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SAKARYA UNIVERSITY
SOCIAL SCIENCES INSTITUTE

THE EFFECTS OF WORLD BANK AND IMF STRUCTURAL ADJSUTMENT PROGRAMS ON DEVELOPING COUNTRIES IN AFRICA

MASTERS DEGREE DISERTATION

Pauline MUIYURO

Department : Econometrics
Sub Field : Financial Econometrics

Thesis Supervisor: Assist. Prof. Çisem BEKTUR

DECEMBER 2020

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"This thesis exam was held online on 11/12/2020 and was unanimously approved by the following Jury members."

JURY MEMBER	DECISION
Prof. Dr. Şakir GÖRMÜŞ	SUCCESSFUL
Assist. Prof. Buket Alkan	SUCCESSFUL
Assist. Prof. Çisem BEKTUR	SUCCESSFUL

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Adı Soyadı	:	Pauline Wanjahi Muiyuro
Öğrenci Numarası	:	1660Y63021
Enstitü Anabilim Dalı	:	EKONOMETRİ
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ABBREVIATIONS

SAP **:** Structural Adjustment Program

SSA **:** Sub-Saharan Africa

IMF **:** International Monetary Fund

GDP **:** Gross Domestic Product

KSH **:** Kenyan Shilling

USD **:** United States Dollar

IFC **:** International Finance Corporation

ISI **:** Import Substitution Industrialization

IBRD **:** International Bank for Reconstruction and Development

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Sakarya University
Institute of Social Sciences Abstract of Thesis

Master Degree	X	**Ph.D.**	

Title of Thesis: The effects of World Bank and IMF Structural Adjustment Programs on Developing countries in Africa

Author of Thesis: Pauline Wanjahi Muiyuro	**Supervisor:** Assist. Prof.Çisem BEKTUR
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The World Bank and IMF constitute the Bretton Wood institutes and have been engaged in improving the welfare of low income and developing countries since 1960s. These institutions offer aid to the developing countries in form of loans and grants aimed at economic development of these countries. World Bank and IMF which tend to have the same organizational structure offer assistance both technically and financially to the developing countries' economy growth enacted using Structural Adjustment Programs. However, the exact nature of effect brought about by these institutions has been strongly criticized and questioned. The main purpose of the study is to examine the effects of World Bank and IMF Structural Adjustment programs on the economic growth of developing countries using Kenya as a case study. A Data set of 41 years was used covering the years between 1975-2016 for Kenya, Uganda, Tanzania, Ghana, Zambia and Rwanda. A dummy variable was created to capture the years where SAPs were applied and Panel regression was used to test the relationship between economic growth and the Structural Adjustment Programs and other independent variables like inflation, Balance of payments, exchange rate, exports and government expenditure. The study concludes that SAPs had no effect on GDP.A significant positive relationship is seen between GDP and other independent variables like total exports, government expenditure and IMF loans on the fixed panel regression. However, when using the Driscoll-Kraay's estimator IMF loans did not have a significant effect on GDP.

Keywords: Structural Adjustment Programs (SAPs), International Monetary Fund (IMF), Developing Countries, World Bank

Sakarya Üniversitesi
Sosyal Bilimler Enstitüsü Tez Özeti

Yüksek Lisans	X	**Doktora**	

Tezin Başlığı: Dünya Bankası ve IMF Yapısal Uyum Programlarının Afrika'daki Gelişmekte Olan Ülkelere Etkileri

Tezin Yazarı: Pauline Wanjahi Muiyuro **Danışman:** Dr.Öğr.Üyesi. Çisem BEKTUR

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Anabilim Dalı: Ekonometri **Bilim Dalı:** Finansal Ekonometri

Dünya Bankası ve IMF, Bretton Wood enstitülerini oluşturur ve 1960'lardan bu yana düşük gelirli ve gelişmekte olan ülkelerin refahını artırmakla uğraşmaktadır. Bu kurumlar gelişmekte olan ülkelere bu ülkelerin ekonomik kalkınmasına yönelik krediler ve hibeler şeklinde yardım sunmaktadır. Aynı organizasyon yapısına sahip olma eğilimi gösteren Dünya Bankası ve IMF, Yapısal Uyum Programları kullanılarak yürürlüğe giren gelişmekte olan ülkelerin ekonomi büyümesine hem teknik hem de finansal yardım sunmaktadır. Bununla birlikte, bu kurumlar tarafından getirilen etkinin kesin doğası şiddetle eleştirilmiş ve sorgulanmıştır. Çalışmanın temel amacı, Dünya Bankası ve IMF programlarının Kenya'yı örnek olay olarak kullanan gelişmekte olan ülkelerin ekonomik büyümesi üzerindeki etkilerini incelemektir. Kenya, Uganda, Tanzanya, Gana, Zambiya ve Ruanda için 1975-2016 yıllarını kapsayan 41 yıllık bir veri seti kullanıldı. SAP'lerin uygulandığı yılları yakalamak için bir kukla değişken oluşturulmuş ve Panel regresyonu, ekonomik büyüme ile Yapısal Uyum Programları ve enflasyon, Ödemeler dengesi, döviz kuru, ihracat ve devlet harcamaları gibi diğer bağımsız değişkenler arasındaki ilişkiyi test etmek için kullanılmıştır. Çalışma, SAP'lerin GSYİH üzerinde hiçbir etkisinin olmadığı sonucuna varıyor. Sabit panel regresyonunda GSYİH ile toplam ihracat, devlet harcamaları ve IMF kredileri gibi diğer bağımsız değişkenler arasında anlamlı bir pozitif ilişki görülüyor. Ancak Driskoll-Kraay'in tahmincisi IMF kredilerini kullanırken GSYİH üzerinde önemli bir etkisi olmadı.

Anahtar Kelimeler: Yapısal Uyum Programları, Uluslararası Para Fonu, Gelişmekte Olan Ülkeler, Dünya Bankası

INTRODUCTION

Topic of the Study

Majority of countries in the Africa continent attained their independence in the 1960's. After attaining independence, these formerly colonized states tried to catch up with the western countries as pertains to development of the economy with the sole aim of attaining desired economic levels. These countries therefore concentrated a large amount of effort in trying to expand their economies.

Considering the fact that Africa was not as industrialized as Europe and America, most of these states heavily relied on the export of commodities which in turn resulted to their economies being vulnerable as the prices of these commodities was often affected by international market prices. Consequently, the dependence on global prices of commodities resulted to drastic relapse of the economic conditions of African countries due to reduced trade (Panford, 1994).

In this regard, African states adopted various mechanisms aimed at the protection of the economies such as Import Substitution Industrialization (ISI) (Acemoglu, et.al., 2001). This was aimed at reducing the large dependency of the countries on importing manufactured products. ISI adoption was successful during the 1960s as it resulted to economic growth in Sub Saharan Africa which averaged to about 3.4 %. However, during the early-mid 1970's, the growth of the economy of these states decreased because of declining export prices caused by high oil prices, declining investments, low productivity growth and last but not least deteriorating social conditions.

All these problems brought about huge balance deficits for these countries and very high debt levels (Taylor, 2009). To solve the above-mentioned problems, these countries sought after assistance from the Bretton Woods institutions. The counties requested for loans from international financial institutions including World Bank and IMF with the aim of improving their dwindling economic conditions. Inevitably, this with time led to the accumulation of huge loans for these newly freed developing states. Additionally, these loans were accompanied with certain conditions that these states had to comply with for the approval of the loans (Taylor, 2009).

Specifically, IMF and World Bank stipulated conditions that these countries had to fully adhere to commonly referred to as Structural Adjustment Programs. These Structural Adjustment Programs refer to processes geared towards reforming market orientations so as to foster sustainability of payment balances, inflation reduction, increase in the annual per capital income (Corbo and Fisher, 1995:2847). This study focuses on finding the effects of IMF and World Bank Structural Adjustment Programs on developing countries in Africa.

Significance of Study

By analyzing the impact brought by Structural Adjustment Programs (SAPs) on how economies grow, the results of the study will aid developing nations realize the effects of participating in IMF and World Bank SAPs. The findings obtained from this study will also enable developing countries in Africa to make wise decisions in the future regarding borrowing credit from the IMF and World Bank as it will highlight the impact the SAPs have on economic growth of the country.

Objectives of the Study

To examine the relationship between the World Bank and IMF Structural Adjustment Programs and economic growth.

Methodology of the Study

The study used an econometrics analysis that was done on STATA 13. The study focused on collecting data for 6 countries over the period 1975-2016. Panel regression was done on the variables in order to establish the relationship between IMF SAP's and economic growth of developing countries in Africa.

CHAPTER ONE: BACKGROUND

1.1. History and Development of IMF and World Bank

The Bretton Woods institutions, commonly known IMF and the World Bank were introduced in attempts to cope with economic and political challenges brought about by the World War I which ushered in the great depression experienced between the years 1929-1939. The great depression was a period marked with depreciation of currencies, economic declines and the disruption of international trade. In short, it was a massive economic slump. The great depression experienced after World War 1 was closely followed by World War II which led to further deterioration of the world economies.

With the aim of re-building the economy that had been devastated and at the same time shattered by the wars, a meeting was conducted in Bretton Woods, USA in July 1994. A total of 43 countries were in attendance in this meeting which was greatly focused on fostering international economic cooperation. This meeting became the birthing place for the International Monetary Fund (IMF) and the World Bank (International Bank for reconstruction and development).

The two institutions were referred to as Bretton Woods institutions and the meeting as the Bretton Woods meeting based on the location of the meeting (Gerber, 2014). However, though these two Bretton Woods institutions were birthed in the same meeting under the same agenda, they have different structures and different functions and they thus operate as two different bodies independent of each other.

1.2. The World Bank

The World Bank was formed in 1944 and aimed at the provision of financial intermediation after the World War II with the agenda of rebuilding Europe. The funds were however relocated to the Marshall Plan as the United Stated wanted to directly control the reconstruction funds. This lead to the World Bank changing focus to largely assisting the developing countries in development (Gerber, 2014).

The World Bank is involved in giving financial support and availing technical assistance to the developing countries. When it comes to financial support, the bank provides low-interest loans and grants to these countries. The bank also partners with donors in order

to provide financial support needed by these countries. In addition, the bank is also involved in carrying out research and analysis, providing policy advice and least but not least availing technical support to these countries. (World Bank, 2016)

The World Bank acts as a major channel of funds between the developed and developing or low income countries. However, over the years the functions of the bank has changed with the diversifying responsibilities. In the 1950s and 1960s, the bank assisted developing countries in acquiring the necessary infrastructure for industrialization purposes. During the 1980s, the main task of the bank was the provision of policy reforms aimed at assisting the countries to grow.

There has been a steady rise in degradation of the environment, disparities in the income levels as well as other global incidences that have shaped the World Bank duties. Currently, the bank functions largely lie in poverty eradication, environmental protection, promoting women welfare and promoting gender equity and balances in governance (Miller-Adams, 2002). By year 2030, the World Bank aims at achieving two main goals including (i) reduction of the extreme poverty levels by ensuring that the number of people living on less than $1.90 per day is less than three percent and (ii) increasing the income growth for the bottom forty percent for all countries (World Bank, 2016).

A board of directors which comprises of a representative from each of the member countries directs the activities of the World Bank. The annual contribution of each country to the World Bank determines its voting rights. These voting rights further form a basis upon which the governor is able to direct the bank. Daily operations of the bank are overseen by 24 directors where 5 permanent spots are allocated to Japan, Germany, USA, France and Great Britain and the remaining spots elected by member countries (World Bank, 2018).

A president leads the World Bank with the assistance of a vice president who is in charge of managing affairs of Europe, Africa, Asia, America, Pacific and the Caribbean. The functional units include finance, infrastructure development, reduction of poverty and development of the private sector (World Bank, 2018). Key agencies forming part of the World Bank Group include International Centre for Settlement of Investment Disputes (ICSID), The International Development Association (IDA), The International Finance

Corporation (IFC), The International Bank for Reconstruction and Development (IBRD) and The Multilateral Investment Guarantee Agency (MIGA) (World Bank, 2018).

1.2.1. The International Bank for Reconstruction and Development (IBRD)

The International Bank for reconstruction and development has a membership of 189 states. The bank was formed with the role of provision of loans to middle income countries and poor countries which are credit worthy (IBRD, 2018). The development bank is self-sustaining and supports the mission of the World Bank Group through raising of funds in the global financial markets, provision of loans, risk management and advisory services (IBRD, 2018). In addition to this, the bank coordinates activities between the middle- and low-income countries by coordination of the responses to regional and global challenges.

1.2.2. The International Development Association (IDA)

This unit of the World Bank is involved in aiding the poorest countries. With a total membership of 173 countries, it largely aims at reducing poverty through loans and grant provisions for the countries. IDA aims to not only reduce inequalities but to also improve living standards among the countries (IDA, 2018).

The IDA serves to complement the IBRD and in addition to sharing the same staff and headquarters facility, they also use the same rigorous methods of evaluating credit. The IDA offers assistance to 75 poorest countries in the world out of which 39 are from Africa. Owing to its vast services in providing basic services, it forms the largest donor with a minimal interest rate of close to zero.

Loan payment to IDA is favorable with a long grace period of about ten years paid within 30 to 35 years (IDA, 2018). Alongside this, it also provides substantial levels of debt reliefs via Multilateral Debt Relief Initiative (MDRI) and Heavily Indebted Poor Countries (HIPC) initiative (IDA, 2018).

1.2.3. The International Finance Corporation (IFC)

This entails a section of the World Bank group that is involved entirely with the private sector of developing countries. It majorly raises its capital from issuing of bonds in international financial markets and investing of its liquid assets globally. The two goals

the bank aims at achieving by 2030 are to promote shared prosperity and to end extreme poverty (IFC, 2018).

1.2.4. The Multilateral Investment Guarantee Agency (MIGA)

This unit of the World Bank was established in 1988 with its core mission of enhancing technology and capital flow to developing nations for productive reasons (Multi Investment Guarantee Agency, 2018). The mandate of MIGA is the promotion of cross border investments in the developing countries through provision of guarantees in form of credit enhancements and risk insurances to the lenders and investors (Multi Investment Guarantee Agency, 2018).

1.2.5. The International Centre for Settlement of Investment Disputes (ICSID)

This is an independent de-politicized organization that focuses on settling disputes regarding international investments. It was established in the year 1966 at the ICSID convention and it settles disputes by way of reconciliation, fact-finding as well as arbitration (ICSID, 2018). The organization is also in charge of sensitization of the role of international law on foreign-based investments.

1.3. The International Monetary Fund (IMF)

The IMF, at its inception had initially two roles which were to regulate the exchange rates of currencies among member states and secondly to foster stability of member countries through offering loans at times of balance of payment crisis. This being said, its main objective was provision of temporary aid with the aim of correcting balance of payment problems in the member states (kjell, 1987).

The IMF operates according to quotas. Each member country has to pay or contribute into the fund according to a quota. This fund that is being paid into is the source of loans for member states in order to correct the balance of payment problems (kjell, 1987).

Different types of loans depend on the size of the national Quota. The quotas were calculated having many things in consideration like the amount of gold and foreign exchange reserves, the national income of the given country, the size and fluctuation of foreign trade of the specific country and last but not least the export dependence of the country (kjell, 1987).

According to Peet (2003), in as much as the mission of the IMF has stayed the same, the institution has undergone some changes that has made it more powerful and even more influential. He argues that it is the most powerful non-state organization in the world whose policies affects the economies of 187 countries.

Through a representative to the IMF board of governors, all the member states directly control the IMF. The Board of Governors have an annual meeting to table and seek consensus on matters affecting the countries. Day to day activities on the other hand are overseen by an executive board comprising of 24 people. Permanent seats of the board are occupied by political powers including USA (which is the largest shareholder), Japan, Great Britain, Russia, Saudi Arabia, China, Germany and France. The remaining directors are elected based on their locations for two-year periods (Peet, 2003).

A managing director is in charge of the executive board. Additionally, there is financial and monetary committee made up of twenty-four members representing the member states. The committee meets twice per year with the mandate of providing advice regarding the financing and monetary framework to the IMF personnel. Conducting of operation is largely dependent on the voting power which is based on the economy size and subsequent quota allocation of each member state. Decisions reached at are mainly consensual with the largest shareholder (United States) having the most influence (Peet, 2003).

1.4. Conditionality

As part of the agreement, before a country acquires a loan form the Bretton wood institutions, there are some requirements that are outlined for them to meet by the IMF and the World Bank to qualify for the loan in question. The requirements, if met, are what give the countries favor for qualification of the loans.

Since most of the developing countries are in dire need of funds, they usually have no way out but to comply with the requirements of the Breton woods institutions so as to be financed and ensure functionality of the nations.

Some of the requirements set by the Bretton Woods institutions include the following:

- **Extreme free-market strategies**

This includes:

- The removal of trade barriers
- The changing of national laws to make them favorable for foreign investors
- Trade liberalization
- Lifting of restrictions during export and imports.
- Lowering the interest rates so as to promote foreign investments to the country.

- **Monetary austerity**

This includes:

- Devaluation of local currency against the dollar- This has an effect of making imports expensive and making local products cheaper for export.

- **Fiscal austerity**

This includes:

- Minimizing and cutting of expenditures
- Strictly having balanced budgets
- Removal of subsidies by the state and control of prices
- Massive layoffs to civil service
- Deeps cuts into the social programs especially housing, education and health
- Removing of subsidies in agricultural products and food aimed at reducing the government expenditure

- **Privatization**

This includes:

Making public corporations private and encouraging the settlement of private companies by making laws that favor both the local and foreign private companies.

- **Financial liberation**

This includes:

- De-regulating of the Banking sector

1.5. Structural Adjustment Programs

To ensure continued financial support to the developing counties by the Bretton Woods companies, member states are required to satisfy certain conditions. These conditions are termed as Structural Adjustment Programs (Abugre, 2000). They consist of different requirements and programs which member states ought to append so as to attain loans from the World Bank or the IMF.

1.5.1. Principal IMF Programs

Stand-By Arrangements (SBA) - These entail short-term agreements that usually last for 1-2 years' duration. Because of their short duration, they require a higher level of conditionality. They help countries having severe disequilibria sort their balance of payment issues.

Extended Fund Facility (EFF)- These assist member states having disequilibria sort out their longer-term balance of payment problems which require fundamental economic reforms. They averagely last for 3 years

Structural Adjustment Facility (SAF) and the Enhanced Structural Adjustment Facility (ESAF) – These are programs of longer-term and they thus require lower conditionality. SAF have more relaxed conditional ties than the ESAF.

Poverty Reduction and Growth Facility (PRGF) – This was initiated in 1999 replacing ESAF. It is usually for low-income countries and allows low interest lending facilities for these countries.

1.6. Structural Adjustment Programs and Developing Countries in Africa

Majority of the countries in the African continent started engaging in the World Bank and IMF SAPs from as early as 1980s. This is because of the economic problems experienced in Africa during the late 1970's because of higher interest rates, the rise in oil prices and the drastic fall of prices of other products. All these factors accumulated led to a high amount of foreign debt which could not be paid by the African countries (Ismi, 2004).

Ghana for example, under the IMF undertook a loan with the condition that it would not give its rice farmers in the Northern part of the country subsidies as it had been doing priorly but would instead import rice from America while the money the government would use for subsidies to the farmers would be put to 'better use'. In relation to this, it is very unfortunate that currently, the US rice is widely used in Ghana as it is cheaper in price because the US government subsidizes it while the Ghana rice is not subsidized by its government thus making it too expensive for the common man.

SAP was first implemented in Ghana in 1983 and led to removing trade barriers, privatization of majority of state entities more so the mining industry that was a key revenue source. Subsidies offered for agriculture, education and health were also stopped. These actions collectively saw to it the rise of food prices and led to the unemployment of 20% of the Ghanaian population (Etego, 2014).

The GDP per capita for Ghana also dropped tremendously and its external debt continued to increase thus making it legible to World Bank Highly Indebted Poor Countries (HIPC) initiative (Etego, 2014).

One of the conditions that Ghana had to adhere to was the privatization of its Mining sector as it is the 2nd largest gold producer in Africa. Before it did so, the government had owned more than 55% of the mining companies. After it privatized these companies, it gave way to foreign state corporations to come in and own these enterprises which were once owned by the state. By doing so, many Ghanaians lost their jobs. Although the export of gold has been on an increasing trend, export of gold has not benefited the people of Ghana and has made minimal contribution to the economy and this is because of the breaks in taxes and incentives offered to foreign-based firms. This is just one among the many cases where the western countries have been allowed to remove resources and profits from the poor African countries (Etego, 2014).

Zimbabwe got involved with IMF SAPs in the year 1991 after the World Bank issued it with a $484 loan aimed at improving the economy which had by then undergone several years of stagnation. The conditions that came with this loan were strict including reduction of trade traffics, removing control of the foreign currency abolishing of protection offered to the manufacturing sector, labor market deregulation, minimal wage lowering, slashing the fiscal budget, deregulating financial markets and finally reducing

the tax rate. These adjustments resulted to the closing of many companies which then resulted to increased unemployment levels as well as poverty. This resulted in the economy of Zimbabwe undergoing recession in 1992 after the GDP significantly reduced by about 8%. On the other hand, Unemployment levels rose to 35% in 1997 and later to 50% in the year 1999 as 25% of public workers were laid off in accordance to the structural adjustment programs (Ismi, 2004).

Manufacturing output in Zimbabwe also declined by more than 20% between the years 1991-2000 due to the depreciation cost of the local currency to the foreign currency and high interest rates. During the years of 1991 to 1996, the real Gross Domestic Product per capita of the country reduced by 5.8%. Similarly, the private per capita consumption also reduced by 37%. High inflations were experienced and increase in the food prices was experienced as farmers were no longer receiving subsidies from the government. The health and education sectors were also affected severely (Ismi, 2004).

Cote d'ivoire got involved in the IMF Structural Adjustment Programs in 1989 after it underwent a decline in its economy in the 1980's brought about by the fall of global prices of both cocoa and coffee that constituted the main exports of the country. Before this event, Cote d'ivoire had been doing economically well for two decades. The SAPS required Cote d'ivoire to reduce the spending by the government by 30% and expenditure on capital by 15%. The conditions also stipulated that taxes should be reduced, state enterprises should be privatized, the labor market de-regulated and the reduction of the civil service (Ismi, 2004).

The SAPs have had a severe effect on the economy and total well-being of Cote d'ivoire. The capita Gross Domestic Product reduced by 15% during 1989-1993. Poverty in the country also doubled and this is seen between the years 1988 to 1995 whereby the percentage of individuals who earned less than $1 a day increased to up to 36.8% from 17.8%. Due to the high poverty levels, education public spending reduced by 35% during the period of 1990-1995 as many could not afford to pay for education. In addition to this, the health sector faced challenges as many health problems deteriorated after the IMF mandated user fees for public health care system. Just like in the case of Ghana and Zimbabwe, the percentage of external debts accrued rose to 210.8% from 132.4% of the Gross Domestic Product. The high poverty levels in the country gave birth to child slave

trade as parents would sell off their children as slaves to work in the cocoa farms (Ismi, 2004).

The case of Uganda and Bretton Wood institutions is quite a fascinating one to also look at. Uganda started involving itself with IMF in 1987 as it took a loan form the institution through the SAF and followed through with the ESAF until 1997. Before that, its economy had deteriorated between the years 1971-1986 (Botchwey, et.al ,1995).

The per capita Gross Domestic Product grew by about 40% between the years 1986-1996. The IMF accredited this growth to the structural adjustment programs that the country had followed through with. This was met by a lot of criticism from economists and scholars who argued that the two major reforms that had been initiated by IMF namely export taxation reduction and liberalization of trade were applied in a progressive way. Critics argue that cash crop liberalization had insignificant effects in the country since a very small number of rural famers were involved in coffee growing and thus liberalization of the cash crop had very minimal effect on incomes of the rural sectors throughout the adjustment period (Botchwey, et.al ,1995).

State owned enterprises in Uganda were privatized which was met with a lot of criticism as the process was reported to have gone too fast thus having many faults right from the beginning. Based on a report by Structural Adjustment Participatory Review International Network (SAPRIN), the process was only of benefit to the state and corporates of the developed countries but did not benefit the local Uganda people (Botchwey, et.al ,1995).

Public expenditure on healthcare in the country increased but not proportionate to the country's budget leading to a relatively smaller share compared to the previous years. Government expenditure also increased although from a very low initial starting point which had been stipulated while taking the first loan in 1986. The price of health care also increased as compared to the inflation rate making health care services very expensive for the common man (Botchwey, *et.al* ,1995).

In the year 1998, Uganda became the first country to benefit from the highly indebted poor country initiative relief implying that it was to be forgiven of its debt of about $650 million. The implementation process of loan relief delayed for one year which made Uganda incur a cost of $193 million. This amount was very high and thus the government

diverted funds meant for key services such as the health care to paying the debt showing a mixed case of IMF in Uganda (Botchwey, *et.al* ,1995).

Involvement of Kenya in the World Bank and the SAPS formulated by the World Bank and the IMF has its roots in the 1980's. The SAP's majorly focused on reduction of the dominance of the government in the economy (Ryan & O'brien ,1999). The SAPs also encouraged the liberalization of trade by ensuring that the goernment ammended its laws to become friendly to foreign investments. It is said that this was the beginning of the collapse of many local industries such as the EPZ textile industry as imported clothes became cheaper than the locally made ones.

CHAPTER TWO: LITERATURE REVIEW

The operations of IMF and World Bank has attracted much criticism from governments, individuals and also other organizations. The main bone of contention is based on claims that these two institutions are used by the western countries to exploit developing countries especially in the African continent. Critics of these institutions have openly stated that their operations are a means of new-age colonialism- where the colonial powers continue to use their existing powers to control and frustrate their former colonies.

In contrast, these two institutions have publicly claimed that their operations are indeed beneficial for the development and growth of member state economies. It is on this basis that researchers from both developing countries and already developed countries have done various studies on this subject to try and shed light on the matter and to find out the underlying impact of the operations of these two institutions on how developed countries' economies faired. The findings of some of the studies done will be highlighted in this chapter.

Ogbona (2012) set out to investigate the results of SAP programs on economies, taking a Nigerian perspective. Using panel data analysis, the period was divided in two; 1960-1985- pre-SAP period and defined the years 1986-2008 as the SAP years. He used quarterly data covering the whole period of 1960-2008. The results of the study were that the exchange rate continued to be volatile and had a downward trend even after implementation of SAPs. The inflation index kept on rising. The study concluded that the IMF through SAPs fails to achieve its objectives of maintaining a stable exchange rate, minimum inflation and finally a reduction in the demand of imports.

On the same note, Easterly (2005) carried out a study on the effect of SAP programs on growth of economies. Probit regressions were used in analyzing covering a duration between 1980 to 1999. The findings of the study were that loans negatively affected the growth of the economies and that majority of the loan beneficiaries did not attain sustained economic growth.

Another research carried out by Przeworski & Raymond (2000) aimed to find out the influence of IMF programs on economy progress. Using a sample of 79 countries, the study investigated the years 1951 to 1990. The results of the study were that participation

in the IMF programs lowers economic growth rate and that the countries which leave the program usually experience a higher economic growth rate that what they had when they were in the program.

Dreher (2004) did a study on IMF and economic growth focusing on compliance with conditionality, SAPs and IMF loans. The study used panel data for a sample of 98 countries and took into consideration the years 1970-2000. Cross section analysis was further used in comparison of the countries. The study concluded that IMF programs reduce the growth rate of countries involved. On the other hand, compliance with conditionality has a positive effect on the economy while loans provided by IMF have no significant impact on economic growth.

According to a study done by Barro and Lee (2003), it seems that economic growth is linked to the loans taken by the countries from the IMF. The larger the loan, the slower the growth rate of the country. In another consecutive study as a follow up to the one they had previously done, Barro and Lee (2005) sought to find out the effect of IMF and World Bank SAPs on developing countries and used Generealize Evaluation Estimator (GEE) while the focused on the years 1975-2000. Their study concluded that SAPs do indeed reduce economic growth.

In another study to investigate the effects of World Bank and IMF SAPs in Kenya, Githua (2013) carried out analysis on secondary data and concluded that IMF and World Bank SAPs contribute to an increase in poverty and that they cause under-development. He stated that under development is seen because the government puts in less money in social sectors like health and education.

According to Ikara (1990), SAPs have had adverse economic effects on the country which includes inflationary pressures, a reduction in employment and the marginalization of the poor in education and health benefits.

Another study by Przeworski and Vreeland (2000) which examined the effect of the IMF SAPS on economic growth came up with the conclusion that participation in the SAPS lowers growth rates for these countries.

Gilbert and Unger (2009) in their research came up with the conclusion that IMF programs have strong effects on inequality and that they increase the gap between economic classes.

Pattillo *et.al* (2014) in a study to find out how external debt affects growth, applied the growth-accounting framework to a sample size of 61 African countries. The data observed was from the years 1969-1989.The results showed that large external debts negatively affects economic growth.

While the above studies show that SAPs have a negative impact on the economic growth of different African states, another school of thought exists which links economic growth to the Structural Adjustment programs based on the results of their studies.

In a study on structural Adjustment Programs in developing countries done by Sulaiman, Migiro & Aluko (2014), SAPs in Nigeria were analyzed by taking into consideration the years 1986-2012. The study used correlation test and Error Correction Mechanism (ECM) and focused on the non-oil exports, CPI, exchange rate and balance of trade as the dependent variables. GDP was used as the proxy to measure economic growth. The findings of the study were that there is an association among the variables and that SAPs have a positive effect on the economic growth. The study concluded that SAPs are beneficial to economic growth.

Yang, (2013) did a study aimed at evaluation of the effect of IMF long term lending on growth trends of economy among African countries. The study focused on the years 1986-2011 and used panel data in the analysis. The results obtained arrived at the conclusion that the SAPs positively influenced the economy's growth. The study concluded that there is a positive correlation between the SAPs and economic growth in sub-Saharan Africa.

A study by Graham & Rowlands (2017) focused on the impact of IMF programs on growth of economies in developing countries. Using a propensity score matching methods, the study investigated the years 1989 to 2008. The study found a positive effect on economic growth but only for a short term (basically 2 years after the agreements are signed and the programs start).

Ninepence (2017) sought to determine effects of SAPs on the economy of sub saharan Africa, case of Ghana. The study used OLS regression covering a period of 1983 to 2015. The study found a positive correlation between SAPs and economic growth of Ghana which was both in the short and long term.

Jinjaraka et al. (2013) did an emperical investigation on the role of trade adjustment provided by the World Bank on trade progression of low income countries. The focused on a sample size of 45 developing countries between the years 1987-2000 using panel data. The study concluded world bank trade adjustment loans brough about an incresase in the country's GDP by positively affecting a country's import and export growth.

Kingston et al. (2011) did a study in Senegal, Zimbabwe, Cote d'ivoire and Uganda on SAPs. The finding of this study was that IMF and World Bank SAPs positively influence economy development in Africa although this has been criticized due to the nature of these four countries.

In its own research, The World Bank (1994) declared that its SAPs had been very much fruitful and that they were causing improvements on the economies that were involved in the programs, especially the ones that were in compliance.

While there are studies supporting the claim that SAPs are harmful for economic growth and others supporting the notion that SAPs are indeed linked to economic growth, there seems to exist a third group that argues that SAPs do not in any way affect (neither positively nor negatively) the economic growth of the participating countries. In addition to this, other studies gave results that showed that the dynamics for each country was unique and hence cannot be generalized to other countries.

Dreher and Walter (2009) did a study on IMF involvement and currency risks in countries. The analysis in the study focused on the period 1975-2002 and covered 68 countries. According to the results found, the study came up with the conclusion that the IMF does indeed live up to its function of helping countries correct macro-economic balances and it does indeed promote exchange rate stability. It thus concludes that IMF conditions do not greatly influence the outcomes or policies.

Dreher (2005) also set out to examine the effect of IMF on the growth process of the economy. The study sampled 98 countries using panel data and analyzed a period of 30

years (1970-2000). In his findings, growth rates were not significantly affected by IMF loans.

Munthali (2004) carried out a study to assess impact of SAPs on Malawian Manufacturing Sector. The study concluded that SAPs had helped improve growth of the manufacturing industry in the country. The study also reflected a weak effect of the SAPs on the economic growth of the country.

Gebrebziagher (2015) in his study about SAPs and long term economic performance uses a sample size of 18 African countries investigating the period of 1960 to 2009 structural break approach. The study concludes that only few countries showed positive results for long-term economic growth with the introduction of SAPs. Other countries experience no change in their economic growth while others experience a detoriation in their economic growth as the SAPs are introduced.

It is evident from the above literature that here has not been a conclusive conclusion pertaining the effects of SAPs on the economic growth of the developing countries. Thus the need to carry out further research on this topic is clearly justified. It is in this view that this study seeks to carry out an independent quantitative research on the effect of World Bank and IMF SAPs on developing countries in Africa. The research will also contribute to the literature gap on this matter.

CHAPTER THREE: METHODOLOGY

3.1. Introduction

The literature review in chapter two clearly showed that up until now, there has not been a conclusive answer on whether the SAPs dictated to developing countries by the IMF and World Bank are helpful to economic growth of the involved countries or not.

In an attempt to get an answer to how the SAPs are affecting economic growth, and in view of the fact that most of the previous studies done had mostly dwelt on qualitative research, this study used an econometric approach to complement and add on to the qualitative component of similar research previously done.

This chapter gives detailed information on the methods applied in this research in investigating the effects of world bank and IMF SAPs on the economic growth of developing countries in Africa. It will further break down the scope of the study, the data collection method used, selected mode of analysis and lastly the limitations encountered while doing this research regarding finding and analyzing data.

3.2. Research Design and Structure

Research design refers to the entire approach on how the study will be conducted including, strategy planning, subject identification and study execution (Punch K.F,1998). This also covers the data collection and analysis methods. The research design is divided into qualitative research and quantitative research. To investigate the effects of World Bank and IMF SAP programs on the economic growth of developing countries, with a specific interest on developing countries in Africa, this study used meta-quantitative analysis technique.

3.3. Data and Methodology

3.3.1. Sources of Data and Data Collection

This study applied library research which involved the analysis of historical documents and papers concerning SAPs and their effect on the African continent. Journals, conference reports, dissertations, books and articles were used in order to get data. Online sources from the internet were also used.

Table 1: Sources of Data

Exchange Rate	https://data.worldbank.org/
GDP	Central banks of the 6 countries
IMF loans history	https://www.imf.org/en/Data
İnflation	Central banks of the 6 countries
Government Expenditute	https://data.worldbank.org/
Balance of Trade	https://data.worldbank.org/
Exports	https://fred.stlouisfed.org/

Numerical data was extracted from various sources such as the National bureau of statistics, Central Banks of Zambia, Ghana, Angola, Uganda, Tanzania and Kenya. Other sources of numerical data included IMF and World bank websites and from economic indicator website such as Federal Reserve Economic Data (FRED Economics).

3.3.2. Data Analysis

The qualitative analysis part of the study was attained by reviewing secondary sources of data which included research papers and reports seeking to investigate the same issue. Reviewing of these reports and research papers was beneficial for this study as they shed light on the various issues that had been happening in different countries as a result of the World Bank and the IMF operations that had been carried out previously or were currently being undertaken in these developing countries. The study looked at case studies from Zambia, Ghana, Angola, Uganda, Tanzania and Kenya.

On the other hand, the quantitative analysis part of this research involved using panel series analysis. The GDP was used to capture the performance of the economy. The economic influence of SAPs was extended to include exports, exchange rate between local currency and USD, government expenditure and balance of payment. SAP dummy was created measured using the years where the conditions were applied for the years 1975 to 2016.

The data was analyzed using the Stata13 program. Before the data was analyzed, it was organized in a consecutive order according to the years that the study sought to focus on. The data was then checked for any errors or any missing years in order to attain uniformity. The researcher ensured data completeness before data analysis was performed.

3.4. Scope of the Study

The data collected for the purpose of analysis was for a period covering 41 years (1975-2016). The study focused on getting data for a minimum period of 30 years in order to avoid any biasness that would occur as a result of selecting few years that would only capture a certain economic period or phase that a country was going through.

By using data sets covering 41 years, which is considered a large and efficient period, the study ensured that it captured all economic cycles that usually happen in any given economy and thus prevented the possibility and chances of having biased results and conclusions.

3.5. Econometrics Approach

By using cross-section data and the time dimensions of these cross-sections together, panel data analysis allows the researcher to analyze by using much more data. While studies conducted with cross-section data analysis only reveal the differences between units, studies conducted with panel data analysis allow us to see both the differences between units and the changes that occur over time. Panel data combining section data with time series gives more information, is more variable, less common linearity between variables, higher degrees of freedom, and more efficient (Baltagi, 2005).

The general structure of a panel data regression with K variables, which includes two basic models known as Fixed effects model and Random effects model, is expressed as follows:

$$y_{it} = \beta_i + \beta_1 X_{1it} + \cdots + \beta_k X_{kit} + \varepsilon_{it} \qquad i=1,2,..,N \quad t=1,2,....,T \qquad (1)$$

In this equation, i=1, 2,…,N refers to the cross-sectional dimension, while t=1,2,……T represents the time dimension. In this model, Y_{it} dependent variable, X_{1it} …… X_{kit} independent variables, βi for constant term coefficient, ε_{it} for error term. Here it is assumed that the mean of the error term has zero and constant variance. If the time dimension of each section in a panel is equal, it is called a balanced panel. Panel data models in which the time dimensions of the sections are different are called unbalanced panels (Gujarati, 2004). Since the time dimension for each unit is equal in this study, it can be said that it is a balanced panel.

With the fixed effects model, different constant coefficients are obtained from the units of section size. This difference shows the existence of a unit effect, that is, each unit has its own characteristics. This model is called the fixed effects model because the constant term for each section does not differ over time, that is, there is no time effect (Asteriou & Hall, 2007). The structure of the fixed effects model is as follows:

$$y_{it} = \bar{\beta} + a_i + \beta_1 X_{1it} + \cdots + \beta_k X_{kit} + \varepsilon_{it} \qquad i=1,2,..,N \quad t=1,2,....,T \qquad (2)$$

In this equation the term mean constant $\bar{\beta}$, differs from the mean constant a_i for section i.

The random effects model is also called the error components model or the variance components model in the literature. In the random effects model, the unit effect is not fixed. Since the unit effect is random, it is within the margin of error, not within the fixed coefficient. The general structure of the random effects model can be shown as follows:

$$y_{it} = \beta_0 + \beta_1 X_{1it} + \cdots + \beta_k X_{kit} + a_i + \varepsilon_{it} \quad i=1,2,..,N \quad t=1,2,....,T \qquad (3)$$

In general, if the cross-sectional dimension is taken randomly from a large mass, the random effects; If there is a more specific data set, it may be reasonable to choose the fixed effects model (Yerdelen Tatoğlu, 2016).

The Hausman (1978) specification test, which is frequently preferred when selecting models in panel data analysis, is intended to determine the coleration between unit or time effects and independent variables. If unit or time effects are uncorrelated with the independent variables, the random effects model will be more consistent, so it would be more appropriate to choose the random effects model. If the unit or time effects are correlated with the independent variables, the random effects estimator will give more deviated results than the fixed effects estimator, and it will be appropriate to choose the fixed effects estimator because it is consistent. Hausman test statistics showing the chi-square distribution are calculated in matrix form as follows:

$$H = (\hat{\beta}_{FE} - \hat{\beta}_{RE})'[Avar(\hat{\beta}_{FE}) - Avar(\hat{\beta}_{RE})]^{-1}(\hat{\beta}_{FE} - \hat{\beta}_{RE}) \qquad (4)$$

In this equation, FE shows the predictors of the fixed effects model, while RE shows the predictors of the random effects model. $Avar(\hat{\beta}_{FE})$ ve $Avar(\hat{\beta}_{RE})$ expresses the

asymptotic variance covariance matrices obtained from the estimates. The equality of this calculated test statistic to zero is tested. The hypotheses of the test are as follows:

H_0 = There is no correlation between independent variables and unit or time effect.

H_a =. There is a correlation between independent variables and unit or time effect

Thus, if the null hypothesis cannot be rejected, the random effects model can be preferred, and if the null hypothesis can be rejected, the fixed effects model can be preferred.

Before analysing time series in the panel data, checking whether the series has changed over time or whether the series is stationary or non-stationary is a very important concept. In case of non-stationary time series, spurious regression occurs, in other words, calculated t statistics values, F tests and determination coefficient can give deviating results.

Panel Unit root tests are divided into two groups: first generation and second generation. While the first-generation unit root tests assume that there is no correlation between units, in the second-generation unit root tests, the correlation between units is also taken into consideration. In case of inter-unit correlation, stronger results can be obtained with second-generation panel unit root tests (Yerdelen Tatoğlu, 2013). Since the correlation between units was determined in this study, CADF test developed by Pesaran (2007), one of the second-generation unit root tests, was used.

In this method, instead of estimating factor loadings, it is suggested to eliminate cross-section dependency. The method is extended with lagged cross-sectional averages of ADF regression and when the first difference of the regression is taken, the cross-section dependency is eliminated. The test also gives strong results in case of N> T (Pesaran, 2007). Simple CADF regression is as follows:

$$\Delta Y_{it} = \alpha_i + \rho_i^* Y_{it-1} + d_0 \bar{Y}_{t-1} + d_1 \Delta \bar{Y}_t + \varepsilon_{it} \quad (5)$$

In this equation, $\bar{Y}_t$ is the average of all units over time. If there is autocolleration in the error term or factor, The delayed first differences of Y_{it} and $\bar{Y}_i$ are added to the model. In this case, it takes the form

$$\Delta Y_{it} = \alpha_i + \rho_i^* Y_{it-1} + \sum_{j=0}^{p} d_{j+1}\, \Delta \bar{Y}_{t-j} + \sum_{k=1}^{p} c_k\, \Delta Y_{i,t-k} + \varepsilon_{it} \quad (6)$$

After the CADF regression is estimated, the CIPS statistics are obtained by averaging the t statistics of the lagged variables (Yerdelen Tatoğlu, 2013).

$$CIPS = \frac{1}{N}\sum_{i=1}^{N} CADF_i \quad (7)$$

There are three important assumptions in panel data models. These are constant variance, no autocorrelation and no inter-unit correlation. If the established model deviates from these assumptions, it will cause standard errors to be deviated and prevent it from being an effective model. This will cause t statistics and confidence intervals to give incorrect results. For this reason, the violation of these basic assumptions should be checked first. If the assumptions cannot be met, the appropriate one from the powered estimators in the literature should be selected and analyzed.

In the study, modified Wald test (Greene, 2000) was used to determine heteroskedasticity according to units. The test statistics are calculated as follows:

$$W = \sum_{i=1}^{N} \frac{\left(\hat{\sigma}_i^2 - \sigma^2\right)^2}{V_i} \quad (8)$$

$$\hat{\sigma}_i^2 = \frac{1}{T_i}\sum_{t=1}^{T_i} v_{it}^2 \quad (9)$$

$$V_i = \frac{(T_i - 1)}{T_i}\sum_{t=1}^{T_i} (v_{it}^2 - \hat{\sigma}_i^2)^2 \quad (10)$$

Here, $\hat{\sigma}_i^2$ is an estimator of the residual variance of the unit. The hypothesis of the modified Wald test fitting the χ^2 distribution is established as:

$H_0: \sigma_i^2 = \sigma^2$

$H_a: \sigma_i^2 \neq \sigma^2$

The null hypothesis is that variances do not change according to units, while the alternative hypothesis is that variances vary from unit to unit.

In the study, the test statistics proposed by Pesaran in 2004 was used to test the existence of correlation between units. The Pesaran CD test statistic that fits the χ^2 distribution is calculated as follows,

$$CD = \sqrt{\frac{2T}{N(N-1)}}\left(\sum_{i=1}^{N-1}\sum_{j=i+1}^{N}\hat{\rho}_{ij}\right) \quad (11)$$

The null hypothesis of the test is that there is no inter-unit correlation (Pesaran, 2004).

On the other hand, Breusch-Pagan LM tests was applied to examine correlation between units.

In this test, the hypothesis that the correlation matrix of the residues of all cross-section units is the unit matrix, in other words, the null hypothesis of non-correlation between units is tested. Lagrange Multiplier (LM) test statistic is calculated as:

$$\lambda LM = T\sum_{i=1}^{N-1}\sum_{j=i+1}^{N}\hat{\rho}_{ij} \quad (12)$$

Here, $\hat{\rho}_{ij}$: i, j is the correlation coefficient of the residue (between the residues of the i^{th} and j^{th} units), and

$$\hat{\rho}_{ij} = \hat{\rho}_{ij} = \frac{\sum_{t=1}^{T}\hat{v}_{it}\,\hat{v}_{jt}}{(\sum_{t=1}^{T}\hat{v}_{it})(\sum_{t=1}^{T}\hat{v}_{jt})} \quad (13)$$

The LM test statistic is distributed χ^2 with d (d=N (N-1)/2) degrees of freedom.

In the study, Durbin-Watson test of Bhargava, Franzini and Narendranathan (1982) was used to test the presence of autocorrelation in fixed effects model. DW Test statistic is calculated as follows:

$$d_p = \frac{\sum_{i=1}^{H}\sum_{t=2}^{T}(\tilde{u}_{it}-\tilde{u}_{it-1})^2}{\sum_{i=1}^{H}\sum_{t=1}^{T}\tilde{u}_{it}^2} \quad (14)$$

The hypotheses of the test are as follows;

$H_0: \rho = 0$

$H_a: |\rho| < 1$

Driscoll and Kraay (1998) estimator is used as the island powered standard error estimator. Resistant standard errors can be produced in case of predictive heteroskedasticity, autocoleration and inter-unit correlation (Yerdelen Tatoğlu, 2016).

3.6. Limitations

While carrying out the study, there were a couple of challenges and limitations that were faced. First and foremost, the study had initially targeted on getting data for up to the year 2018 but the data sets were incomplete for the years after 2016 and thus it had to eliminate the latter years in order to use complete data sets.

Secondly, some numerical data was not uniform since different websites gave different numerical values of either GDP, government expenditure or exports and this proved to be a challenge as the study needed to be as accurate as possible.

CHAPTER FOUR: RESULTS AND FINDINGS

4.1. Descriptive Statistics

The descriptive statistics for the study are presented in Table 2.

Table 2: Descriptive Statistics

	Mean	Max	Min	St.dev
GDP (USD)	12,791,385,292.68	70,875,289,605.38	571,863,296.00	15,011,233,585.40
INF(%)	68.11	787.25	-0.29	147.21
EXCR	346.06	2586.89	10	593.71
EXPE (USD)	2,628,077,021.09	13,547,444,909.97	116,918,118.38	2,421,413,929.17
BOT (USD)	2,489,711.904.48	18,700,000,000.00	-15,530,000,000.000	3,846,639,067.82
EXP(USD)	7,040,172,573.13	48,802,300,000.00	47,498,580.00	9,603,938,374.99
IMF LOANS (USD)	2,639,804,116.07	21,693,855,610.10	16,025,295.4	3,897,544,917.04
SAP dummy	0.24	1.00	0	0.43

The mean amount of IMF loans received was USD 2,693,804,116 with a maximum of USD 21,693,855,610. The mean GDP was USD 12,791,385,292 with a minimum of USD 571,863,296 and maximum of USD 70,875,289,605. Minimum inflation rate was -0.29 percent with maximum of 787 percent. Minimum exchange rate between local currency and USD was 10 and maximum 2586.89. Government expenditure had a maximum of USD13,547,444,909.97, Balance of Trade 18,700,000,000 and exports 48,802,300,000 USD.

4.2. Diagnostic Tests

Table 3: Pesaran CD and Breusch-Pagan LM Test Results

	Test Statistics	Probability Value
Pesaran CD test	3.287	0.0010
Breusch-Pagan LM test	100.954	0.0000

According to the results of the CD test and the Breusch-Pagan LM test, the null hypothesis indicating a non-correlation between units is rejected. It is therefore understood that there is a correlation between units.

In this case, the Pesaran CIPS test which is one of the second-generation unit root tests was used in case of inter-unit correlation. The CIPS test statistics for all the variables are given in Table 4.

Table 4: Pesaran Panel Unit Root Test Results

Variable	**Pesaran Panel Unit Root Test**	
	Fixed Model	**Fixed and Trend Model**
	CIPS Test Statistics	CIPS Test Statistics
lnGDP	-2.314***	-2.951**
INF	-3.320*	-3.878*
lnEXCR	-2.221***	-2.054
lnEXPE	-2.700*	-2.874**
BOT	-2.293***	-2.369
lnEXP	-2.604*	-3.135*
lnIMF	-3.043*	-3.458*

Note: (*), (**), (***) shows the rejection of the underlying hypothesis at 1%, 5% and 10% significance, respectively).

When the results of the Pesaran CIPS test, whose null hypothesis was non-stationary, were examined, it was concluded that the null hypotheses of all series could be rejected and all series were stationary.

After examining the stationary states of variables, the following equation is established to examine the effect of SAP and other independent variables on GDP.

$$lnGDP_{it} = \beta_0 + \beta_1 lnIMF_{it} + \beta_2 ln\ EXPE_{it} + \beta_3 lnEXP_{it} + \beta_4 lnEXCR_{it} + \beta_5 INF_{it} + \beta_6 BOT_{it} + \beta_7\ (sapdummy) + e$$

Where:

$lnGDP_{it}$ is the GDP for country *i* at time *t*,

$lnIMF_{it}$ is the Amount of loans from IMF,

β is the constant,

$ln\text{EXP}_{it}$ is the Export for country *i* at time *t*,

$ln\text{EXPE}_{it}$ is the government expenditure for country *i* at time *t*,

INF_{it} is the Inflation for country *i* at time *t*,

*ln*EXCR is the Exchange rate for local currency against USD or country *i* at time *t*,

BOT_{it} is the Balance of Trade for country *i* at time *t*.

SAP dummy is coding for the conditionalities denoted as 1 where SAPs conditionalities were present and 0 denoting no SAPs conditionalities.

Log values were used for GDP, IMF loans, Government expenditure and Exchange rate. Inflation was taken as a nominal value because it was already in percentage form as inflation is a rate. Balance of Trade (BOT) could not be taken as a Log form because there were negative values in its data set and thus its nominal form was used.

Before the established model was estimated, whether the Fixed effects model or the random effects model should be used was determined through the Hausman specification test, which is frequently used in the model selection phase in the literature.

4.3. Hausman Test

Hausman Test was used to determine whether the model had random and fixed effects and thus determine the model panel to use. The null hypothesis for Hausman Test was that the preferred model did not have fixed effects. The findings from this analysis are presented in Table 5.

Table 5: Hausman Test Results

Independent Variables	Coefficients		
	(b)	(B)	
	Fixed effect	Random effect	(b-B)
INF	-.000284	-.0009756	.0006916
lnEXCR	-.0234008	.0076093	-.0310101
lnEXPE	.7001607	.5533563	.1468044
BOT	-2.37e-11	-7.58e-11	5.21e-11
lnEXP	.3122909	.2631449	.0491459
lnIMF	.0551363	.1255183	-.070382
SAPdummy	-.0289312	-.015995	-.0129361
$\chi^2(6) = (b-B)'[(V\_b-V\_B)^{(-1)}](b-B) = 107.97$ $Prob > \chi^2 = 0.0000$			

When the results of Hausman specification test were examined, the probability value was calculated as $Prob > \chi^2 = 0.0000$. In this case, the null hypothesis can be rejected. In other words, there is a correlation between independent variables and unit or time effect. That

being the case, if the random effects model estimator is used, this estimator will give more deviating results than the fixed effects estimator, since the fixed effects estimator is still consistent, it has been decided that this estimator should be used.

Before the model was estimated, variance and auto correlation problems were examined in the data set used. The modified Wald test was used to test the existence of the variance problem, and the local best invariant (LBI) tests of Durbin-Watson and Baltagi-Wu were used to test the presence of autocorrelation. The results of the test are given in Table 6.

Table 6: Heteroscedasticity and Autocorrelation Tests

Test	Test Statistics	Probability Value
Modified Wald Test	6460.19	0.00000
Bhargava Durbin-Watson	0.23212657	
Baltagi-Wu LBI	0.28515039	

When the probability value of the Modified Wald Test, which is in the form of its null hypothesis $H_0: \sigma_i^2 = \sigma^2$ is examined, it is concluded that the null hypothesis can be rejected and therefore $\sigma_i^2 \neq \sigma^2$ meaning it has been concluded that the variance varies according to the units.

In the literature, if the DW and LBI test statistics are less than 2, it is usually commented that autocorrelation is significant. DW and LBI test statistics values are much less than 2. In this case, it can be said that autocorrelation is serious.

4.4. Panel Regression Model

As a result of the tests applied in this study, inter-unit correlation, varying variance and auto correlation problems, which are important assumptions of panel data, were found. In the case of a few or all of these problems, reinforced standard error estimators are preferred, which are frequently used in the literature. In this study, Driscoll and Kraay estimator, which can produce strong standard errors in case of the presence of these three problems, were used. The results of the Panel data regression are shown in Table 7 and 8.

Table 7: Fixed Effect Model

Fixed effects, dependent variable: GDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnIMF	0.0551363	.0269973	2.04	0.042
lnEXPE	0.7001607	.0327516	21.38	0.000
lnEXP	0.3122909	.0333902	9.35	0.000
lnEXCR	-0.0234008	.0093784	-2.50	0.013
INF	-0.000284	.0001876	-1.51	0.131
BOT	-2.37e-11	8.15e-12	-2.90	0.004
SAPdummy	-0.0289312	.0387334	-0.75	0.456
cons	-0.0360698	.8003535	-0.05	0.964
R-squared F- statistic P-Value	0.9139 362.55 0.0000			

When the results obtained from the fixed effects estimator were examined, the probability value of the lnIMF independent variable was calculated as 0.042. In this case, it is seen that the lnIMF variable is statistically significant at the 5% significance level. The coefficient of the lnIMF variable was calculated as 0.0551. Thus, in case of a 1% increase in the debts given by the IMF, the GDP is expected to increase by 0.0551% on average. It can be said that from an economic perspective, the calculated coefficient is in the expected direction.

The probability value of the lnEXPE independent variable was calculated as 0.000. Thus, it is seen that the lnEXPE variable is statistically significant at the 1% significance level. The coefficient of the lnEXPE variable was calculated as 0.7002. In this case, in case of a 1% increase in government expenditures, GDP is expected to increase by 0.7% on average. It can be said that from an economic perspective, the calculated coefficient is in the expected direction

The probability value of the lnEXP independent variable was calculated as 0.000. Thus, it is seen that the lnEXP variable is statistically significant at the 1% significance level. The coefficient of the lnEXP variable was calculated as 0.3122. In this case, a 1% increase in exports is expected to increase GDP by 0.3% on average. When analyzed from the economic perspective, it is expected that the increase in exports will affect GDP positively. It is seen that this coefficient of the calculation meets the expectations in from an economic perspective.

The probability value of the lnEXCR independent variable was calculated as 0.013. Thus, it is seen that the lnEXCR variable is statistically significant at the 5% significance level. The coefficient of the lnEXCR variable was calculated as -0.0234. Thus, 1% depreciation of the domestic currency will cause the GDP to decrease by 0.02% on average. It is thus seen that the coefficient is economically as expected.

The coefficient for the INF independent variable was calculated to be -0.000284. Even if the coefficient is economically in the expected direction, it is concluded that it is statistically insignificant when the probability value is examined. It can be said that inflation does not have a statistically significant effect on GDP for the countries covered in the study.

When we look at the calculated probability value for the Bot independent variable, it is seen that the coefficient is statistically significant at 1% significance level. 1% increase in foreign trade deficit is expected to decrease GDP by -2.37e-11 units on average. Although the direction of the coefficient is economically negative as expected, its effect on GDP is quite small.

The probability value for the SAPdummy variable was calculated as 0.456. It is concluded that the dummy variable added to the model is statistically insignificant. It is observed that the structural adjustment programs proposed by the IMF are ineffective on the economic growth of countries.

In addition, considering the F-statistic value that expresses the significance of the whole model and the probability value calculated for this value, it is seen that the model established is generally meaningful. The coefficient of determination (R2) in the model was calculated as 0.9138. In other words, 91.4% of the variations in GDP can be explained by the independent variables in the model.

Due to the presence of inter-unit correlation, autocorrelation and variance problems The model, was re-calculated with Driscoll-Kraay's estimator, which can produce strong standard errors in these three cases, the results obtained are as Table 8. In the results, it is seen that the coefficients are the same as the coefficients calculated by the fixed effects estimator, but the standard errors, t-statistics values and the probability values change accordingly.

Table 8: Fixed Effect Model (Robust)

Driscoll-Kraay's Robust model, dependent variable: GDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnIMF	0.0551363	.0363962	1.51	0.137
lnEXPE	0.7001607	.0432469	16.19	0.000
lnEXP	0.3122909	.025019	12.48	0.000
lnEXCR	-0.0234008	.0168327	-1.39	0.172
INF	-0.000284	.0000957	-2.97	0.005
BOT	-2.37e-11	9.69e-12	-2.44	0.019
SAPdummy	-0.0289312	.0403873	-0.72	0.478
Cons	-0.0360698	.6915893	-0.05	0.959
R-squared	0.9139			
F- statistic	495.57			
P-Value	0.0000			

When the results obtained from Driscoll-Kraay's estimator are compared with the fixed effects estimator, it is seen that in this model, lnIMF and lnEXCR variables lose their effect on GDP statistically, but INF variable becomes statistically effective on GDP.

The dummy variable added to the model was removed and re-calculated using the fixed effects estimator. Results are as shown in Table 9.

Table 9: Fixed Effect Model Without Dummy

Fixed effects, dependent variable: GDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnIMF	0.0536283	.0268969	1.99	0.047
lnEXPE	0.7017029	.0326563	21.49	0.000
lnEXP	0.3153378	.0331095	9.52	0.000
lnEXCR	-0.0232072	.0093661	-2.48	0.014
INF	-0.0003007	.0001861	-1.62	0.108
BOT	-2.35e-11	8.13e-12	-2.88	0.004
cons	-0.10987	.7934995	-0.14	0.890
R-squared	0.9137			
F- statistic	423.66			
P-Value	0.0000			

Considering the probability values and coefficients calculated for the variables, it was observed that there was no big difference from the model with the dummy added. In the same way, the dummy was removed from the model and re-estimated with Driscoll-Kraay's robust estimator. The results from the estimator are as in Table 10.

Table 10: Fixed Effect Model (Robust) Without Dummy

Driscoll-Kraay's Robust model, dependent variable: GDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnIMF	0.0536283	.0358931	1.49	0.143
lnEXPE	0.7017029	.0422671	16.60	0.000
lnEXP	0.3153378	.0284795	11.07	0.000
lnEXCR	-0.0232072	.0167611	-1.38	0.174
INF	-0.0003007	.0000923	-3.26	0.002
BOT	-2.35e-11	9.83e-12	-2.39	0.022
cons	-0.10987	.7127161	-0.15	0.878
R-squared	0.9137			
F- statistic	517.76			
P-Value	0.0000			

In the results obtained from this model, it has been observed that the variables lnIMF and lnEXCR lose their statistical significance as in the model to which dummy was added. However, removing the dummy variable from the model did not cause significant changes on the other independent variables.

4.5. GDP Trend

The trend in GDP for Tanzania, Uganda, Rwanda, Ghana, Zambia and Kenya is presented in Figure 1.

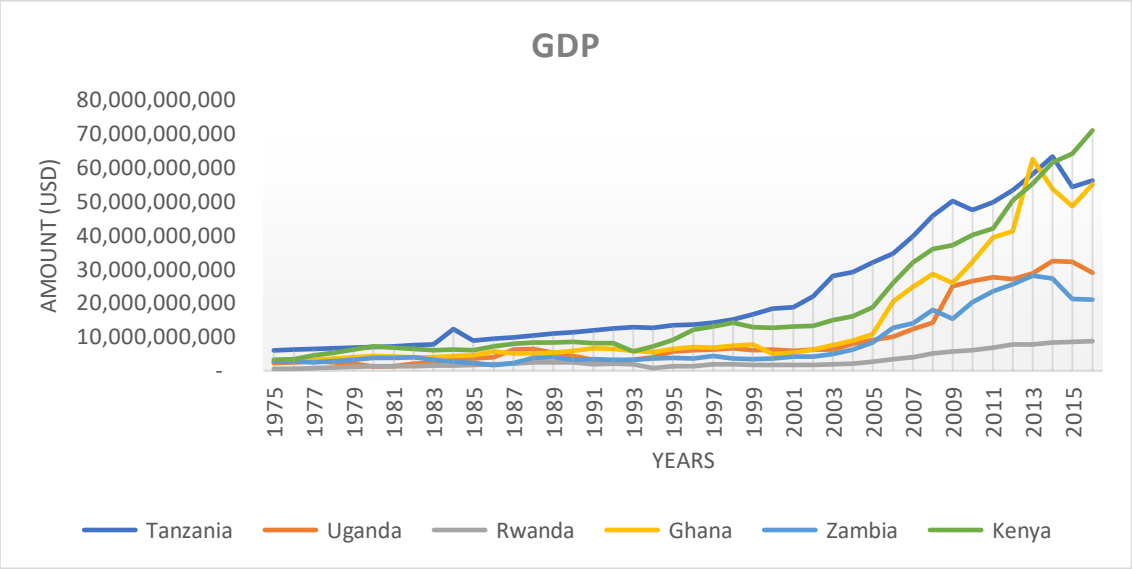

Figure 1: Trend in GDP

Source: Author's computation

Figure 1 above indicates that for all the countries studied, GDP had a positive trend for the period 1975 to 2016. Notably, GDP for all the countries recorded dismal growth in the years 1975 to 2002. However, subsequent years 2002 to 2016 recorded significant GDP growth. Notably, for all the countries studied, early 2000 recorded increased pressure from the international organizations including IMF and World Bank to implement far reaching measures meant to trigger economic growth. Some of the measures included privatization of public commercial entities, devaluation of local current to promote exports, increased inflation and opening of the economies. This study used GDP to show economic growth and the analysis show that there has been an increase in economic growth over the years even after the introduction of SAPs.

4.5.1. Exchange Rate Trend

The trend in exchange rate for Tanzania, Uganda, Rwanda, Ghana, Zambia and Kenya is presented in Figure 2.

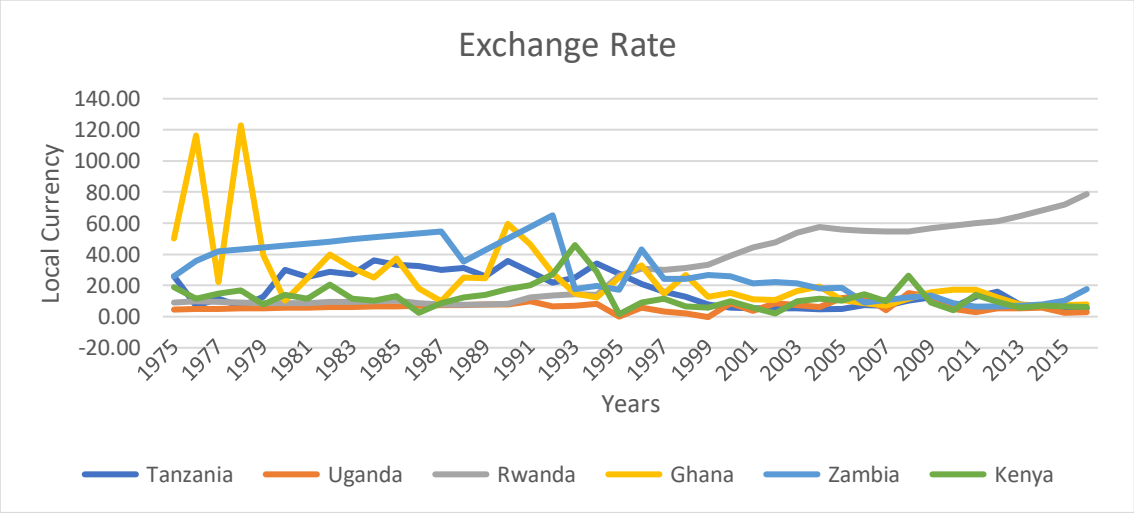

Figure 2: Exchange Rate

Source: Author's computation

In 1960, the USD to KSH exchange rate was at 7. As shown in the graph above, the rate was constant until about the year 1980 (meaning the USD to Ksh exchange rate had remained stable for 20 years straight).

After 1980 the value of the Ksh started depreciating against the dollar. Coincidentally this is when the country started engaging in SAPs with the IMF. After the year 1980, the Ksh

started facing a rapid depreciation. By 1992, the USD to Ksh exchange rate stood at 32 which was four times more the rate it had been 10 years before. Part of this can be attributed to being a result of the Structural Adjustment Programs that Kenya was undertaking which dictated that the Ksh had to be devalued against the USD. This is part of the monetary austerity that the IMF is involved in with the aim of making imports expensive and local products cheaper for exports.

4.5.2. Government Expenditure Trend

The trend in expenditure for Tanzania, Uganda, Rwanda, Ghana, Zambia and Kenya is presented in Figure 3.

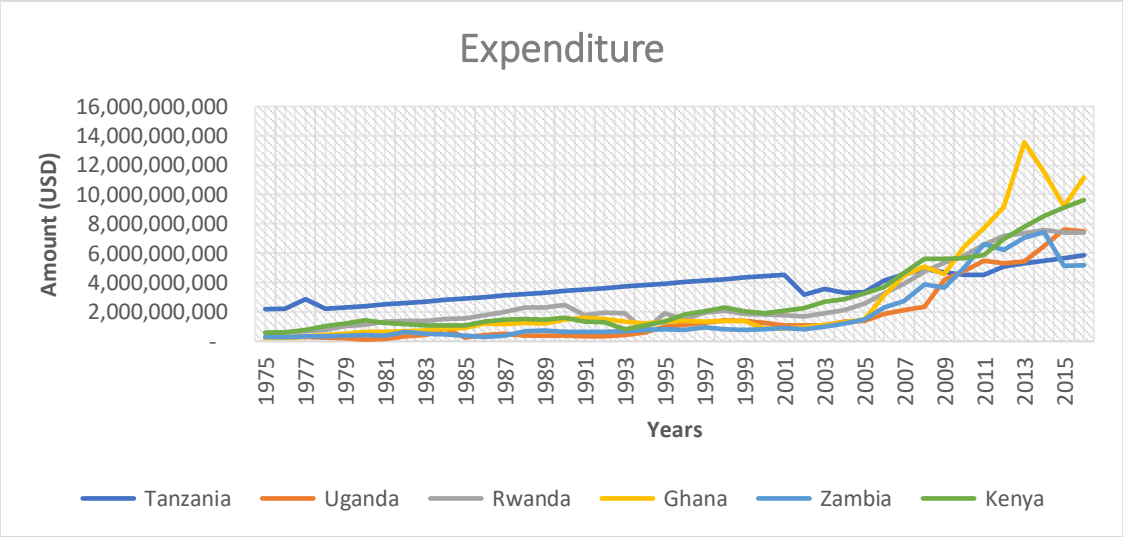

Figure 3: Trend in Government Expenditure

Source: Author's computation

One of the conditions set by the IMF is that governments should decrease their spending. This is usually part of the conditions undertaken via SAPs that sees to it that there is a reduction in government expenditure.

However, the graph above shows that the government expenditures continued to rise steadily over the years. It has been noted that a big percentage of various government expenditure is spent on recurring expenses rather than development projects and this has made the IMF and other stakeholders to raise concerns on this issue. It is also important to note that a big portion of recurrent expenditure is targeted towards paying off both domestic and foreign debts that the countries have.

For instance, Kenya's expenditure seems to have sky rocketed especially after the year 2010 when it introduced the devolved government under its new constitution. 47 counties were introduced under devolution and as a result of this, the administration costs of the counties coupled with expenditure on wages and salaries pushed the government expenditure to new levels (Muraguri,Ortiz et.al, 2018).

4.5.3. Total Exports Trend

The trend in total exports for Tanzania, Uganda, Rwanda, Ghana, Zambia and Kenya is presented in Figure 4.

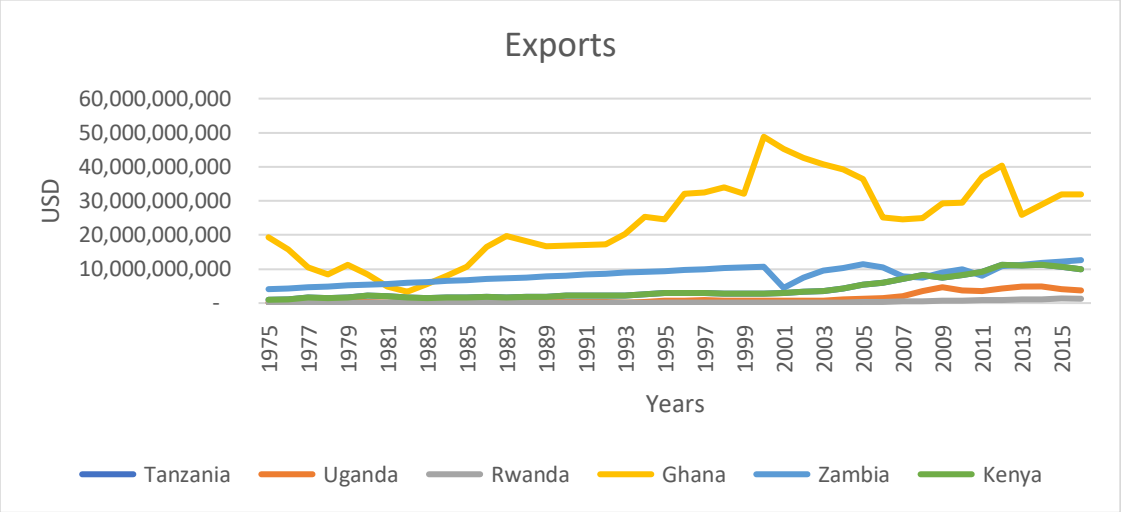

Figure 4: Trend in Exports

Source: Author's computation

The number of Africa's total exports has been on a rising trend from the 1960's with some minor fluctuations in between. The value of exports was seen to decrease during the 1980's because of the economic crisis experienced by African countries at that time due to the great fall in market prices that saw to it many countries affected.

4.5.4. Inflation Trend

The trend in inflation for Tanzania, Uganda, Rwanda, Ghana, Zambia and Kenya is presented in Figure 5.

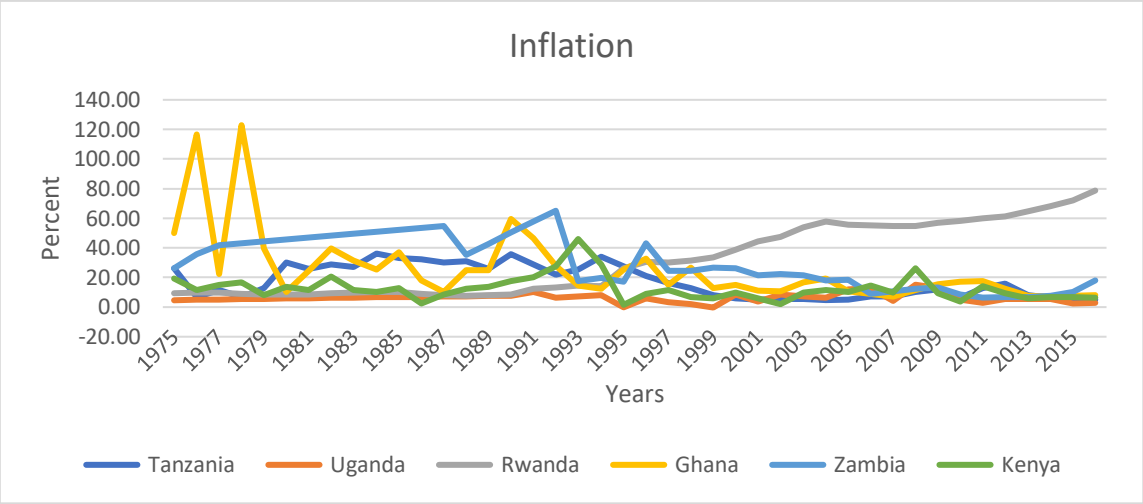

Figure 5: Trend in Inflation

Source: Author's computation

Rwanda has been having the highest percentage growth in inflation as compared to the other countries as seen in the graph above.

4.5.5. Balance of Trade Trend

The trend in balance of trade for Tanzania, Uganda, Rwanda, Ghana, Zambia and Kenya is presented in Figure 6.

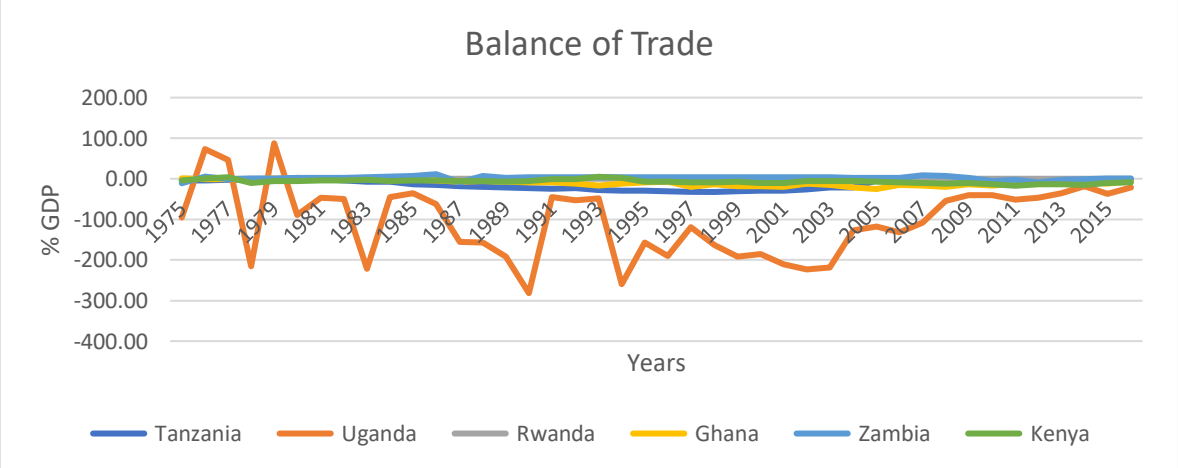

Figure 6: Trend in Balance of Trade

Source: Author's computation

Uganda has been having the most fluctuations in its Balance of trade as seen in the graph above. Its balance of trade has also been significantly negative as compared to the other countries.

4.5.6. SAP Loans

The trend in SAP Loans for Tanzania, Uganda, Rwanda, Ghana, Zambia and Kenya is presented in Figure 7.

Figure 7: Trend in SAP Loans

Source: Author's computation

Kenya is seen to have the highest record when it comes to SAPs. The country has simply had many programs applied which consecutively matches its borrowing history as it's the highest borrower among the 6 countries in this study.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This is the final chapter of the study and it comprises of summary, conclusions and recommendations based on the findings in chapter four.

5.2. Summary

The research findings sought in this study address the related objectives. The findings related to research question and objective include the relationship between the World Bank and IMF Structural Adjustment Programs and economic growth. According to the results obtained from the econometric tests carried out in concerning this study, structural adjustment programs in Africa have no effect on economic growth. The study thus concluded that GDP growth was not affected by SAPs but rather by other economic factors.

According to the results in this study, the variables that had a positive significant effect on GDP were government expenditure, IMF Loans and total exports. The fixed panel regression results showed that IMF loans had a positive impact on GDP whereas the Robust panel regression showed that although IMF loans had a positive impact on GDP, the effect was considered to be statistically insignificant.

With the results showing that IMF loans had a positive impact on GDP, it is interesting to note that among the 6 countries used in my study, the ones having the highest GDP growth were Kenya, Tanzania and Ghana. Coincidentally, these same countries were also having the highest amount of IMF loans. On the other hand, the lowest GDP growth was observed with Rwanda as compared to the other 5 countries. Coincidentally, Rwanda also had the least amount of IMF loans among the 6 countries in the study. This supports the findings in my study which concluded that IMF loans have a positive impact on GDP.

In both the fixed panel regression and the Robust panel regression, the variables that were seen to have a positive relationship with GDP were government expenditure and exports. On this note, it is interesting to see that Rwanda which had the lowest GDP

growth among the 6 countries also had the lowest level of exports thus supporting my findings which indicated that exports have a significant positive relationship with GDP.

In as much as SAPs have been seen to have an insignificant effect on GDP based on the results in my study. It is clearly seen that some conditions that have come with the SAPs have been found to shape the future of the African economies. For example, making state enterprises private has led to better management of these corporations which has led to more profitability and thus high tax returns for the government. However, it is important to note that with privatization, many people lose their jobs through retrenchment schemes which are not favourable for the citizens affected. This has been heavily criticized as research has shown that high level of unemployment leads to a rise in poverty levels in Africa which consequently leads to high crime rates.

Opening up African countries to foreign investments and liberal trade has had its contribution to a higher GDP due to the fact that foreign investors directly inject foreign capital into the continent. However, trade liberalization has been under great criticism as concerned parties who are not in favour of this policy have raised arguments that the liberalization has led to the collapse of some of the industries in the continent after facing high competition from foreign firms. A good example is the local textile industry in Kenya which has been highly affected due to availability of cheaper foreign alternatives.

5.3. Conclusions

Most Countries in Africa have had some challenges with complying to SAPs and some of the programs have been an on and off affair which have interrupted the smooth flow of operations. A good example is seen with the privatization of some of the state-owned enterprises like the National Cereal Board (Kenya) which the government did not find favourable and did not comply to.

Another issue has been the government expenditure which has been scrutinized severally by the IMF. Most government expenditures in Africa have been on a rising trend over the years and efforts to reduce the budgets has been met with a lot of opposition.

The results concur with other studies such as Dreher (2005) and Munthali (2004). This shows that SAPs do not have a significant effect on economic growth. However, the loans from IMF are seen to have a significant positive effect on economic growth.

5.4. Recommendations

From the above conclusions, the following recommendations were made:

- For achievement of better GDP, the African governments should aim at having a higher percentage of their expenditure budget targeted on development projects rather than incurring expenses.
- In order to have a positive balance of trade account, developing countries in Africa should invest heavily in having more exports which will in turn boost the GDP as my findings have shown that increase in balance of trade deficit levels lead to a decrease in GDP.
- In as much as Trade liberalization is encouraged, the African governments should also give priority to locally manufactured goods over cheap imports in order to protect the local industries which will in turn boost employment to the citizens and lower the unemployment rate.
- Mismanagement of funds has been an outcry in regard to the government activities in most developing countries in Africa. There should be proper mechanisms put in place to curb corruption and mismanagement of funds as they hinder economic growth due to the fact that money ends up in the hands of few advantaged individuals at the expense of development projects and social services which are supposed to be offered to the public.

5.5. Future Research

Future research should be done on this topic especially on IMF SAPs and the effect of government expenditures on economic growth. This is relevant because SAPs usually rally for a reduction in government expenditure with the argument that this will help in economic growth. However, the results in my study show that government expenditure has a positive relationship with GDP and thus an increase in government expenditure causes and increase in GDP. A further study should be done to understand the components of the government expenditure that boost economic growth.

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RESUME

Pauline Wanjahi Muiyuro is a Financial Econometrics student at Sakarya University. She also holds a Bachelor's degree in Business Administration with a major in finance and banking from Kampala International University. Pauline has also worked in various organizations such as the postal corporation of Kenya (finance department), UN Women (operations department), UNDP Biofin and UNDP GPC where she is currently working in the Global policy center for sustainable Ecosystems and desertification. Pauline has a keen interest in finance especially in sustainable development and how finance can support sustainable Ecosystems