Hacettepe University Graduate School of Social Sciences

Department of Economics

FOREIGN AID AND ECONOMIC GROWTH IN SUB SAHARAN AFRICA COUNTRIES
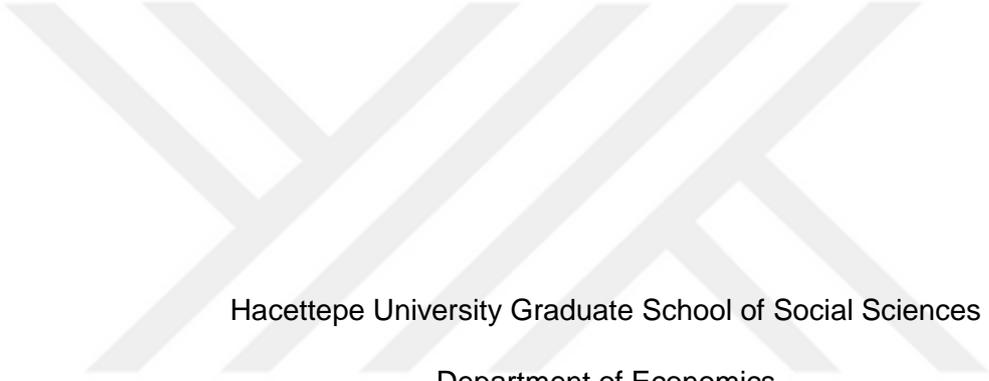
Amin Fikila SALIM

Master's Thesis

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KABUL VE ONAY

Amin Fikila SALIM tarafından hazırlanan "Foreign Aid and Economic Growth in Sub Saharan Africa Countries" başlıklı bu çalışma, 18.06.2019 tarihinde yapılan savunma sınavı sonucunda başarılı bulunarak jürimiz tarafından Yüksek Lisans Tezi olarak kabul edilmiştir.

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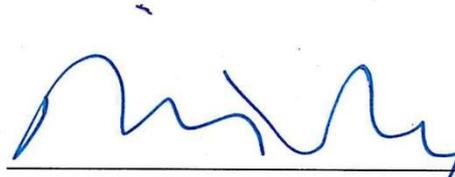
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Bu tez çalışmasında Sayın Prof.Dr. Timur Han Gür Ortak Danışman olarak görev almıştır.

Yukarıdaki imzaların adı geçen öğretim üyelerine ait olduğunu onaylarım.

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ETİK BEYAN

Bu çalışmadaki bütün bilgi ve belgeleri akademik kurallar çerçevesinde elde ettiğimi, görsel, işitsel ve yazılı tüm bilgi ve sonuçları bilimsel ahlak kurallarına uygun olarak sunduğumu, kullandığım verilerde herhangi bir tahrifat yapmadığımı, yararlandığım kaynaklara bilimsel normlara uygun olarak atıfta bulunduğumu, tezimin kaynak gösterilen durumlar dışında özgün olduğunu, **Prof. Dr. Timur Han GÜR** danışmanlığında tarafımdan üretildiğini ve Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü Tez Yazım Yönergesine göre yazıldığını beyan ederim.

11/07/2019

Amin Fikila SALIM

ACKNOWLEDGEMENTS

ABSTRACT

SALIM, Amin Fikila. *Foreign Aid and Economic Growth in Sub Saharan Africa Countries.* Master's Thesis, Ankara, 2019.

The effects of external aid to the developing countries on economic growth have been controversial in the economic literature for many years, and economists have made various statements on this issue. This thesis analyzes the effects of foreign aid on economic growth in Sub-Saharan African countries. In this study, the annual data of 29 sub-Saharan African countries between 1990 and 2017 were used. The main hypothesis of the thesis is that foreign aid promotes the economic growth in Sub-Saharan Africa. The hypothesis was tested using panel data on foreign aid. As a result of the large-scale literature review and econometric analysis, the foreign aid of developed countries and organizations to Sub-Saharan African countries has had a negative and insignificant impact on the economic growth in the long-term.

Keywords

ÖZET

SALIM, Amin Fikila. *Sahra Altı Afrika Ülkelerinde Dış Yardım ve Ekonomik Büyüme*, Yüksek Lisans Tezi, Ankara, 2019.

Gelişmekte olan ülkere yapılan dış yardımların ekonomik büyüme üzerindeki etkileri iktisadi literatürde uzun yıllarca tartışma konusu olmuştur ve ekonomistler bu konu hakkında çeşitli beyanlarda bulunmuştur. Bu tez, Sahra altı Afrika ülkelerinde dış yardımların ekonomik büyüme üzerindeki etkilerini analiz etmektedir. Bu çalışmada 29 Sahra altı Afrika ülkesinin 1990 – 2017 yılları arasındaki yıllık verisi kullanılmıştır. Tezin ana hipotezi, dış yardımların Sahra altı Afrika ülkelerinde ekonomik büyümeyi desteklediğini içermektedir. Hipotez panel dış yardımlarla ilgili panel veri kullanılarak test edilmiştir. Yapılan geniş çaplı literatür taramasının ve ekonometrik analizlerin sonucunda gelişmiş ülkelerin ve kuruluşların Sahra Altı Afrika ülkelerine yapmış olduğu dış yardımlar, ekonomik büyüme üzerinde farklı etkilerde bulunsa da uzun vadede önemsiz ve negatif etki oluşturmuştur.

Anahtar Sözcükler

Dış yardım, ekonomik büyüme, kalkınma, Sahra Altı Afrika, yabancı yardım

TABLE OF CONTENTS

ABBREVIATIONS

DAC: Development Assistane Committee

IMF: International Monetary Fund

LIC: Low-income countries

LMI: Lower-middle income countries

UMI: Upper-middle income countries

OECD: Organization for Economic Cooperation and Development Countries

SAL   Structural Adjustment Loan

SSA: Sub-Saharan Africa

WB: World Bank

WDI: World Development Indicators

CONTENT OF TABLE

CONTENTS OF FIGURES

INTRODUCTION

Throughout history, all humanity wanted to live wealthier and prosperity and tried to develop and grow in that direction. Both individual and social basis, after living as hunter-gatherer, humanity started to make production and accelerated development and civilization process. However, on the one hand, especially after the emergence of states and empires, humankind history had faced with many negative events such as war, natural disaster, epidemic and invasion. Although societies sometimes solve these problems based on their power and potential, there were times when they needed help and support from other societies. Therefore, the matter of assistance and cooperation has been a critical issue and discussion for states and nations throughout history.

Although the need for foreign aid and assistance by states and societies depends on spiritual reasons and needs, the main purpose of these assistances has been the economic situation and indicators, especially for governments. The foreign aid matter and its relevance with economic growth and development goes back a long way in history of humanity and international relations community. Especially, during the period of colonization of big empires in Africa and South Asia in 18th and 19th centuries and after World War II demolition in Europe, external aid and official progress assistance from rich countries to developing and needy countries has an important place for economic, politic and social history of world. Most especially, after big and destructive wars and colonization process, developed countries has used a tool of foreign aid and assistance for some aims. These aims were contributing to economic and social growth and development of countries that are undeveloped and need of help, and contributing to gaining control and profiting from these countries politically and economically.

The cohesion between foreign aid and growth of economy can appear in so important place in economics literature and there is a currently argumentative

debate about of its effects. With many kinds and objectives of foreign assistance, this topic had embodied the world history from various angles throughout history. Especially in the last two centuries, Africa continent and its countries like Sub-Saharan part had faced with need for foreign assistance and official development support because of wars, invasions, epidemical problems etc. Therefore, this paper will investigate and interpret the relationship between foreign aid or ODA and growth of economy in Sub-Saharan Africa countries with data, econometric calculations and consequences and it will determine the promotion and strength of foreign aid to economics growth for Sub-Saharan Africa.

In these days, the initial goal of foreign assistance is to make a contribution and stimulate the economic growth of countries and support the development and welfare process. Although, the people in academic community and decision makers have debated the impact of external assistance on growth of economy and development operation, the foreign aid policies and applications has an important place in international economic relations. Especially, in last decades, many kinds of foreign aid have different impacts and results on different countries. Sometimes, these foreign aid types used to promote the reconstruction and organization and to support and accelerate the development and welfare process of undeveloped and poor nations in terms of food, water sources, finance, education, health etc.

Throughout history, the foreign aid had an important role as struggle with ideologies like between capitalism and communism, and as a strategy development in international political scene. However, debates about the effectiveness of foreign aid policies had continued because of some cases. Many people and decision makers esteem that the foreign aid decisions had negative results on undeveloped countries and even they increased poverty and inequality of opportunities, so these created a corruption problem like growth of gap between classes in societies. For example, the financing and promoting of Sub-Saharan Africa countries by IMF and World Bank was not efficient and consistent

because of many factors like types, process, time and conditions of foreign aid. Therefore, we will interrogate the effectuality of foreign aid or official development assistance programs (ODA) on 29 countries in Sub-Saharan Africa region.

To investigate the foreign aid and its relationship with economic growth and development in Sub-Saharan Africa region, primarily, we can look at the concept of foreign aid or ODA to clarify definition. Then, we can look over the overall economy of Sub-Saharan African countries to comprehend the need for foreign aid and assistance. We will examine the 29 Sub-Saharan Africa countries, especially low-income countries and needed for foreign assistance in respect to World Development Indicators database of World Bank, IMF, OECD and other official data sources. Finally, we will analyze the foreign aid and economic growth relation with numerical and statistical calculations and econometric models in third chapter and then will come to a conclusion about this relation.

CHAPTER ONE

1. LITERATURE REVIEW

In the economic literature, the most outstanding and substantive debate about this matter is the relationship direction and power. In the last decades, many economists and other scientists had studied about the effectiveness of foreign aids and donations and they argued and said many things with empirical results and data.

In early studies, Chenery and Strout (1966) considered foreign aid and donations ease domestic savings and foreign exchange constraints. According to them, foreign aid increases the investments and supports the increase of the level of income with supplements. Therefore, foreign aids are useful for undeveloped countries to encourage economic growth. Furthermore, in the literature, some scientists argued and determined the affirmative relationship between foreign aid and economic expansion and growth with causality tests like Dhakal, Upadhyaya and Upadhyay (1996). They tested this causality and relationship for some African and Asian governments and they resulted the positive relationship about foreign aid and economic growth.

Furthermore, Papanek (1973) concluded same results of positive relevance between foreign aid and economic growth, but he also insisted that half of his sample countries indicate that there are no causality and relevance between saving rates and foreign aid. There are also many papers that demonstrate the positive relevance between foreign aid and growth of economy and development process like Dowling and Hiemenz (1982), Gupta and Islam (1983), Burnside and Dollar (2000), Hansen and Tarp (2000), Dalgaard et al. (2004). However, there is a more important study that Levy (1988) found that there are notable and

positive connection between the ratio of aid to gross domestic product (GDP) growth rate and growth rate of economy for Sub-Saharan Africa region.

There is another research that McGillivray (2005) the effect of ODA programs for African countries that increases economic growth and reduces poverty rates. Furthermore, Addison, Mavrotas and McGillivray (2005) investigated the foreign aid flows to African states and they arrived at a decision that foreign aid stimulates the economic growth and minimizes the poverty in Africa region. The other study that Karras (2006) also investigated and showed the relevance and correlation between assistance and economic development and growth and they determined that there is favorable, significant and permanent correlation between them.

In other respects, there are many claims that there is negative correlation between foreign aid and economic results and development process. Griffin and Enos (1970) stated that the there are no positive relevance between foreign aid and economic growth. According to Griffin and Enos, foreign aid and donations creates the political corruptions and damages to states and democratic regimes. Furthermore, this leads to decrease of disposal rates because of circumstances and kinds of foreign aid.

Also, some researchers analyzed the connection between foreign aid and economics growth with GNP and GDP data like Vivodas (1973). Vivodas finds a negative causality between foreign aid and economic growth like Mosely, Hudson and Horrel (1987). They also determined that there are negative and important relevance between foreign aid and financial expansion and growth in sixties and seventies, but they also ensue that there are negative but insignificant relevance in 1970-1980 period. The other studies that claim the negative relationship or no relation between foreign aid and financial improvement are, Mosley (1980), Boone (1996), Jensen and Paldam (2003) and Brautigam and Knack (2004).

One of the foreign aid types and ODA methods is foreign direct investments. In the last decades, private capital and sources had flowed to undeveloped regions and countries at important rates. In the last twenty years, even the foreign direct investment has grown zippier than assistance and donations to undeveloped or developing countries. In the literature, some researches argued that the FDI could boost economic development and increase the economic growth more effectively than foreign aid and donations. (Trevino and Upadhyaya, 2003). Furthermore, for example, Borenzstein, Gregorio and Lee (1998) tested the impacts of foreign direct investments on economic development and growth in 69 developing countries in last 20 years and they detected that the FDI is a momentous source for financial and economic growth with investments and development.

Furthermore, Bosworth and Collins also resulted with some examinations and tests that determined boosting economic growth with FDI for some growing states of Asia, Africa and Latin America between 1978 and 1995. Another study that Trevino and Upadhyaya (2003) stated that foreign direct investments contribute to economic growth with investments and capital flow, positively.

At the same time, there are many papers, studies and researches about the cohesion between aid, growth and development process in the literature. We will do short additions regarding these studies, again. Annen and Kosempel (2009), analyzed the impact of foreign assistance on economic growth and they found two results: While the non-technical aid is insignificant on economic growth, technical aid and assistance has positive and significant impact on growth of economy. Asiedu (2014) researched the promote power and relation of foreign aid on economic growth for Sub-Saharan Africa in terms of educational aid and resulted that aid for primary education has affirmative and important impact on economic growth, but post-primary education aid has negative effect on growth or no significant.

Minoiu, Sanjay and Reddy (2009) conducted a research about the long-run relation between development aid and growth, they obtained positive sequence on economic growth in the long-term, and these impacts are significant. Hatemi-j and Irandoust (2005) investigated evidences about foreign assistance and economic expansion for some developing countries and they found positive relevance. There is another study of evidence from pooled mean group estimator about Sub-Saharan Africa countries, also by Ndambendia and Njoupouognigni (2010). They decided that positive correlation between assistance, FDI and economic growth. Leontief (1964) also found that there can have affirmative potential and can be positive impact of foreign aid on economic growth depending on program and process.

Outside of facts of Africa countries, the researches can be observed about other areas and countries. Adelman and Chenery (1966) studied about the connection between external aid and economic growth for Greece case and concluded that there is successful plan of foreign aid to Greece. Furthermore, Alvi and Senbeta (2014) investigated the aid, growth and poverty relation and they found that there are heterogeneous effects on growth and poverty. Furthermore, Veiderpass (2015) analyzed the relation between productivity and foreign assistance for 89 low and middle-income countries and she found that large aid receivers are affected with significant productivity decrease. Also, Gomanee, Girma and Morrissey (2005) found that the significant and affirmative relation between external assistance and economic expansion for Sub-Saharan Africa area, and they specified that one percent increase in aid over GNP promote the economic growth with 1/4% rate. Therefore, we can see many studies that examine the relevance and connection between foreign aid, ODA, foreign direct investment and growth, poverty and scarcity and some studies found the negative point, but a large majority of these studies found the positive and significant relevance between these concepts.

On the other side, we check up the formal and updated reports and bulletins about overview of economy and macroeconomic indicators of Sub-Saharan Africa countries. The cause is that the attitude and macro & micro economic decisions are related to need for foreign aid and its application process. Therefore, we can benefit from some official and confidential sources and databases of institutions like the Organization for Economic Cooperation and Development (OECD), World Bank (WB), International Monetary Fund (IMF), the Freedom House and other governmental and official institutional sources.

To review of the economic and social situation and policies of Sub-Saharan Africa region, we can benefit from development reports, economic outlook reports, development co-operation reports, development and economic aid reports, efficiency reports and regional economic outlook reports of Sub-Saharan Africa region and countries. These reports include the data, statistics, policies and final statements, annually or periodically. These inventions and findings can be handy to check up and understand the dependence between foreign aid & assistance and economic growth & development.

Therefore, according to literature and official reports, many papers and studies try to prove the relationship between the economic development & growth and external assistance & official development aid, positively and negatively.

CHAPTER TWO

2. FOREIGN AID AND ECONOMIC GROWTH

To understand better the relation between foreign aid and economic development, we need to understand the concept of foreign aid, economic growth, its components, reasons and results. Scientists and researchers had prospected the foreign aid, official development assistance (ODA), economic growth, development, welfare and other relevant concepts for a long time, academically and scientifically. Thus, to comprehend the meanings and relevance, we should express a number of definitions and concepts like foreign aid, foreign direct investments, growth, development, investment and some policies.

2.1. Foreign Aid Concept and Definition

2.1.1. Definition of Foreign Aid

To deduce the notion of foreign aid and its relevance with economy, we can identify the definition of this notion. Foreign aid is the financial assistance and backing of universal organizations, institutions or countries to needy countries and regions. Stated in other saying, foreign aid is transnational transfer process of capital, goods and services, in general definition. Furthermore, when we look at the literature, we can see the definition that foreign aid is the financial support and donation of financial, and commodity funds by rich states to destitute and weak nations and societies to fulfill the needs of people of destitute nations, according to Paula Hoy. (Hoy, 1998). The other definition is also that the interchange of money, commodities, goods and services from one country to another country, society or region. (Morgenthau, 1962). On the other side, there is also more technical meaning of OECD Development Assistance Committee

(DAC). In accordance with OECD, external assistance is stimulating and sighting of economic growth and welfare. (OECD, 2019).

In accordance with this official illustration of foreign aid and assistance, transition of money or goods and services is to encourage and stimulate economic growth of nations and welfare of people. The foreign aid is also called as foreign assistance, external aid, external assistance etc. In other respects, according to some official institutions and sources like OECD, official development assistance (ODA) can be considered as a term of foreign aid or foreign assistance. Thus, we will use these descriptions and concept by location.

As we see from the identification, external aid or foreign assistance can be done in a method of a loan, grant or donation. Besides, states or institutions can do assistance in cash or in kind. These kinds can be food, health goods and services, educational services, military tools and equipment, technical services, trainings etc. These aid plans and types are used as official development assistance, generally. This program (ODA) is backing program that contribute to accelerate the economic growth and social development of needy countries and regions. The official organizations and councils like WB, International Monetary Fund (IMF), OECD, World Health Organization (WHO), World Trade Organization (WTO) organizes and regulates the official aid and assistance plans and programs to needy and undeveloped countries and regions.

To understand the definition of foreign aid, we can look at types or methods of foreign aid and assistance, actually. Morgenthau explained the forms of foreign aid as humanitarian aid, subsistence aid, military aid and support, bribery aid, prestige and economic development aid and programs. (Morgenthau, 1962). According to Hans Morgenthau, humanitarian aid is a political aid type and it is given to needy regions and regions during natural disasters, scarcity or other natural and human crises. For example, OECD members disburse between $100

and $150 billion each year for external assistance. (OECD, 2019) Furthermore, subsistence foreign aid is given to governments to support fundamental public and government activities that can affect the people directly. Bribery foreign aid means that the aid consists of political aims directly and it is given to leaders to apply policies about trade, war, international relations etc.

Another type of foreign aid, prestige aid, helps undeveloped and developing countries about technological development process and helps to industrialization of a country. Although martial aid is not considered by some people as foreign aid because of effects and aims, Morgenthau mentioned that military aid is to help and supply military power to a country with materials and manpower. Especially, during the Cold War, the USSR and US used this foreign aid type for some important countries to protect themselves. On the other side, martial aid and assistance applications are not considered as assistance because these programs just promote security of states. (Haroon, 2003).
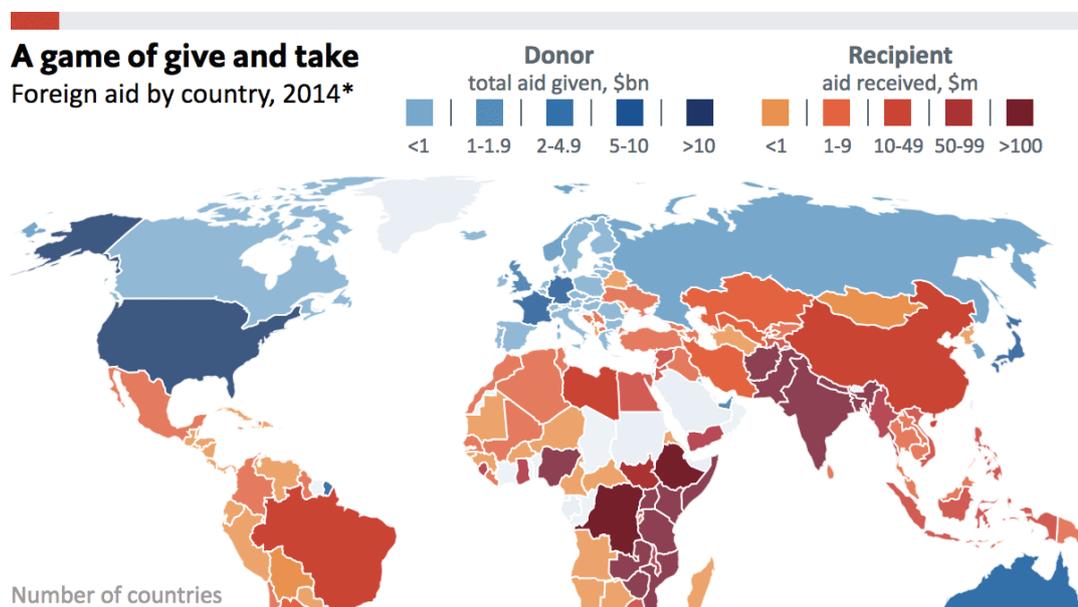
Figure 1: The map of foreign aid donor and recipient countries (The Economist, 2014)

We can observe also in historical process two channels of foreign aid as bilateral and multilateral type. Bilateral foreign aid is one-to-one aid type while multilateral foreign aid type is aid from a group of governments or organizations to needy states. (Singer. 1982). Therefore, theoretically, foreign aid is delivered to different countries and regions for different financial and economic aims to help needy people and states. Moreover, we can consider the sorts of foreign aid like tied, project or voluntary aid. To support a particular project, plan or aim, governments and official organizations can use these aid types.

Eventually, the foreign aid is a boost of a country or organization to needy, undeveloped or weak countries or regions for some reasons and purposes, by definition. The reasons of foreign aid are generally humanity problems, peace and tranquility in a region, decrease in inequalities, positive position and relations. Therefore, the foreign aid has a significant place for developed or undeveloped countries in order to their profits, advantages and goals.

2.1.2 Concept of Foreign Aid

While needy or weak countries need for external assistance and official development programs to grow and develop economically and socially, developed and wealthy countries want to do assistance and backing to jack up their own decisions and their self-security and position. Hence, all countries have a purpose and plan about the foreign aid and assistance in short and long terms and these aims, and plans can be friendly or hazardous. Foreign assistance can also be used for international and diplomatic relations and aims to takeover in international area and to have a voice about politics about the needy and recipient countries or regions, directly.

Furthermore, there are many purposes or aims of foreign aid or ODA like supply of necessary raw materials or intermediate goods for production or moral and

cultural aims like spread of language, religion, traditions etc. These moral and cultural aims can be seen before 20th century, especially for empires. However, the main and apparent aim of the foreign assistance is to solve the humanitarian problems like wars, terrorism and crimes, diseases, scarcity, and economic non-development.

When look at the humanity history, we can see infinitely many examples and cases of foreign aid between tribes, governments, countries and regions. However, the first serious and big examples of foreign aid were in 18th and 19th centuries in European area and colonies of the empires and states in North and South Africa and India. To gain control and increase military power in undeveloped regions, states wanted to improve the economic, military and social structure of the regions. Then, the first and second World Wars had caused that foreign aid issue is more important for all people. Besides, the end of the World War II caused two international duration in terms of foreign aid and ODA. These are independent states and independent economic development. Therefore, especially after Second World War, cooperation between countries gained prominence for all countries on the world and the establishment of international financial organizations and institutions accelerated. For example, the International Money Fund (IMF), WB, Multilateral Investment Guarantee Agency can be examples for this statement. These organizations and institutions are in charge of development and economic stability of states, initially. Because after the world war, the entire world changed fast, countries also had needed various sources of economic, social and political development.

The most substantial and fundamental concept of external assistance is economic development help. The foreign aid aims to accelerate economic development and stimulate economic accruement of countries with industrialization and trade policies. This backing or assistance kind is form of transfer of money to destitute countries to fix and reconstruct economic structure and stimulate economic development. Therefore, this type of foreign aid aims the

economic growth and development process of undeveloped governments in different perspectives such as investment, production, financial situation and balance of payments etc. (Hoy, 1998). Most undeveloped countries and regions depend on external supports and aids to catch developing and developed countries and states in terms of economic development and income. The primary aim of donor and supporter countries & organization and recipients is social and economic development. This development includes the decrease of poverty, scarcity and opportunity inequalities and increase in per capita income and social possibilities.

External aid can be seen in several forms, as stated above. Individuals, states, governments, non-governmental organizations and institutions have used these aids. The most common aid types according to historical examples are food and essentials aid and other aid types in kind. Developed and wealthy states give the assistance and aid to destitute countries and areas to get better living standards and conditions. (Lancaster, 2007) According to Lancaster, also, approves those donor countries uses the foreign aid plans to expand and develop their political and international power between countries and recipient regions. Moreover, economists and other scientists have founded that the foreign assistance is used for benefits and interests of donor countries for some purposes. For example, Bigsten, Platteau, and Tengstan (2011) and some other scientists claimed that European countries do not want to optimize and allocate the foreign aid to needy countries and regions because of some benefits and profits from these recipient regions. Therefore, the foreign assistance or external aid has some motives and these changes from country, aims and purposes.

Although the states or institutions have an objective or purpose behind the assistance or development aid, the recipient countries have needs and plans, also. Because they need to perform their own necessities and solve problems, they should use these foreign aid plans and programs efficiently. Therefore, there will be a matter of efficiency or effectiveness of external assistance and backing.

Is foreign aid effective to support needy countries, really? Can foreign aid promote the economic growth and stimulate the economic activity, positively? These problems and questions take up significant space in economic literature and social contents. Therefore, the argument and concept of foreign assistance and development assistance is very effective about the promotion and power on economic growth and development process.

2.2. The Importance and Effect of Foreign Aid

As mentioned above, because the tribes, societies, countries, states or organizations had faced with the issue of lack of resources, the foreign assistance issue had an important place for economic and social growth and development, throughout history. There can be varied causes of usage of foreign aid or ODA. The assistance is designed to support the economic activity or accelerate the growth of an economy with financial or in-kind aid types.

This assistance is significant and important with some reasons and benefits for needy or developing countries. Although many countries have done this assistance in terms of monetary, the developing countries has benefits in terms of some ways. For instance, infrastructure is one of the main matters of some areas and continents like Africa. The road, bridges, sewage systems and aqueducts and electricity can be built with the assistance of developed countries or organizations. Furthermore, agricultural technology and water resource is another problem for Africa continent because of the lack of technological development and drought. The technical and non-technical foreign advices can help the construction of draw well and duct systems. On the other side, the foreign assistance of education, health, martial or financial can provide the acceleration of the growth and development process of undeveloped, weak or poor countries.

Except these humanitarian and social matters, the foreign assistance is effective mean for diplomatic relations and policies. While developed countries uses the foreign assistance programs to save their images and positions on the world, needy countries or organizations want to benefit from the assistance or aid to survive and to have strong support behind. However, this aims and reasons can cause problems about independency and democratic regimes. The political and diplomatic aims of foreign assistance may infests the structure of democratic system and civil liberties. (Reci, 2014) Therefore, although the external assistance to needy or developing countries have good intention and aim, the results or impacts may differ from expected.

The discussions about the impact of foreign aid and ODA program to assist people, to develop living conditions and to contribute to the increase in growth of economy had continued for a long time. Some economists and opinion leaders in academic communities claim that the foreign aid policies and decisions are not forceful and sufficient and even these had increased the gap between needy and wealthy classes in many cases. For instance, according to some development economists like Peter Bauer, "Development assistance is not necessary to rescue poor societies from a vicious circle of poverty. It is far more likely to hold them in that state. It stimulates dependence on others. It instigates the idea that forming from poverty based on external aid rather than on people's own efforts, motivation, arrangements and institutions". (Bauer, 1976)

Therefore, some economists like Peter Bauer thinks that the foreign aid and donations from developed and wealthy countries to necessitous and needy countries creates the issues that political and economic dependence, colonialism, laziness, fast consumption and lack of motivation to produce. On the other side, some economists like Dalgaard, Hansen and Tarp (2003) think that the official development assistance (ODA) method is effective process for undeveloped countries, even in bad conditions and environment. The purpose of external aid is to make differences in living conditions of people and decrease in inequalities.

It should provide to reach easily fundamental needs and essential conditions for wealthy and comfortable life.

Therefore, we will examine and research the efficiency and results of foreign aid and donations to Sub-Saharan African countries and determine the result of assumption that ODA (foreign aid) can contribute to growth of economy in Sub-Saharan Africa countries.

2.2.1. History and Examples of Foreign Aid

In the interest of analysis of the effect of foreign aid and comprehend the concept, we should look over the historical background of foreign assistance and development aid. Actually, modern foreign assistance plans and programs can be seen from 18th and 19th centuries in European countries and its colonies on the world. Particularly, the martial assistance and technical advices from the empires and states to small tribes, countries and important regions strategically was designed to help saving of position and international power. For example, the subsidies of Prussia to its allies and friend countries can be an example for foreign assistance history. Furthermore, the foreign assistance as a money transfer, military aid, agricultural technology aid or health assistance of European countries and empires to colonies in Africa, Asia, Latin America or the Balkan region can be an example. (Williams, 2013) Rich and strong countries and empires had given the money and in-kind aid to support substructure such as roads, railways, sewage platforms, sea ports and they want to build strategical base camp to gain control against opponents.

If we continue, we can see real and big development and growth process with foreign assistance and external aid after World War II in European area. World War II had created great damage in Europe and in nearby places. As from 1945, millions of people died, the largest cities of Europe were destroyed and, in some regions, even the most basic needs and essentials could not be met. By way of

the states that are under heavy burdens could not be able to fix their own damages, the foreign assistance and aid issue had gained importance again. Especially, US and the USSR, moving towards becoming a super power, shaped their foreign policies in this direction to gain power and control the international scene. Furthermore, because the USSR that defeated Nazi Germany (Third Reich) want to propagate the ideology of communism in European area and then Middle East region, it urged the US to take measures in this direction. (Grant, 1979) Although, the apparent aim of the foreign aid and assistance policies is to reconstruct the Europe and accelerate the economic growth, the primary objective of the US is to improve national security and martial capacity of European countries to inhibit the USSR and its ideology, communism. These foreign aid policies that started in the late 1940s concentrated to European countries and then Asia, South America and Africa continents on the world.

After the WWII and destruction of European area and Asia countries, these countries needed the massive foreign aid and supports. The foreign aid policies and recovering of European and Asian countries, they also focused on the external aid decisions and inflow of FDI & portfolio leaks to developing and undeveloped countries. Developing and undeveloped countries are defined and characterized by lower level of income, higher level of unemployment, unskilled industrial capabilities, high poverty and lack of social development. These matters of developing or needy countries formed needs of foreign aid to speed up the recovery and reconstruction process and support to domestic resources of these nations. These countries benefit from the foreign aid from developed countries one time or continuingly depending on conditions. For example, Sub-Saharan African countries take advantage of foreign aid program from big developed nations on the world since 1980s and they still need and collect these aids to sustain the vital and fundamental social and economic activities. We also examines this foreign aid type and process in the history of Sub-Saharan Africa region.

The end of Second World War induced the consist of new era in terms of financial and social on the world. The formation of the USSR caused the formation of new foreign decisions and policies of the US because of communism. That away, the Truman doctrine and the Marshall Plan emerged that has affected the history of Europe and Middle East, even today. Because of the communism pressure in South Europe and Turkey, the Truman Doctrine aid policies was started to be applied with military and economic aid worth $400 million. (May, 1948) Then, in 1947 again, the US launched the new aid program of Economic Recovery Program for European countries to recover and reconstruct. This assistance proposal passed by the Marshall Plan, also. Otherwise, the foundation of the North Atlantic Treaty Organization (NATO) aimed to prevent the spread of communism by the USSR and used the foreign aid method.
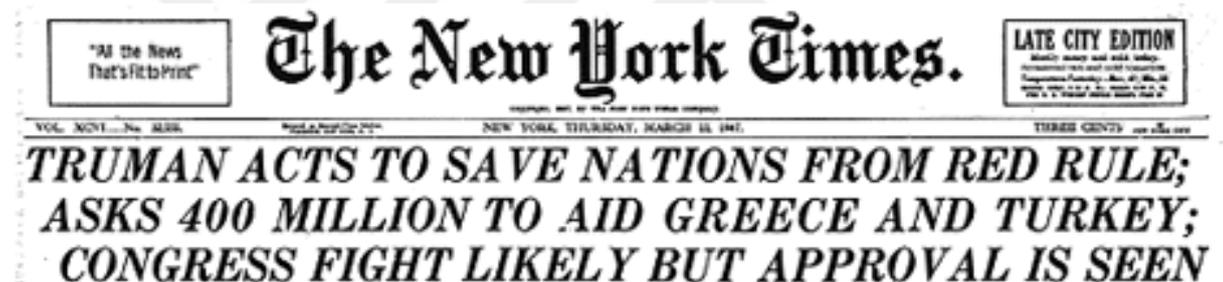
Figure 2: The headline of The New York Times about aid to Greece and Turkey (NYT, 1947)

While the Truman Doctrine includes military and financial aid worth $400 million aid, President of the US targeted and promised foreign assistance to inhibit the spread of communism in Europe and other regions, in 1947. (Kennedy and Cohen, 2013) On the other side, the Marshall Plan included the economic and assistance as a loan and grant worth more than $12 billion in Southern and Western Europe between 1948-1951. (Wood, 1986) This plan included also recovery program of Europe continents in terms of poverty, unemployment, production, security and essentials. This plan restored industrial and agricultural policies and production methods, and then financial policies and foreign trade

policies in 1948-1951. Although the Marshall Plan targeted initial economic help to the European countries, the real aid and assistance was military through NATO.
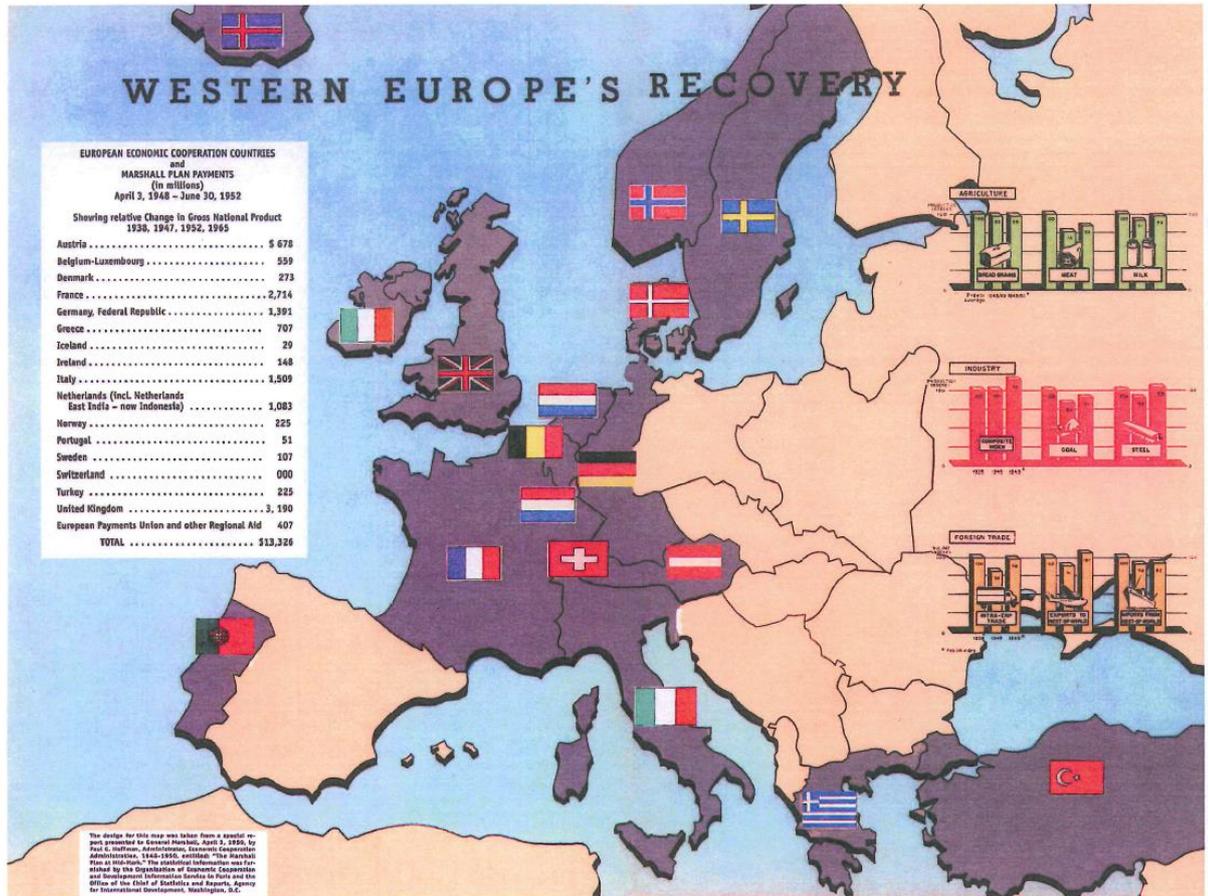
Figure 3: The payments of Marshall Plan to countries (Marshall Foundation, 1952)

After Marshall Plan, the US President Truman also conducted the foreign aid program against hunger, scarcity and poverty in 1950 and it is known as "ancient enemies - hunger, misery and despair". (Hoy, 1998) The aim of this program was reconstruction and building of infrastructure about economic development projects. After these plans, US had continued to conduct foreign aid programs to Africa, Asia, Europe and Middle East countries to struggle with communism and USSR during Cold War. (Hoy, 1998) After these big plans and aid programs,

because the Cold War continued till 1990s, the US and the USSR applied different foreign aid policies to gain power and control in the international scene.

Countries	1948/49 ($ in millions)	1949/50 ($ in millions)	1950/51 ($ in millions)	Total ($ in millions)
Austria	232	166	70	468
Belgium & Lux	195	222	360	777
Denmark	103	87	195	385
France	1,085	691	520	2,296
W. Germany	510	438	500	1,448
Greece	175	156	45	376
Iceland	6	22	15	43
Ireland	88	45	0	133
Italy & Trieste	594	405	205	1,204
Netherlands	471	302	355	1,128
Norway	82	90	200	372
Portugal	0	0	70	70
Sweden	39	48	260	347
Switzerland	0	0	250	250
Turkey	28	59	50	137
U. Kingdom	1,316	921	1,060	3,297
Totals	4,924	3,652	4,155	12,731

Table 1: The payments to partner countries of Marshall Plan in 1948-1952 (Schain, 2001)

Apart from the Marshall Plan and Europe, some official organizations and institutions had applied the foreign assistance programs and development supports, like OECD, IMF, WHO, UNICEF etc. Particularly, Development Assistance Committee (DAC) of the Organization for Economic Co-operation and

Development (OECD) has conducted many foreign assistance programs on the world. Especially, the increase of opportunity inequalities and scarcities in Africa, Latin America, South Asia and other regions caused the emergence of new foreign assistance policies. Throughout the 20th century, for instance, many governments in Africa had faced with humanitarian problems and poverty because of undeveloped governments and states. Thus, the amount of humanitarian and development backing to African countries, particularly Sub-Saharan Africa area, increased by OECD, IMF, WB, developed governments and other development banks. These states and institutions focalized to food, health, education and human rights problems. We will construe the history and instances of assistance to SSAn states in the next parts.

Terminally, if we look at the other historical examples of foreign aid and assistance, we can see some plans of WB after 1960s and plans of IMF after 1990s. (Phillips, 2013). The downfall of the USSR and the end of Cold War on the world, caused to return to development and humanitarian projects instead of military aid. Especially, the IMF and other great commercial banks and funds conducted foreign assistance programs to develop democratic regimes and human rights. In case of current policies and aims, the main focus of foreign assistance and aid policies is to decrease poverty and hunger problems, to decrease the gap and opportunity inequalities and to provide humanistic living standards in Africa, Latin America and Southern Asia. As stated above, we will survey and analyze the foreign assistance to SSA region in this paper.

2.2.2. Approach of Foreign Aid

Foreign aid is one of the major themes in macroeconomic literature, especially in the last decades. The end of World Wars and the increase in scarcity and disparities caused the increase in importance of foreign aid and caused the one of the main policies. This new era has changed also cooperation between organizations and countries. The foundation of some official organizations like

WB, IMF, OECD, UNICEF and councils of states help to cooperate for these aims. Therefore, this alterations and new era caused the major changes and shift in the concept of foreign aid and macroeconomic policies.

The one of new paradigm is the Bretton Woods system. The Bretton Woods system was launched in 1944 with participation of 44 countries to found WB and new international regulations. Under this agreement, countries agreed about exchange rates, foreign trade policies, macroecnomic policies and foreign markets. The countries want to prevent trade wars between countries for development and growth policies. The usage of the Bretton Woods instead of Gold Standard system want to guarantee the value of currencies of countries and save the benefits of countries. However, after this agreement, each member country agreed to discharge its their own currency for U.S. dollars, instead of gold. Especially, poverty, inflation, the value of money and other macroeconomic problems on the world caused the emergence of this agreement. Furthermore, the establishment of IMF and WB are main players for the application the Bretton Woods System.
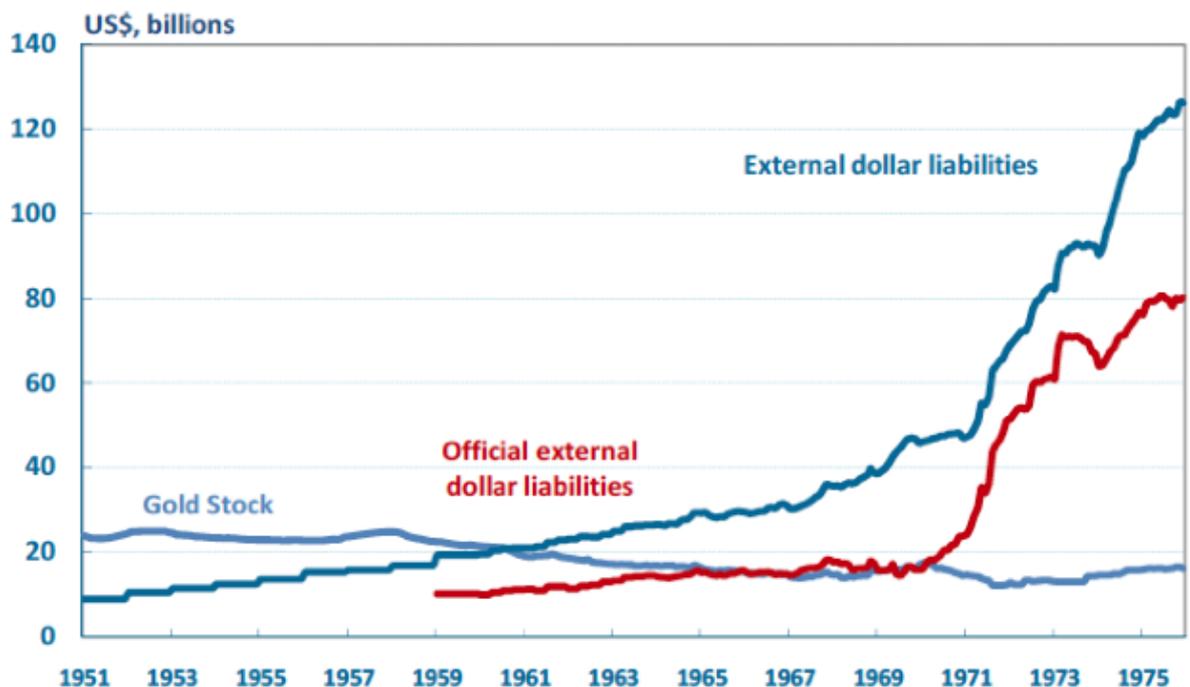
Figure 4: US gold stocks and external liabilities in 1951 – 1975 (Federal Reserve, 1976)

This system also affected the foreign aid and assistance methods. The WB and the IMF started to conduct big foreign aid policies and agreements. Therefore, foreign assistance policies was applied based on US dollars and its policies. The foreign assistance programs has concentrated on the modernization and industrialization process in last decades. Aid is procured with varied ways and aims from support to states and regions to support development process with specific projects and programs. We can see two aid methods or approaches, actually. These are budget backing and sector approach. (Haroon, 2003)

The budget support approach is committed to fix budget problems and strengthen the budget capabilities. The macroeconomic issues like monetary policy, inflation, foreign trade, budget deficit and balance of payments are related to budget constraitn and conditions, directly. This method empowers the recipient country policies and support governmental development strategies wtih transparency and strength ownership. This direct method helps recipient countries to manage national systems and development process directly. On the other side, the sector approach gives colloborator actors the greater ownership of development process and power of redistributing of internal and external sources.

These approaches includes some ideas also. These are cash transfers, policy making based on evidence, budget flexibility, multilateralism and better instruments and tools. (CGDEV, 2017) These ideas aims the lower cost and effective results from foreign assistance programs. The allocation and redistribution of resources in foreign aid programs should be considered by donors and recipient countries. Therefore, the approaches for foreign aid is so important for the methods and effectiveness of assistance and development supports.

2.3. Economic Growth Concept and Definition

2.3.1. What is Economic Growth?

The other substantial description of this thesis is economic growth, after foreign assistance. Before the outlook of SSA economy and analyze of the relationship between foreign aid and economic growth, we should review the definition and components of economic growth. Economic growth is a demonstration that indicates the rising of the market value (corrected to inflation) of the services and goods that produced by an economy of a country in a certain period. (IMF, 2012). This demonstration is measured as a percentage that changes in real gross domestic product, or real GDP and real GDP per capita. In other saying, the growth rate of economy is the positive or negative rate of growth in GDP. The rate of growth of economy is impressed by many factors because of GDP. For example, consumption, investment, production, inflation and interest rates, exports and imports affect the real GDP and change in real GDP, and then economic growth. Moreover, other factors like labor and capital intensity, energy costs and materials, input costs and other equipment also are the considerations that impress the real GDP and then economic growth.

Economic growth theme is the most outstanding demonstration of a country. This indicator shows the acceleration, stability, trust and potential of a country. This assists to understand the unemployment, poverty, scarcity, public services of countries, but this does not mean anything by oneself. This indicator also is important for labor and capital situation, business expansion, trade policies, decisions of economic plans and quality of life. Therefore, the economic growth index is one of the means to compare states, particularly developing and undeveloped countries. Moreover, economic development is also another concept except economic growth and it is broader concept that involves economic growth and other moral and tangible components. It means a multidimensional process includes major developments in social structure, institutions, economy

and politics, and also increase in wealth and decrease in inequalities. (Todaro & Smith, 2009).

As we stated above, the economic growth implies the spurt in total output in an economy and it is formed with capital, labor and technology in basic terms. Because the economic growth is numerically measurement, there are several ways to calculate this growth, but the most common method is real gross domestic product (GDP). The best way of calculation of economic growth is real GDP that indicates the all of activities of an economy in a certain period. If we look at the GDP term gross domestic product is a monetary measure of the value of all final goods and services in a certain period. (Callen, 2018) To understand better the GDP concept, we can look at the definition and components detailed.

According to OECD definition, GDP means a total measurement of the sum of gross values added of all people and organizations in a country. (OECD, 2014) On the other side, according to IMF definition, the total market value of all final goods and services produced in a country in a certain period. By the expenditure approach, GDP have some components that constituted the term of GDP. These components are consumption variable (C), investment variable (I), government spending variable (G) and exports (X) & imports variables (I) (or net exports, X-M). (OECD, 2014) These components involve all transactions in an economy and it indicates the all activities in a certain time. Therefore, GDP can be used to see economic activities and to measure economic growth of an economy. However, there can be some ambiguities because of real GDP and nominal GDP definitions.
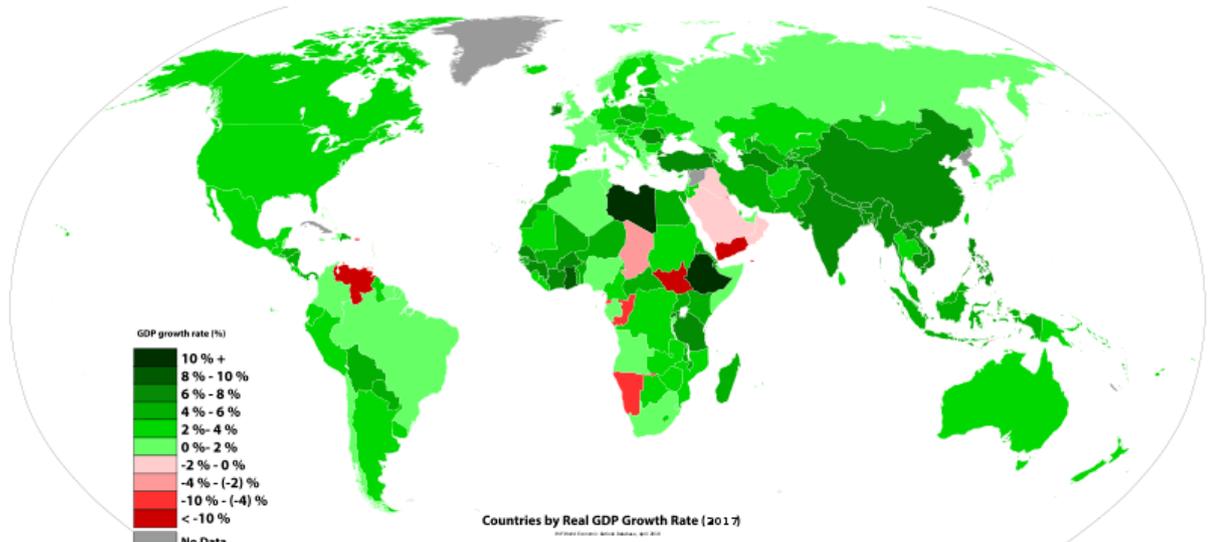
Figure 5: The real GDP growth rate of all countries (World Economic Outlook Database IMF, 2019)

The nominal GDP is a measurement based on current prices. These current prices prevent the comparison between two periods because of changing in prices, or inflation. Therefore, to compare the GDP values of two periods, we should adjust the prices by constant prices and we need to use real GDP. In another saying, the real GDP value is adjusted value of nominal GDP to constant prices to eliminate inflation and change in prices problem, so to calculate the growth rate of an economy, we use the real GDP value. The real GDP can be influenced by some variables and aspects. Because of the components are related to prices, interest rates, tax rates, inflation, barriers, policies etc. directly, the real GDP, and then economic growth can be also affected by these components and variables. Economic growth is a rise in the potential and capacity of an economy to produce from one time to another, so the production, consumption, spending and trade components of GDP is so effective on the economic growth. (Romer, 2019)

On the other side, there are some discussions about the use of real GDP value to calculate the economic growth. Some states and institutions use the GNI (gross national income) term instead of GDP. (WB, 2015) The GNI term includes

income of citizens who live abroad. In other words, GNI value shows the all of income of residents of a country on the world. Then, while GDP calculates production in certain boundaries, GNI calculates the all income of residents. Some organizations and countries like WB use the GNI value to calculate economic growth.

Figure 6: The map of the real GDP levels of countries in 2017 in constant 2010 US$ (WB, 2019)

However, there are some conflicts and problems about gross domestic product in the literature. GDP tells us the all economic activity of a country in a certain period but does not tell any detail. For example, GDP cannot measure the living standards, conditions, equalities and distribution, directly. Therefore, the GDP value cannot demonstrate the power of an economy by itself, but it is a substantial indicator that shows the economic activities of a country in a certain period. On the other side, to calculate the growth rate of an economy, the real GDP per capita can be used. Per capita means for each person or people taken as individual, so the real GDP per capita means a measure of a country's economic output that divided to population of a country. This measurement is the better way to understand the standard of livings instead of the real GDP because this term shows the economic power by individual on average. For this reason, the real GDP per capita can indicate better the economic activities in a country and this can be used in calculation of economic growth.

Economic growth theme has many constituents, as we mentioned above. Although the real GDP, real GDP per capita, inflation, interest rate, trade values and other components show the numerical situation of economic growth, this term also contains the moral variables like technological advances, statement of labor and capital force etc. These components influence the economic growth in the short and long run, directly, so the changes in these variables affect the change in economic growth. The productivity and public policies are related to these variables and components and these terms can influence the economic activities of a country in terms of production, consumption and monetary.

When look at the literature, economists have argued many growth models. If we look at the historical sense, we encounter several principle growth models. These can be mercantilist growth, classical theory, neo-classical (Solow/Swan) theory, endogenous growth, Malthusian and Keynesian theories. The mercantilist growth, the popular method during the industrial revolution is not a theory of growth, generally, but it claimed that the accumulation of gold & commodities and increasing of foreign trade can promote the economic growth. (Reinert, 2011)

The classical growth theory was developed by Adam Smith and it was mentioned in The Wealth of Nations book in 1776. According to him, the market structure, specialization of labor, foreign free trade and scale of economy is important for economic growth. Moreover, David Ricardo and Thomas Malthus developed this classical theory and they argued that the technological changes were constant and increasing inputs can cause diminishing returns. (Lanza, 2012). On the other side, endogenous growth model is also the new model and it was developed by Paul Romer and Robert Lucas. They mentioned the importance of human capital and human productivity with knowledge base. Along with them, Joseph Schumpeter contributed to this growth theory and they gave the importance to technological improvements and innovation for economic growth in the long-run. (Parker, 2012)

Although there are many growth models and theories according to economists and other scientists like above, the most known and effectual theory is Solow/Swan model. This neo-classical growth theory suggests that the rise in the ratio of investment and GDP and technological improvements can lead to economic growth. (Solow & Swan, 1956) The most substantial point of Solow model is that the model can demonstrate the basic and abstract representation of economies. This model concentrates on the output, labor, capital and technology, in general. This dynamic growth model uses the production function with its components like capital, labor and productivity or technology parameters in basic form:

(1) $Y_t = f(K_t, L_t, A_t)$

where the Y_t dependent variable describes the total production in an economy, K_t describes the capital stock, L_t describes the labor force or total employment and A_t describes the productivity or technological improvements in an economy. (Solow, 1956) These variables are main indicators and factors that compose the economy and production. In this model, labor variable can be determined with total employment or labor force of an economy. Moreover, the capital stock shows the machinery and production structures, and then the technology variable indicates the capability of organization, production techniques, knowledge and efficiency in production. This variable is a shifter variable in this model because the technological improvements affect directly the total output and economic growth. (Jones, 2016) Also, there can be different variables like environmental quality, population etc. In brief, the Solow/Swan model denotes the production and output system of an economy and this helps to analyze the economic growth. Therefore, we will use this theory in chapter of econometric analysis.

If we come back to economic growth and its factors, economic growth is one the most significant factors of an economy and it depends on some determinants. As we mentioned above, these determinants are capital, labor and technology and

apart from these, natural resources, infrastructure, wages, taxes, law, education, health, macro and micro economic policies, politic system, social factors, international trade position and so on can be other determinants for healthy economic growth. Therefore, the matter of economic growth is complex subject, and it has many determinants that affect growth directly or indirectly for an economy or a country. We can now look over the general economic outlook of SSA region and countries depending on above factors and determinants.

2.3.2. Overview of Economics of Sub-Saharan Africa

The overall economic outlook of SSA region can help us to apprehend the matter of foreign aid and economic growth. Although we analyze the 29 SSA countries, the general overview of economy of the region indicates the position of development and economic structure. When look over the economy and social pattern of SSA, we can see developing and undeveloped countries relatively to rest of the world, generally. Especially, last decades of Africa history had confronted with many wars, civil wars, chaos, scarcity, demographic changes and borderline changes. As we have seen from news and international political developments, many SSA countries still struggle with social and economic problems. However, in spite of SSA countries have struggled with political and economic problems, the Africa continent is one of the quickest developing continents on the world under favor of BRICS countries (Brazil, Russia, India, China and South Africa) with FDI and portfolio flows. (2014, Pugliese & Sy).

When look at the general economic level of African, economic growth of the region proceed to improve from 3% in 2018 to 3.5% in 2019. About half of the SSA are expected to grow about 5 percent in 2019, but in the other more resource-dependent 24 economies, including the big economies like Nigeria and South Africa, the economic expansion looks hold on weak in the short run. Most SSA countries have either indifferent or tight monetary policy viewpoint and have announced fiscal consolidation plans. These macroeconomic decisions may need to be recalibrated to support growth. (IMF, 2019) On the other side, economy of SSA countries has different indicators and structure. According to IMF report, economic heal and improvement in Sub-Saharan Africa continue with economic growth from 3% in 2018 to 3.5% in 2019. However, economic performance stays bifurcated. (IMF, 2019). When we look at the general overview of growth rate of real GDP for Sub-Saharan Africa region, average of world and average of OCED countries (48 countries and contains South Africa and Nigeria in Sub-Saharan Africa) in 1990-2014 period, we can see this graph:
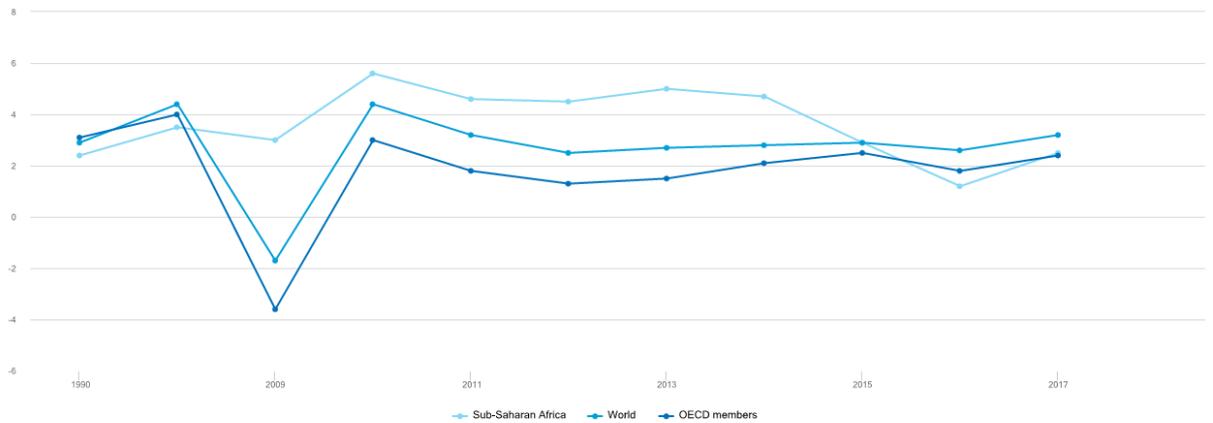
Figure 7: The growth rates of real GDP of SSA, OECD & World. (WDI of World Bank, 2019)

According to this figure, we can see the average of growth rate of real GDP for SSA region is higher than the world and OECD countries generally in 1990-2017 period except last 3 years. Also, we can exclude the high-income countries like South Africa and Nigeria from this graph and see again:
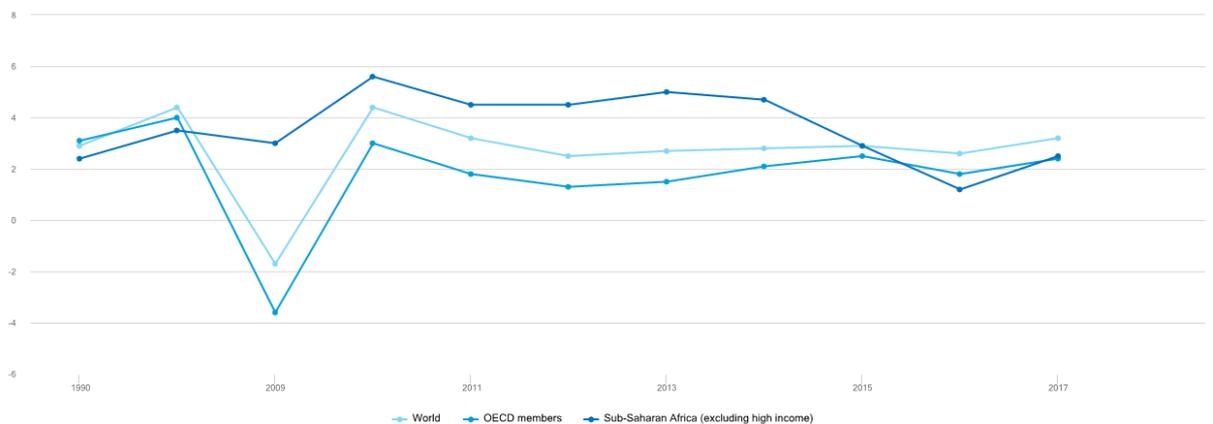
Figure 8: The growth rates of the real GDP for SSA (excluding high income), OECD and World averages. (WDI of World Bank, 2019)

We can see again in above figure, the general average of the growth rate of real GDP is in rise than OECD average and world. There may be several reasons for SSA countries like development policies, economic growth dynamics, foreign trade or official foreign assistance programs, and also we can see that there is no significant difference between including and excluding of high income SSA (SSA) countries. However, if we look at the real GDP values in constant prices (2010 US$), we can see significant difference and gap between SSA region and other regions:

Series : GDP (constant 2010 US$)
Source: World Development Indicators
Created on: 05/28/2019
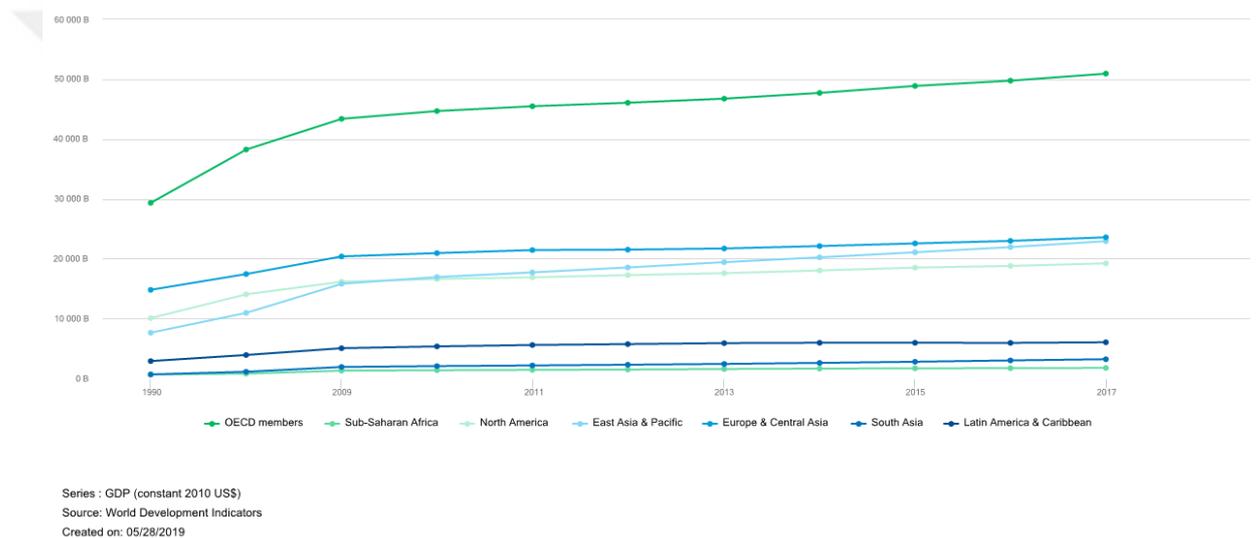
Figure 9: The real GDP values in constant 2010 US$ prices of the regions. (WDI of World Bank, 2019)

This figure indicates that the total output and productivity of SSA region is very low than other regions or groups like OECD, North America, East Asia and Pacific, Europe and Central Asia and Latin America and Caribbean. There is just one region that close to SSA region and it is South Asia. Therefore, SSA countries do not have a big fragment in total output of the world relatively to other regions and countries. This may be caused by inefficiencies, inabilities or illiteracy about production and consumption parameters.

Series : GDP per capita growth (annual %)
Source: World Development Indicators
Created on: 05/28/2019
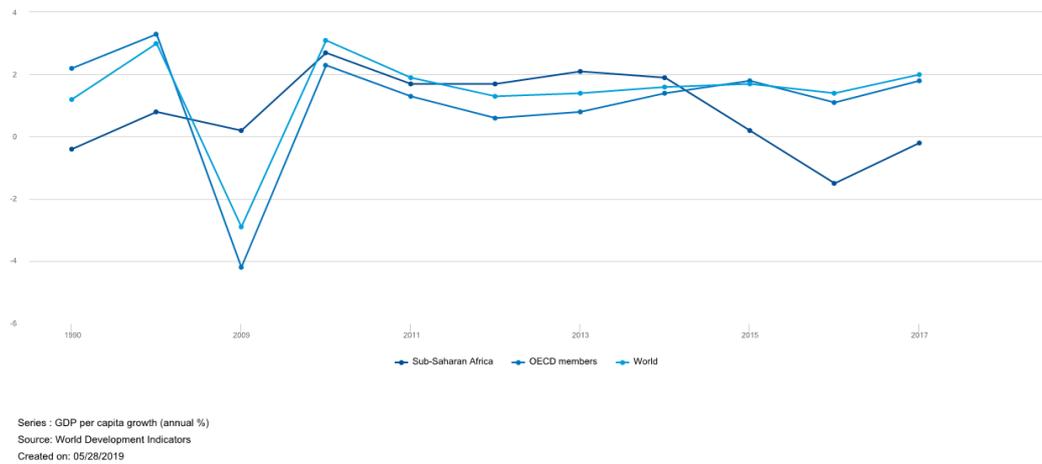
Figure 10: GDP per capita growth rate by regions. (WDI of World Bank, 2019)

However, the growth of GDP per capita is better demonstration than real GDP because it involves the population and indicates per capita income, averagely. The growth rate of real GDP per capita for SSA region is nearly same with OECD members and world averages, but when we think the value of GDP, the SSA countries need more growth rate. The figure is also shows the growth rate of real GDP per capita by country:

Series : GDP per capita growth (annual %)
Source: World Development Indicators
Created on: 05/28/2019
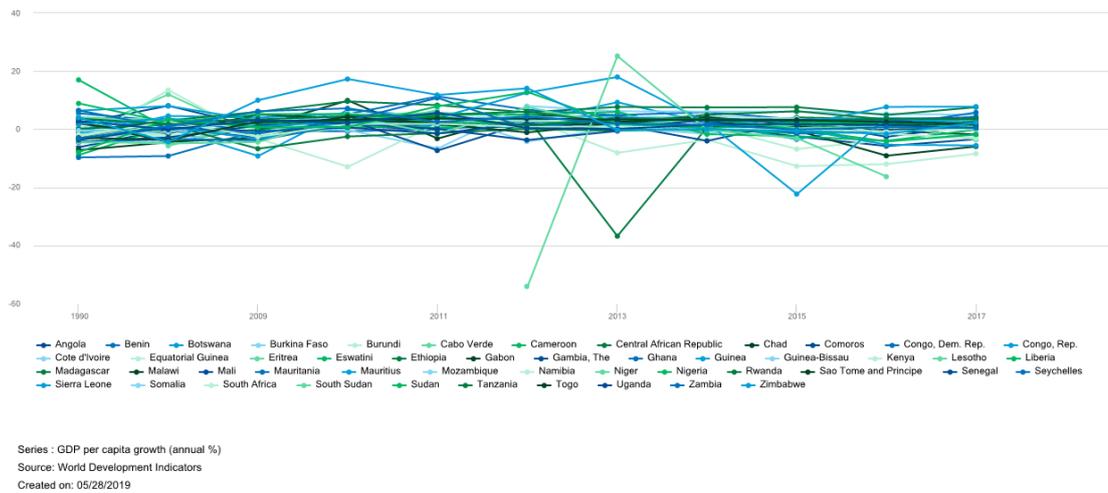
Figure 11: GDP per capita growth rate by country in SSA region. (WDI of World Bank, 2019)

The real GDP growth rate is one of the most substantial demonstrations that situation of countries. When look over the position and situation of SSA countries, the economic recovery in this region, local growth has begun from 3% in 2018 to 3.5% in 2019. About half of the region's countries are expected to grow about 5% or more and they are non-resource-intensive states, and for other remaining countries improvements and development in living standards will be slower. And, the region's medium-term growth prospects are held back by low productivity growth and limited material capital accumulation, compared with countries at similar levels of development in Asia, developing Europe, and Latin America. (IMF, 2019)

We can look at other variables and indicators that are related to macroeconomic position of SSA countries such as inflation, government debt, real interest rate, net exports, productivity rates, agriculture investments, infrastructure, health, education etc. Although the general average rates may not give the detail information on a country basis, the average ratios of all region can give an opinion to compare with other regions. For example, the inflation rate with consumer prices of the SSA countries and other regions can be seen below:

Series : Inflation, consumer prices (annual %)
Source: World Development Indicators
Created on: 05/28/2019
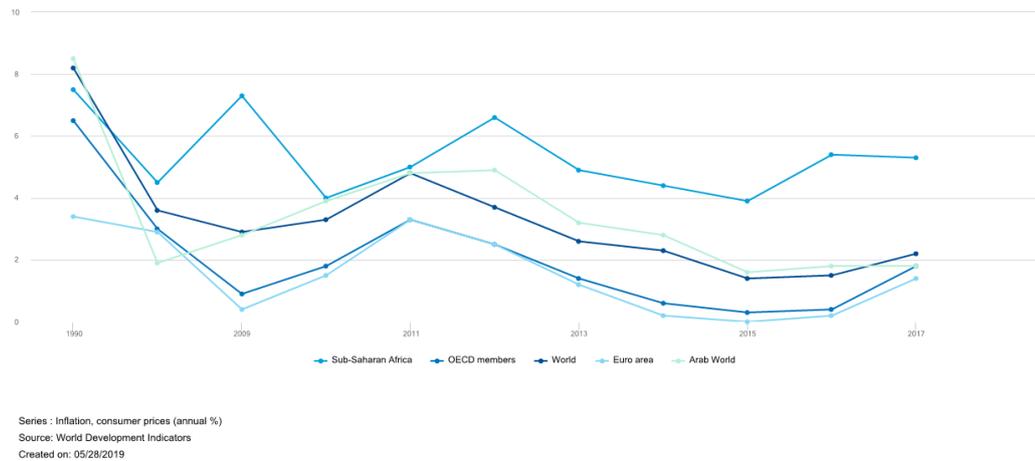
Figure 12: The inflation rates with consumer prices of SSA, OECD, Euro and Arab area (WDI of WB, 2019)

Along with the real GDP values, the inflation rate indicator does not create a beautiful image for SSA region. The average inflation rate of SSA region is between 4% - 8% and this values higher than the big and significant regions on the world like OECD, Euro area, Arab world etc. It remarks also that the gap between the supply and demand for SSA region is higher than other regions. Besides, when we look at inflation rates on a country basis, we can see great gap between countries of SSA region. Even, some countries like Angola, South Sudan and Dem. Rep. of Congo struggle with hyperinflation about 500%:

Series : Inflation, consumer prices (annual %)
Source: World Development Indicators
Created on: 05/28/2019
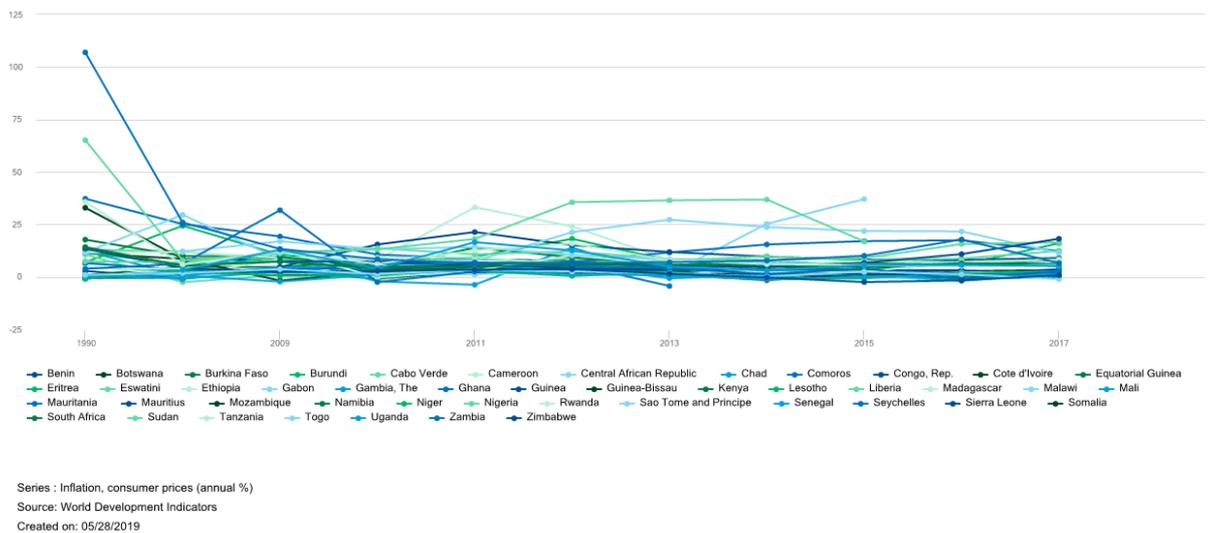
Figure 13: The inflation rates of SSA countries in 1990-2017 period. (WDI of WB, 2019)

Therefore, we can understand this from the figure: Although, the general average of inflation rate is below 10%, some countries try to tackle with hyperinflation problem, so this creates the purchasing power inabilities. On the other side, the real interest rate is concerned with investment, saving and foreign direct investments. (FDI) Because of higher inflation rates, there is also financial instabilities and risk problems for SSA countries:

Series : Real interest rate (%)
Source: World Development Indicators
Created on: 05/28/2019
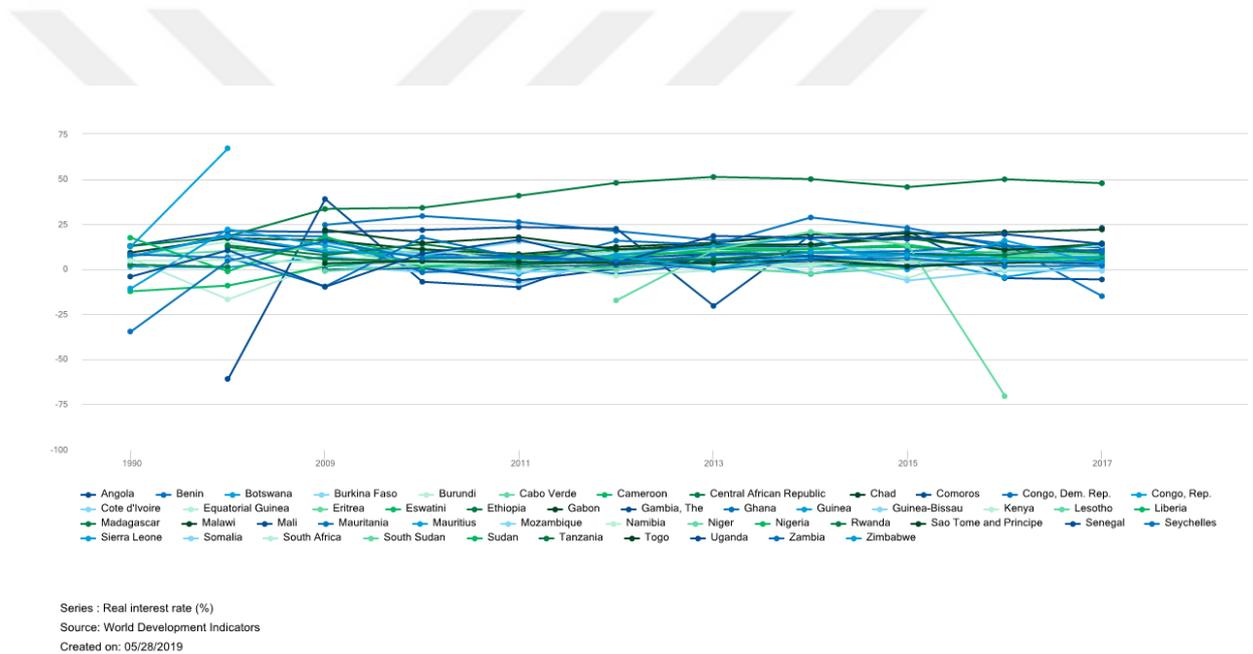
Figure 14: The real interest rates of SSA countries in 1990-2017 period. (WDI of WB, 2019)

Although the higher interest rates encourage savings and accumulation, it also may result the risk and lack of confidence to financial sector, and the investment possibilities had become difficult for government and private sector. However, we see the negative real interest rates in SSA region. The real interest rate is subtraction of inflation from nominal interest rate.

Series : Lending interest rate (%)
Source: World Development Indicators
Created on: 05/28/2019
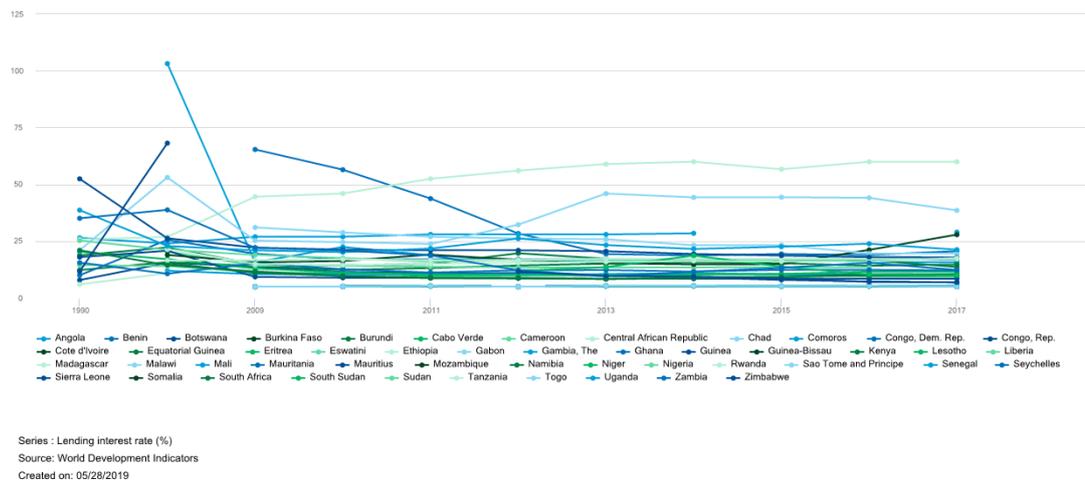
Figure 15: The lending interest rates of SSA countries (WDI of World Bank, 2019)

However, the lending interest rate is more significant than real interest rate because the investors and borrowers are related to lending and its rates. Because the high lending interest rates make difficult to borrow, produce and invest, the production, and then total output of an economy may be affected from this indicator, directly.

Another factor that affect the economic growth of an economy and potential to make new investments is total debt of governments. If a government has a big share of debt in GDP or GNI level, this may create difficulties about development process, government expenditures and taxes on people. According to figure below, SSA countries do not face with total debt service as a share in GNI, but when we look at this indicator on a country base, some countries like Dem. Rep. of Congo, Angola, South Sudan etc. tackle with high ratio of total debt service about 10%. (WB, 2019)
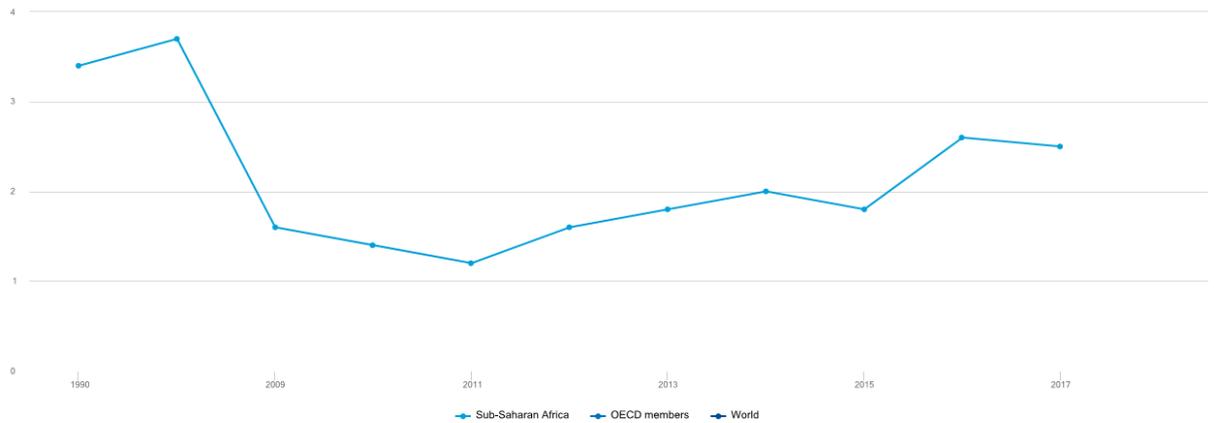
Series : Total debt service (% of GNI)
Source: World Development Indicators
Created on: 05/28/2019

Figure 16: The total debt service ratio as a share in GNI of SSA countries. (WDI of World Bank, 2019)

The one of the most substantial economic indicators that show maximum capacity of an economy is population and labor force. Because the labor force and population are the main component of the output model like basic Solow model, this factor can affect directly the output of an economy and economic growth. Therefore, the labor force and unemployment rates of countries are so significant during the making of macroeconomic policies for development and economic growth.
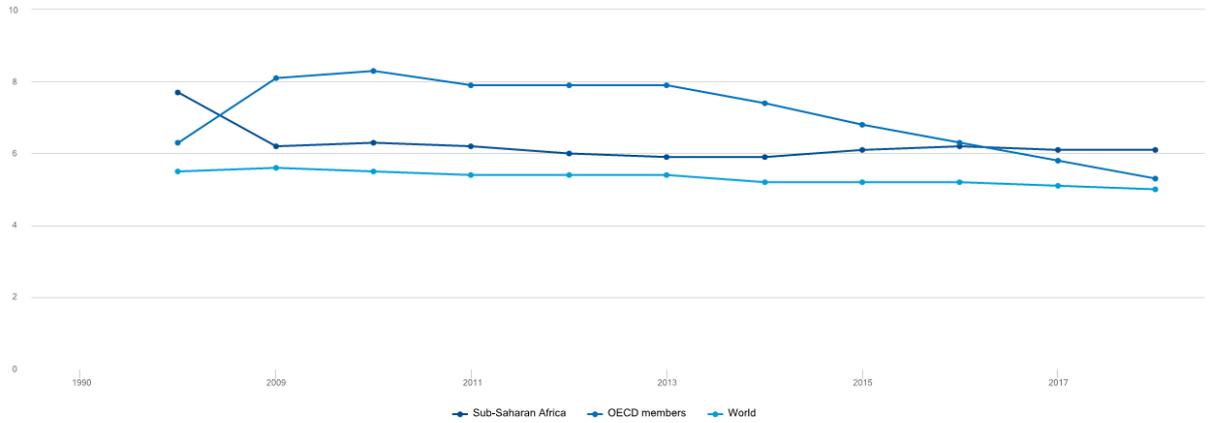
Series : Unemployment, total (% of total labor force) (modeled ILO estimate)
Source: World Development Indicators
Created on: 05/28/2019

Figure 17: The average unemployment rates in SSA region, OECD and world. (WDI of WB, 2019)

The unemployment rates SSA region are below than the OECD countries, so this can be seen good impression about employment and potential of economy. It spectates around 6% for the region. Moreover, when look over these rates on a country base, we can see some low-income and low-middle income countries also try to struggle with high unemployment rates. This problem may cause the lower output, lower personal income and then lower economic growth:
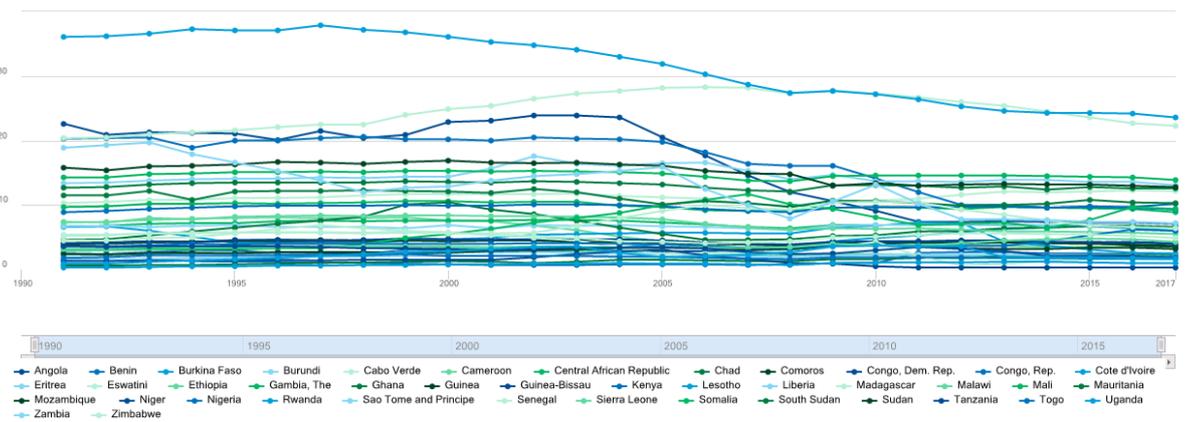
Series : Unemployment, total (% of total labor force) (modeled ILO estimate)
Source: World Development Indicators
Created on: 05/28/2019

Figure 18: The unemployment rates of SSA countries in 1990-2017. (WDI of World Bank, 2019)

Also, the gender and sector parameters are important in employment indicator. We can see the female unemployment in the figure below. Female employment is one of the main development indicators, nowadays. Therefore, the engagement and employment of female population into labor force is significant:

Series : Unemployment, female (% of female labor force) (modeled ILO estimate)
Source: World Development Indicators
Created on: 05/28/2019
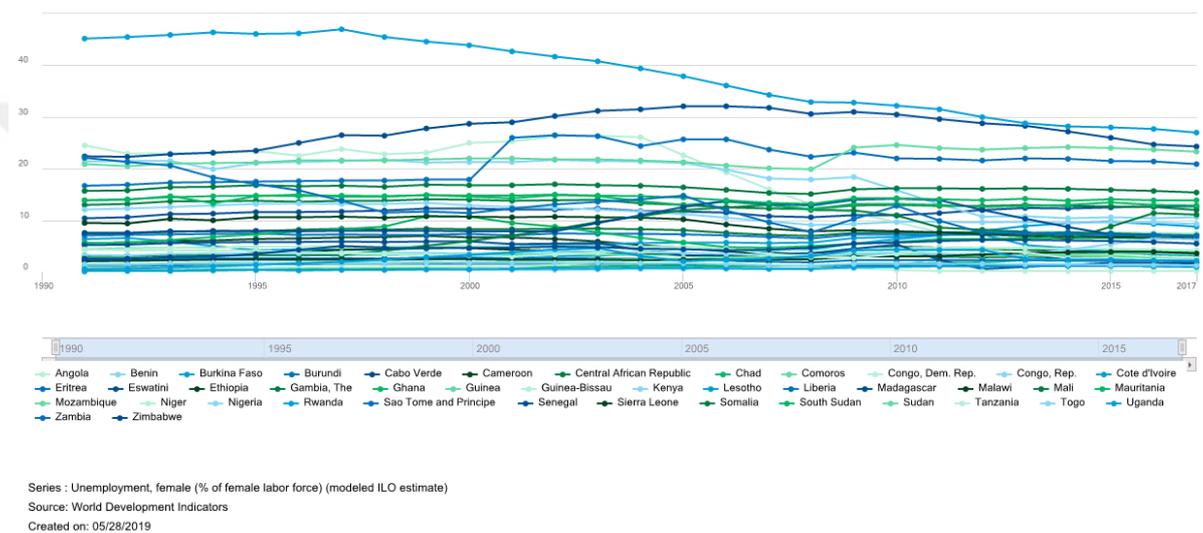
Figure 19: The female unemployment rates in SSA countries. (WDI of World Bank, 2019)

On the other side, the fragment of employment relatively to sectors can demonstrate the structure of an economy. For example, if the fragment of the agricultural employment is more than other sectors like service sector or manufacturing sector, this is agriculture-intensive country. When look at the rate of employment in agriculture for SSA, OECD countries and world averages, we can see that SSA countries produce agricultural-intensive product rather than service or industrial goods. This situation leads that SSA region is food source of many regions and countries on the world.
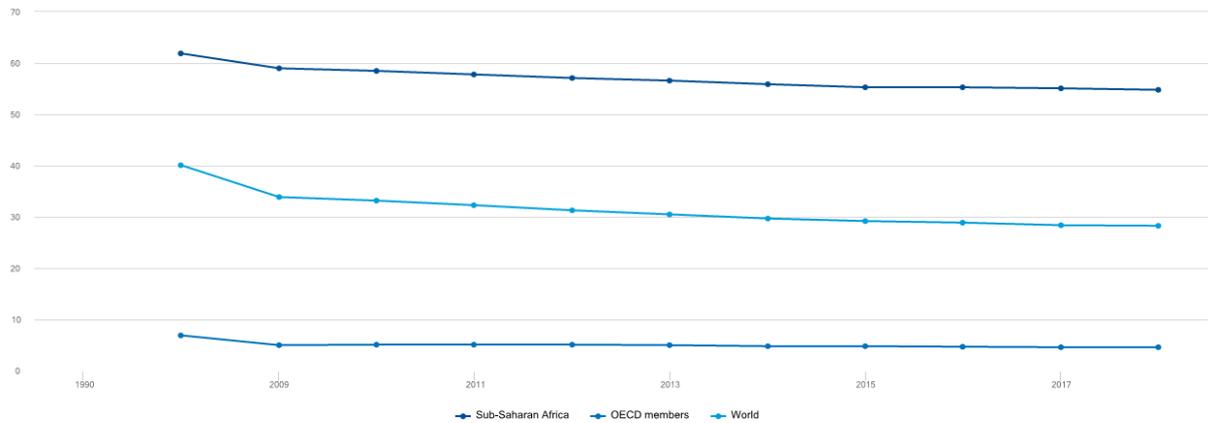
Series : Employment in agriculture (% of total employment) (modeled ILO estimate)
Source: World Development Indicators
Created on: 05/28/2019

Figure 20: The employment rates in agriculture sector in SSA countries. (WDI of World Bank, 2019)

Otherwise, the share of the agricultural production in GDP is related to this employment rates. When look at the value of agriculture, forestry and fishing sectors in GDP, the share in GDP is more in SSA countries than OECD countries and world averages. This result is also related to potential of output and economic growth of SSA countries.
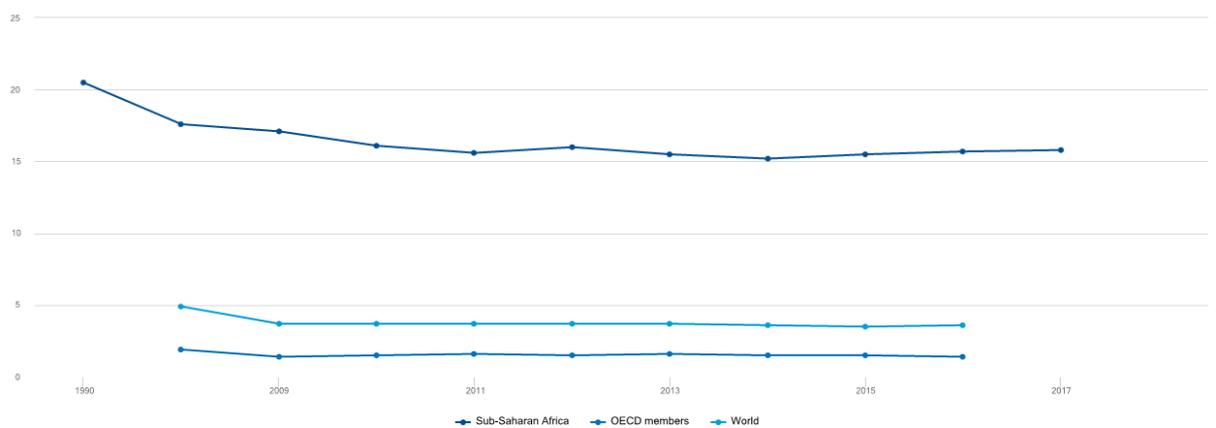
Series : Agriculture, forestry, and fishing, value added (% of GDP)
Source: World Development Indicators
Created on: 05/28/2019

Figure 21: Agriculture, forestry and fishing production rates as value added in GDP. (WDI of WB, 2019)

The foreign trade is one of the components in output model of expenditure approach. The export and import parameters constitute the foreign trade and show openness to abroad of an economy. The export and import ration in real GDP of SSA countries are more the OECD and world averages. This implies that the SSA countries are open to world about trade and cash flow between countries.

Series : Exports of goods and services (% of GDP)
Source: World Development Indicators
Created on: 05/28/2019
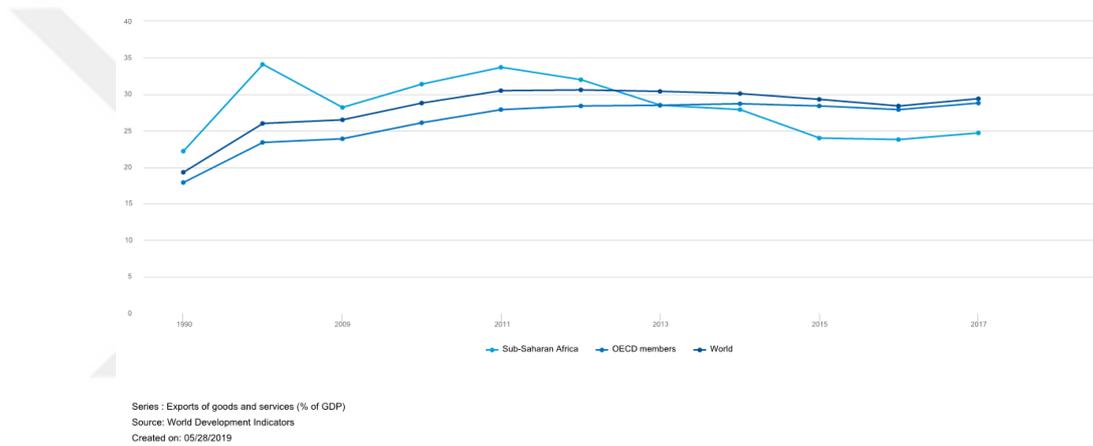
Figure 22: The share of exports of goods in GDP for SSA, OECD and world. (WDI of WB, 2019)

Series : Imports of goods and services (% of GDP)
Source: World Development Indicators
Created on: 05/28/2019
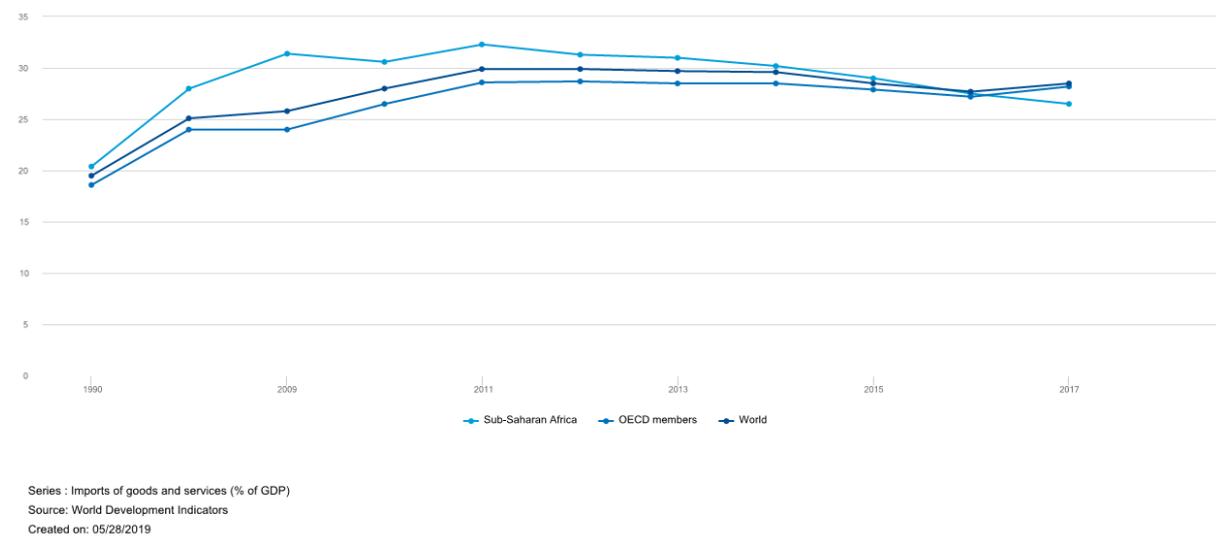
Figure 23: The share of imports of goods in GDP for SSA, OECD and world. (WDI of WB, 2019)

Along with these figures, foreign direct investment shares in GDP can also show the openness and cooperation between countries. If look at the figure below, the financial inflows for SSA, OCED members and world average are nearly same or have same trends:

Series : Foreign direct investment, net inflows (% of GDP)
Source: World Development Indicators
Created on: 05/28/2019
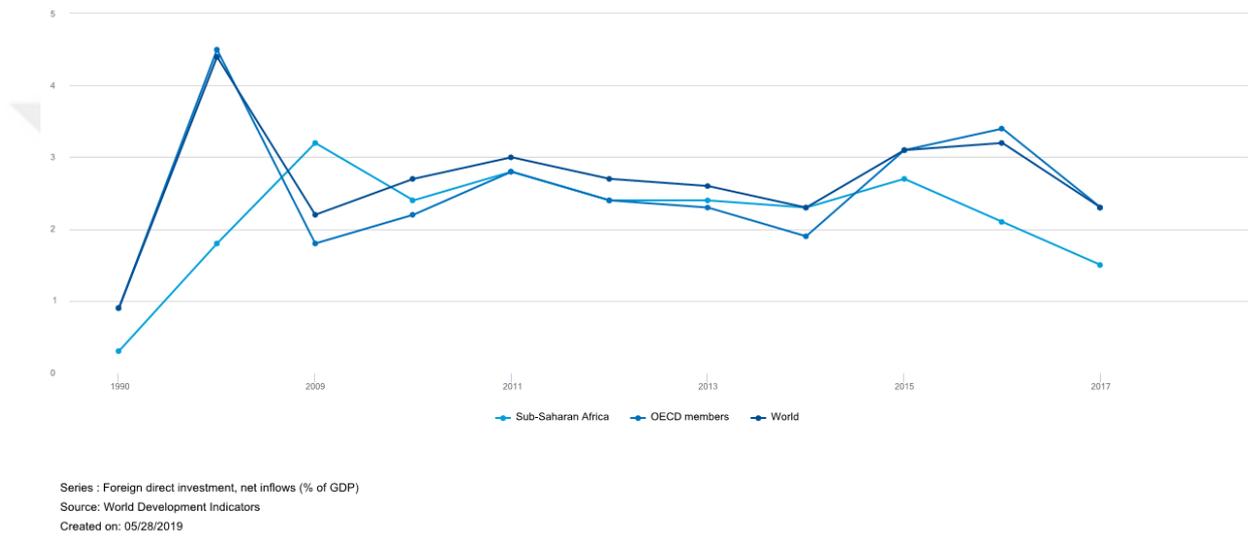
Figure 24: The net inflows of foreign direct investment as a share of GDP. (WDI of World Bank, 2019)

Series : Net ODA received (% of GNI)
Source: World Development Indicators
Created on: 05/28/2019
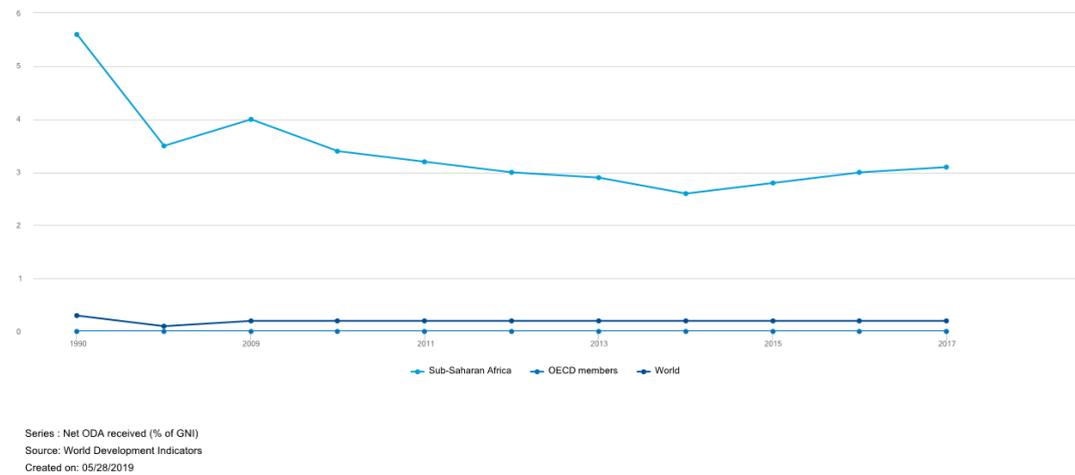
Figure 25: The net ODA (ODA) as a share of GNI (WDI of World Bank, 2019)

The foreign aid, is also the main topic of this paper, is an assistance by other countries and organizations. This parameter can also indicate the structure of an economy and freedom or dependency to foreign countries. The graph of net ODA received shows the important feature of SSA region and usage of foreign assistance. Otherwise, when look at this parameter on a country base, some countries depend on foreign assistance more than the others:

Series : Net ODA received (% of GNI)
Source: World Development Indicators
Created on: 05/28/2019
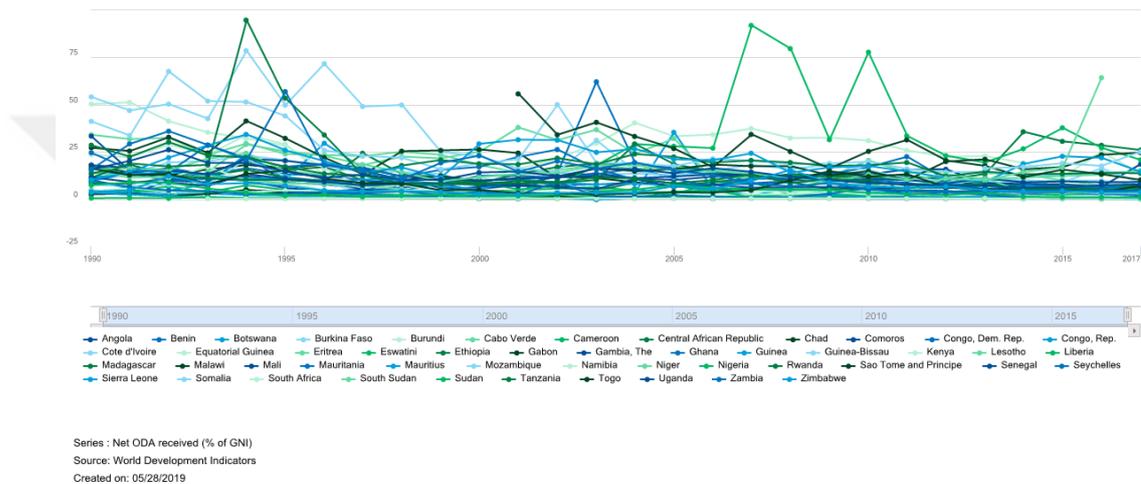
Figure 26: Net ODA received of SSA countries in 1990-2017 period. (WDI of World Bank, 2019)

Apart from these macroeconomic parameters, there are also some different indicators that demonstrate the development situation and fundamental functions of countries like infrastructure, education, health, poverty etc. We should look at these parameters briefly. For example, access to electricity is one of the major problems for SSA countries. In this region, many people and regions cannot access to electricity because of lack of infrastructure investment. Therefore, this problem can affect the production and output of economies directly and the growth is affected negatively.
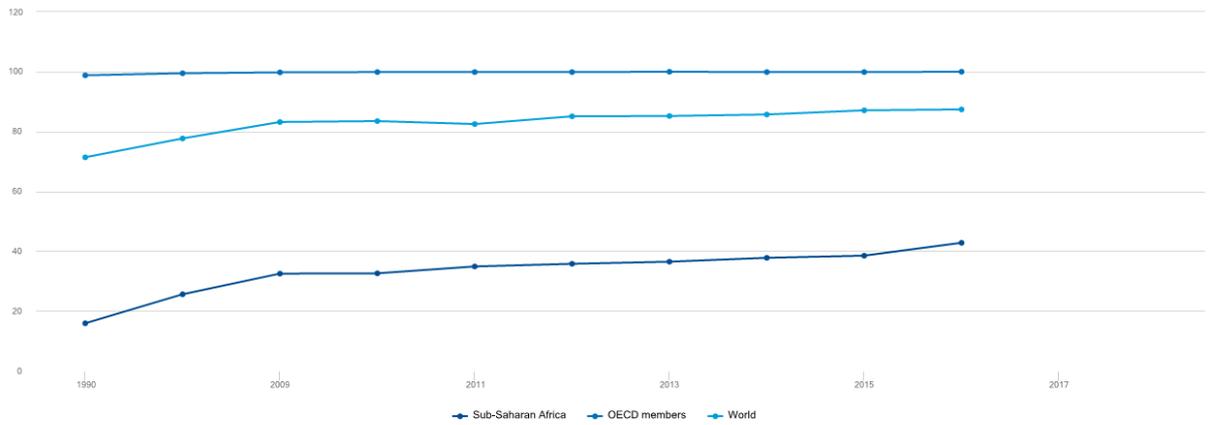
Series : Access to electricity (% of population)
Source: World Development Indicators
Created on: 05/28/2019

Figure 27: Access to electricity of SSA region, OECD members and world averages. (WDI of WB, 2019)

Besides, the water sources and accessibility are also fundamental feature of humanity and development. It is also enormous problem for SSA region because of lack of water sources. The major fragment of people in SSA region cannot access to water at least basic drinking services. This crisis may also cause the health problems and increase in mortality rates.
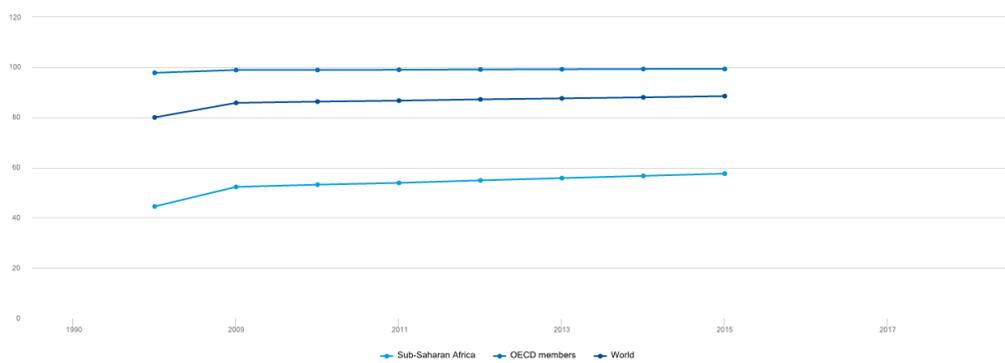
Series : People using at least basic drinking water services (% of population)
Source: World Development Indicators
Created on: 05/28/2019

Figure 28: People access at least basic drinking water sources. (WDI of World Bank, 2019)

Another parameter is the share of health expenditures in GDP and it is also related to previous parameters, electricity and water sources. Because SSA countries face with very low real GDP values and high inflation & interest rates, the government and private spending on health and its technologies is very low rather than other big and developed countries. Therefore, these undeveloped or needy countries may need to foreign assistance and aid programs about health technologies and possibilities.

Series : Current health expenditure (% of GDP)
Source: World Development Indicators
Created on: 05/28/2019
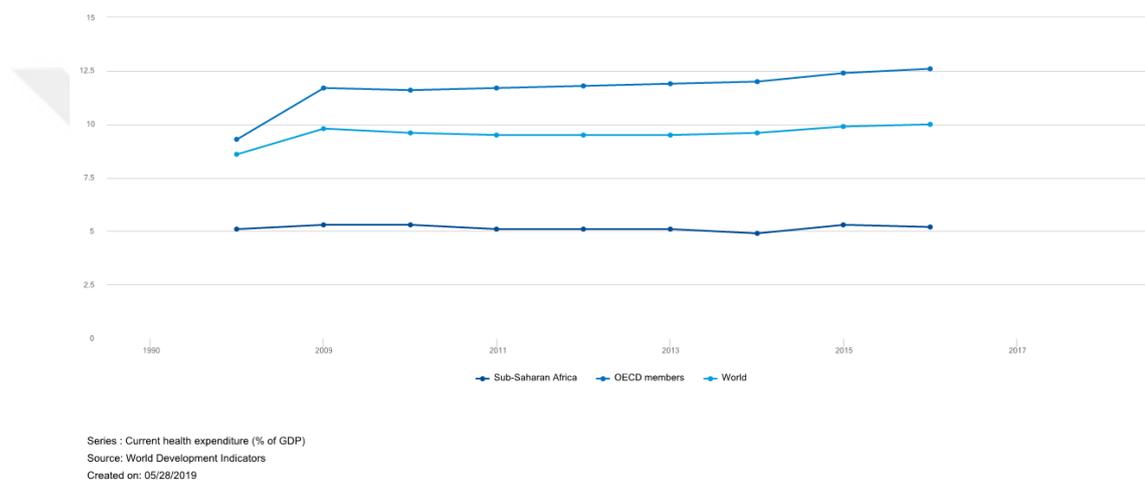
Figure 29: The current health expenditures as a share of GDP. (WDI of World Bank, 2019)

Although the SSA countries have a few macroeconomic indicators and high potential because of some political and economic reasons, these region and countries still try to solve major humanitarian problems and continues to benefit from external aid from rest of the world such as US, China, Europe and other Asian and Latin American countries. The former reason of this statement is natural resources and geostrategic place of SSA. Therefore, developed and rich countries shaped their foreign direct investment policies and foreign aid targets according to their aims. Although SSA countries have faced with some humanity, economic and political problems and instabilities, they need to collect foreign aids and donations from international organizations and governments.
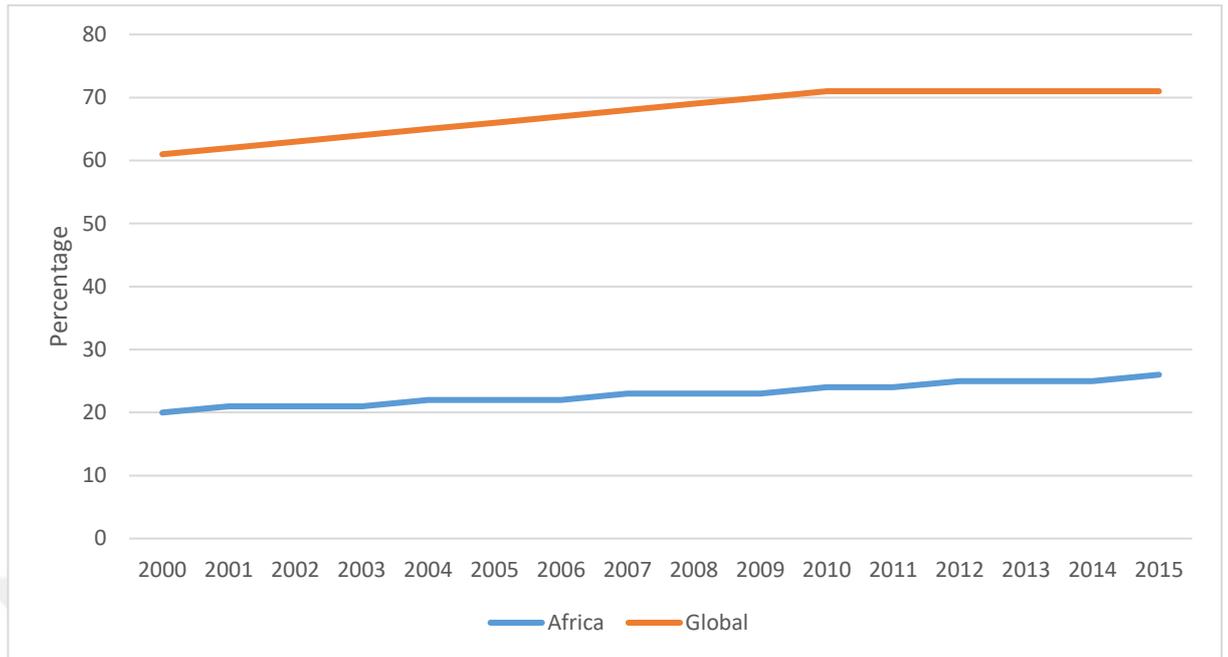
Figure 30: Population using drinking water services. (%) (WHO, 2019)

The SSA region has struggled with many infrastructure and humanitarian problems, especially in last decades. The access to electricity, lack of water sources, inefficient sewage systems, human rights and civil wars and undemocratic politic regimes in some countries prevent the accelerated development process and these problems make countries need help. For instances, the inequalities in terms of accession to water and sanitation cause the needs for development aid and assistance. Besides, the inefficiency and absence of other infrastructural investments causes also epidemics, mortality and even chaos and civil wars.

Therefore, the existing of these humanitarian problems results in the need for foreign assistance and development aid from other regions and countries. On the other side, the fact that there is a huge mine and natural resources under the ground and the lack of sufficient financial sources and technology to extract and produce, makes Africa a very valuable and potential region in the eyes of other countries.
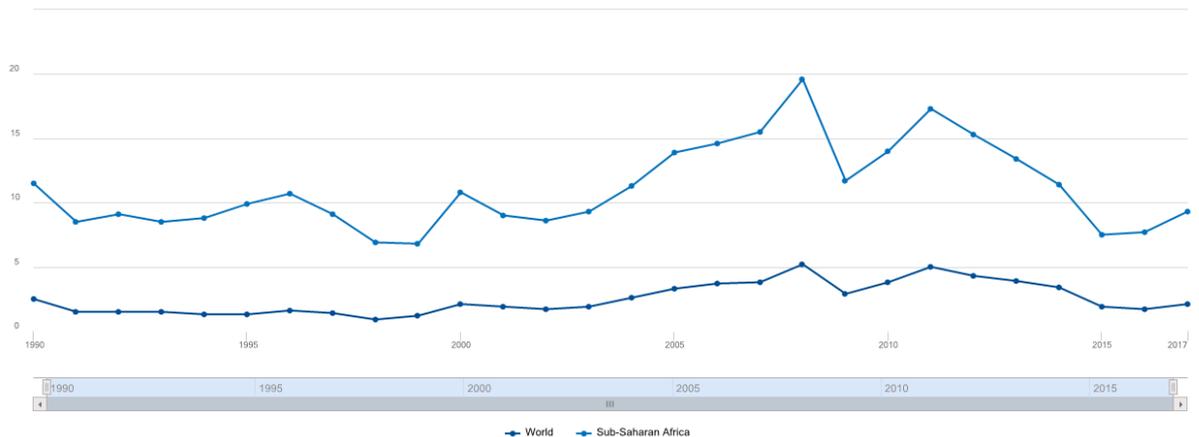
Series : Total natural resources rents (% of GDP)
Source: World Development Indicators
Created on: 05/29/2019

Figure 31: Total natural resources rents (% of GDP) in SSA and world averages. (WDI of WB, 2019)

Consequently, the lack of sufficient living conditions in many regions in SSA results in the need for foreign development assistance at least for a while. The development operation and then economic growth structure of SSA region and countries create requirement for planned, effective and productive assistance and aid programs.

These are general economic outlook of SSA region and countries briefly. We can expand these reviews and outlook, but these indicators can give general opinion about SSA countries and their economic structure in favor of comparison with OECD member countries and world averages. As you can see from these parameters and indicators, many SSA countries try to tackle with poverty, scarcity and low-income problem although they have good potential. Therefore, these hitches cause the need to assistance and support from other countries and organizations because of fundamental and vital needs. While the realization of the support is important, the effectiveness and efficiency of this assistance is also significant to solve these problems and shortcomings.

CHAPTER THREE

3. FOREIGN AID IN SUB-SAHARAN AFRICA

3.1.History of Foreign Aid in Sub-Saharan Africa

The economic structure and development mechanism of Sub-Saharan Africa countries point us that the region needs to undergo restructuring and settlement period because of the humanity issues and financial instabilities. Although the global growth projections of regions on the world draw positive foresights, these growth and development processes need external intervention and support. (IMF, 2019) When we look at the last decades, some regions and countries had used the foreign assistance from the official organizations and countries, and one and major of these regions is Sub-Saharan Africa. SSA region had placed in ODA programs of many developed countries in the last decades. (OECD, 2019) Therefore, we will look at the brief history of foreign aid and development assistance to Sub-Saharan Africa.

If we mention the definition and meaning of foreign aid again, it means the financial or technical advices by one to other to help in terms of financial, social or structural terms. It can involve the financial grants, loans and donations, educational and technical advancements, goods and services or materials according to aims and methods. Also, apart from humanitarian aims, military supports are also method of foreign assistance. For the foreign aid or assistance, the general theme is accepted by official institutions and countries as Official Development Assistance (ODA). Especially, OECD uses the ODA concept and measurement to indicate foreign aid and development assistance to countries and regions. These assistance and aid programs aim the reduction in poverty problems and solve weak living conditions on the world. Although some institutions and organizations claim that the development assistance achieved the goals and had reduced the poverty in general, many Africa countries and

others try to tackle with poverty problems, still. For example, one in five people survive in poor and weak life conditions on less than 1.25 US dollar a day in developing countries, according to OECD. (OECD, 2019) Therefore, there are needs for foreign development support programs for many areas on the world, still.

When we look at the general situation of foreign aid or official development assistance (ODA) on the world, we can see grants, loans and other flows for the calculation and application of ODA. (OECD, 2019) For example, according to Development Assistance Committee (DAC) of OECD statistics, we can see some data and statistics like these:

	2016	2017	Difference (%)
ODA (net disbursements)	49,908	51,833	3.9%
ODAs (gross disbursements)	55,967	58,602	4.7%
Commitments	62,022	66,103	6.6%
Population in thousands	1223 400	1254 600	2.5%
Net ODA in per capita in US dollar	40.8	42.1	

Table 2: The general trends of ODA on the world in 2016 US$ prices (OECD, 2019)

The DAC has 30 members and these member countries developed and high-income countries, generally. From 2016 to 2017, the disbursements and commitments of ODA has increased significantly in terms of money and percentage. Besides, if we look at the general trend of ODA for world averages in the sense of sectors and distribution, we can see these data and graph:
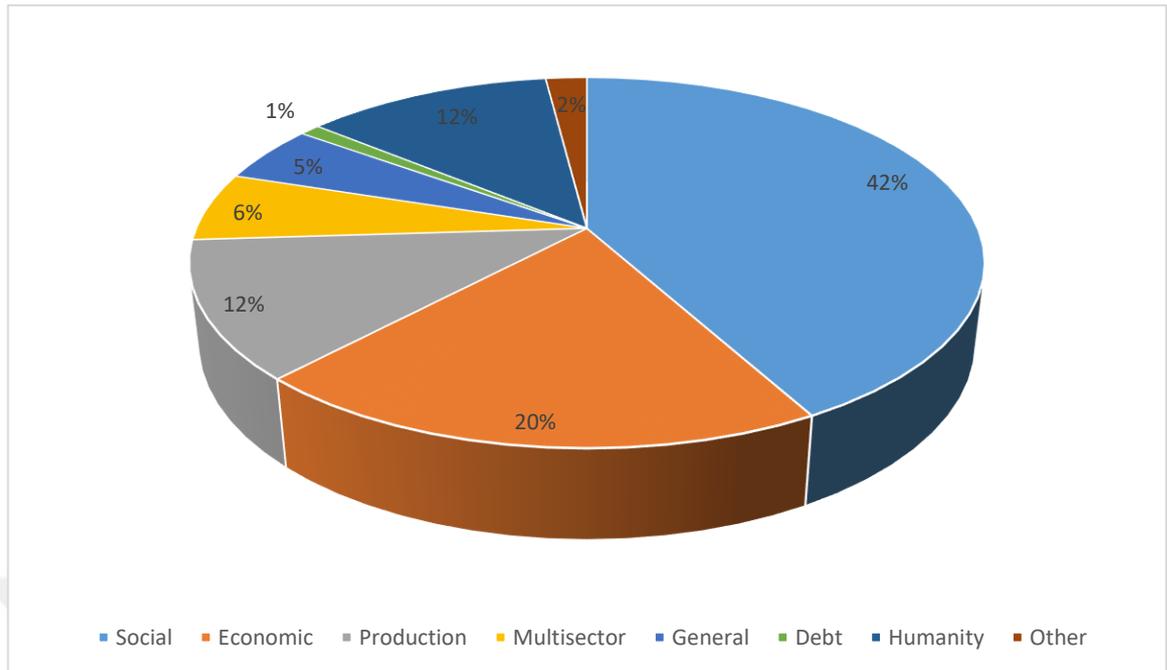
Figure 32: The distribution of ODA according to sectors in 2017. (OECD, 2019

This figure also gives us an opinion that the general goal of the official assistance is to solve social and economic problems and issues. Finally, before the analyze and review the history of foreign aid to SSA, we can look at the top donor and recipient countries on the world according to net disbursements in 2017:

	Net Disbursements	Share in Total (%)
Ethiopia	4,117	8
Nigeria	3,359	6
Tanzania	2,584	5
Kenya	2,475	5
Dem. Rep. of Congo	2,280	4
South Sudan	2,183	4
Uganda	2,008	4
Morocco	1,885	4
Mozambique	1,776	3
Somalia	1,760	3
Others	28,373	54
Total	52,800	100

Table 3: The top 10 recipients in terms of net ODA disbursements in million US$. (OECD DAC, 2019)

We can see from the table above, all of the top 10 ODA recipient countries are African countries, so the foreign assistance programs contain plans for African countries, generally.

After the end of Second World War, the entire world had entered the settlement and restructuring progress to build more civilized, advanced and prosperous world. Therefore, the developing and undeveloped (poor) countries started to be in search of external support and assistance to accelerate this process. The Sub-Saharan Africa region was also a region of these countries. Because of great destructions with civil wars, scarcity, climate changes and epidemics, this region had become the major recipient of external assistance. However, the external aid process of the Sub-Saharan Africa was never easy.

After the World War II, many developed countries like US, UK, France, Italy, and Germany started to colonize in Africa and Asia again like after the WWI. In Sub-

Saharan Africa area, there were two independent countries and these were Ethiopia and Liberia, but others were colonies of rich countries. Because of mineral and agricultural reserves of Africa land, the SSA region had become the source of essential needs for US and European area. (McKelvey, 1965) Although most African colonies rejected the colonization process, they had need for foreign assistance of these big countries, also. The development and growth wishes began in this period of 1950-1960, but the lack of financial and social power for development and economic growth process, the colonies and countries had needed for official assistance programs for a long while.

In the 1950-1960 period, because there were not a food crisis or scarcity and there were strong believes for industrialization wishes, African countries and colonies avoided from agricultural production. However, unforeseen results of population and climate change had created great issues in the following years for SSA region. (Eicher, 2003) The development thoughts and plans about capital accumulation, industrialization and believes on foreign assistance from wealthy countries had altered the development programs and policies of African countries and colonies. Besides, after the 1970, because of fluctuations and turbulences in world economy with oil and financial crisis, the development assistance and aid aims changed according to international relations. The five-year development plans and economic growth models reshaped because of shifting of priorities. The beginning of great development assistance programs to resourceful regions caused the plans had taken in this direction. Besides, international political tension and chaos also leaded to the reorganization of the development assistance programs.

When look at the aid policies of developed countries, for example the US, there were the rise in the quantity of assistance to Sub-Saharan Africa and Latin America to get position stronger. (Williams, 2013) The threats about communism from the USSR was also a factor the reshaping of aid policies of US. They started to rise the quantity of assistance after 1970 and they continued until the end of

1980 for both humanitarian and self-interests. Also, the applications of NATO were in this direction. On the other hand, some official organizations wanted to be major player in this development and aid process.

If we turn back to major problems of SSA region, many governments are affected by energy famine problem and there are many areas and countries that have no access to electricity. (2019, Engineering News). Also, because of increase in prices of goods and commodities like coal, petrol, thermal energy resources are becoming more valuable to generate power and electricity, so SSA countries need to build new hydropower generation facilities. On the other side, in regard to researchers at the Overseas Development Institute (ODI), many countries in the area face with the lack of infrastructure and this has created the limitations to economic growth. Especially, the undeveloped and lack of highway, sewage structures and also industrial facilities cause the limitations and slow down to economic growth. However, SSA area, on the other side, is a major and most substantial oil and mineral exporter of the world. Many mineral type and oil sources like gold, iron, uranium, antimony, coltan, manganese and copper are placed under the African soils. Therefore, this property of the area emphasizes the potential and significance of the Sub-Saharan Africa countries for the rest of the world for both political and economic reasons. Moreover, because of productive lands for agricultural production of Sub-Saharan Africa region, the society in these countries depends on agricultural income and production. As a result, the foreign aid and donations from the other part of the world to Sub-Saharan Africa countries is vital and basis resource for the economic growth and development process, especially in the last decades. However, continuity and amount of foreign aids and donations has caused discussions about the impressiveness and efficiency of these foreign assistance for the development period and growth of economy of the Sub-Saharan Africa region. Therefore, we will examine the main argument that effectiveness and importance of the ODA programs and foreign aid promote economic expansion and growth and help growing and undeveloped countries to achieve economic growth goals.

Before efficiency and the effectiveness of assistance to SSA region, we should look at the historical examples of external support to Sub-Saharan Africa countries with data, graphs and figures. Because we focused on the 29 countries of SSA region, we will use the data of these countries apart from general overview of SSA region (49 countries). These 29 countries are Angola, Benin, Botswana, Burkina Faso, Cabo Verde, Cameroon, Chad, Comoros, Cote d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea-Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Senegal, Seychelles, Tanzania, Togo, Uganda, Zambia and Zimbabwe. The data of these countries is resourced from official databases of institutions, organizations and countries such as WB, IMF, OECD, United Nations etc. Besides, these data may be segregated for the DAC and non-DAC donors. Although DAC (Development Assistance Committee of OECD) donors are the major aid donors of OECD, the other donor countries that within or without OECD have a substantial role for development assistance and aid. Primarily, when we look at the general disbursements of ODA (ODA) to SSA region and these 29 countries, we can see these data and figures:
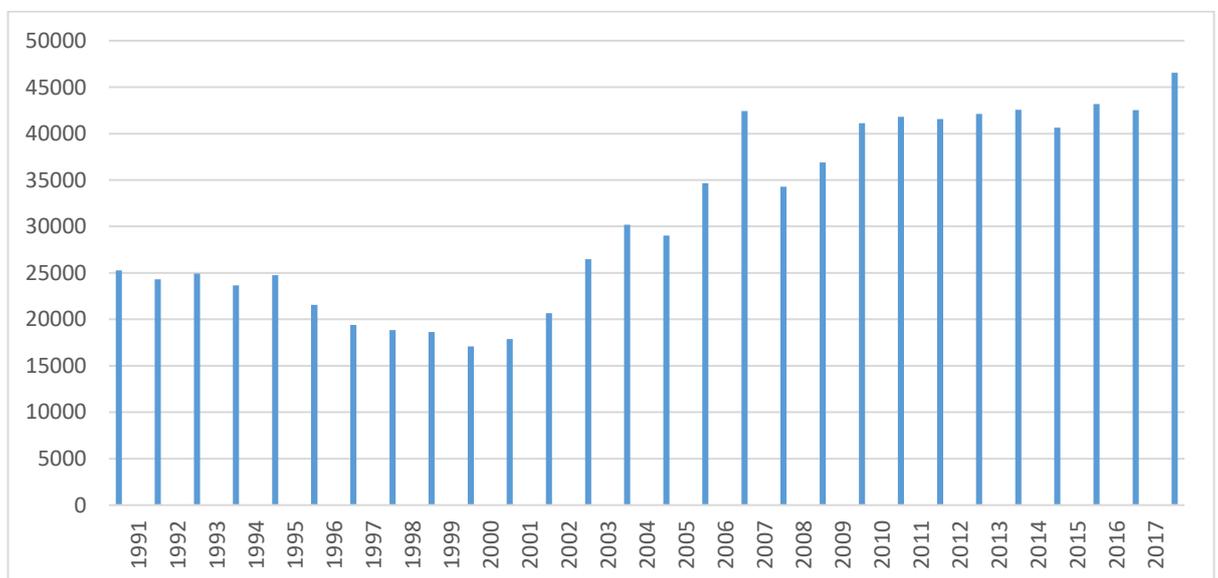
Figure 33: The aid (ODA) disbursements to Sub-Saharan Africa (total) in millions US$ (2017) (OECD, 2019)

According to DAC database of OECD, Sub-Saharan Africa region had benefited great amount of aid between 1990-2017. On the other side, when we compare the net amount of ODA disbursements between the regions, Asia and Africa had benefited from the ODA in the last decades:
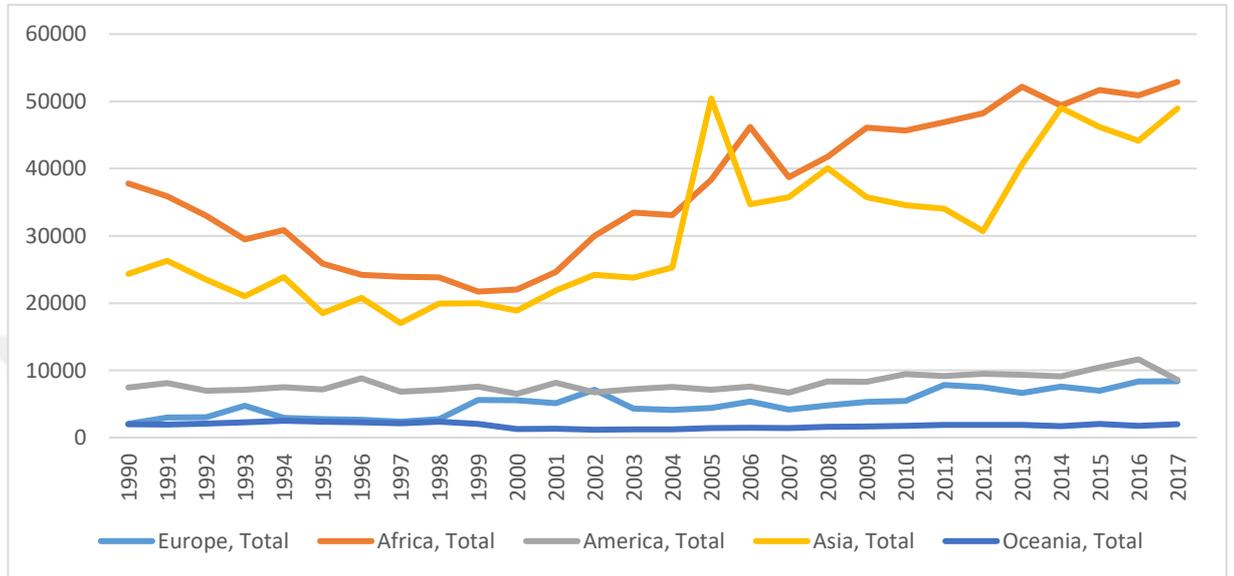
Figure 34: The foreign aid (ODA) disbursements to countries and regions. (OECD DAC2a, 2019)

Between 1990 and 2017 years, Asian and African countries and regions had benefited and used the foreign assistance programs more than the other regions. This means the development and economic growth process of these countries were supported by the other developed countries.

On the other side, apart from the recipient countries, the donor countries and regions are also significant to understand the structure of foreign aid on the world:

Countries	2015	2016	2017	% of DAC
United States	9 320	9 840	11 190	36
United Kingdom	4 203	3 857	3 858	14
Germany	3 036	3 499	3 691	12
France	2 131	2 217	2 362	8
Japan	1 784	1 495	1 674	6
Canada	1 086	974	1 140	4
Sweden	873	842	1 033	3
Norway	672	629	748	2
Netherlands	635	663	716	2
Switzerland	655	584	551	2
Others (from DAC)	2 483	2 615	2 813	9
Total of DAC	26 877	27 213	29 776	100

Table 4: The ODA to Africa by donors in USD million in 2015-2017. (OECD DAC 2a, 2019)

As we mentioned before, because the US have some purpose about internation relations, politics and economy, US try to regulate their international policies in this direction. They have the great fragment in the share of foreign backing to Africa. We will also mention about the targets and purposes of these major donor countries in the next part. Also, we should look at the not only on a country base, also institutional and on a multilateral donation base:

Countries	2015	2016	2017	% of All Aid
International Development Association	6,246	5,844	6,851	31
EU Institutions	5,176	6,328	6,326	29
Global Fund	2,211	2,622	3,059	13
African Development Fund	2,059	2,029	2,427	11
Global Alliance for Vaccines and Immun.	1,016	755	763	4
UNICEF	540	549	558	3
IFAD	182	239	319	1
UNDP	235	221	207	1
IMF	361	23	242	1
Global Environment Facility	218	257	112	1
Others	1,535	1,185	1,284	6
Total	19,778	20,052	22,148	100

Table 5: The great multilateral donor countries to Africa region in USD million. (OECD DAC2a, 2019)

Apart from the countries, the most important institutions and organizations like International Development Association, EU Institutions and so on have a significant role to support and develop Africa economy and social structure. These amounts of aid and assistance contribute to solve the major humanity and military problems in Africa region and countries.

On the other side, when we look at our sample of 29 countries of Sub-Saharan Africa countries, we can also see the average amounts of aid and assistance to these countries:

Countries	1990-99	2000-09	2010-17	2015	2016	2017
Angola	472	469	242	402	207	219
Benin	327	428	554	431	493	663
Botswana	140	143	100	66	91	100
Burkina Faso	537	725	962	998	1 027	865
Cabo Verde	155	156	192	367	742	419
Cameroon	670	896	699	667	757	1 187
Chad	305	347	495	608	624	635
Comoros	53	34	65	66	54	66
Cote d'Ivoire	1,059	597	1,089	655	616	813
Equatorial Guinea	52	28	17	7	7	7
Gabon	1,179	2,182	3,451	99	42	104
Ghana	793	1,146	1,420	1 759	1 316	1 237
Guinea-Bissau	157	108	111	96	197	111
Kenya	889	933	2 371	2 464	2 188	2 437
Lesotho	140	94	188	83	112	144
Madagascar	538	728	527	680	622	763
Malawi	607	643	1 043	1 038	1 241	1 491
Mali	560	720	1 144	1 205	1 208	1 325
Mozambique	1 421	1 678	1 826	1 813	1 529	1 746
Namibia	212	196	217	143	170	182
Niger	408	488	824	871	951	1 182
Nigeria	284	2 418	2 280	2 401	2 498	3 309
Senegal	752	780	897	884	737	895
Seychelles	26	22	21	7	6	19
Tanzania	1,316	2,004	2,566	2 559	2 318	2 543
Togo	198	140	267	200	165	338
Uganda	907	1,367	1,621	1,619	1,757	1,976
Zambia	1,026	1,102	928	795	964	1,008

Zimbabwe	552	358	727	775	654	718
Total	9,738	9,040	8,043	8,900	8,211	7,061

Table 6: The net receipts of ODA to SSA region (in 2016 USD millions) (OECD DAC2a, 2019)

As we can see table above, the great amount of foreign assistance to Africa region had gone to many Sub-Saharan Africa countries. Because of the low-income and poor living conditions, these countries and regions had benefited from the external assistance by DAC and non-DAC donor countries. Also, the amount of external assistance to Africa and then Sub-Saharan Africa has a big share in the amount of total assistance on the world. This assistance and aid have also some fragments according to sectoral aims and policies. When look at the sectoral fragment, we can see these figures:

Countries	Social	Econ.	Prod.	Multi	General	Debt	Human	Other	Total
Angola	255	4	9	90	0	-	26	7	391
Benin	207	510	229	21	89	0	1	49	1,105
Botswana	56	1	8	5	-	-	2	1	72
Burkina Faso	362	270	207	131	96	0	18	14	1,099
Cabo Verde	46	31	27	8	9	-	1	2	122
Cameroon	261	216	229	99	423	-	82	58	1,367
Chad	270	3	36	34	147	0	144	5	639
Comoros	20	35	4	2	2	0	1	1	64
Cote d'Ivoire	386	638	114	131	140	44	8	282	1,744
Eq. Guinea	4	0	0	1	-	0	0	1	7
Gabon	25	0	4	4	85	0	-	1	119

Ghana	615	314	323	27	93	-	2	26	1,399
Guin. Bissau	55	59	18	6	11	-	1	1	152
Kenya	1,922	746	467	142	20	0	271	30	3,599
Lesotho	102	20	21	20	10	-	4	0	177
Madagascar	353	496	371	110	197	0	35	8	1,568
Malawi	639	86	460	77	37	-	84	31	1,414
Mali	716	183	126	49	131	0	91	19	1,314
Mozambiq.	1,242	413	191	137	34	-	34	38	2,088
Namibia	122	83	28	19	0	-	0	2	256
Niger	488	226	199	122	78	0	130	13	1,255
Nigeria	2 166	350	454	147	3	-	950	56	4,145
Senegal	413	754	205	107	6	0	4	35	1,524
Seychelles	3	4	3	4	-	0	0	0	14
Tanzania	1,376	689	273	415	0	-	102	29	2,885
Togo	203	107	82	6	70	0	1	2	472
Uganda	1,038	183	156	69	11	-	347	29	1,834
Zambia	640	366	73	21	3	-	11	17	1,132
Zimbabwe	300	26	54	46	9	-	49	20	502
Total	6546,578	6813	4371	2050	1704	44	2373	777	3016,472

Table 7: The ODA commitments by sector and recipient countries in 2017 (OECD DAC Geobook, 2019)

Finally, we can review the share of net ODA received as a percentage of GNI for these 29 countries. This graph gives us an opinion about the dependency for assistance of a country and share in GNI:

Series : Net ODA received (% of GNI)
Source: World Development Indicators
Created on: 05/29/2019
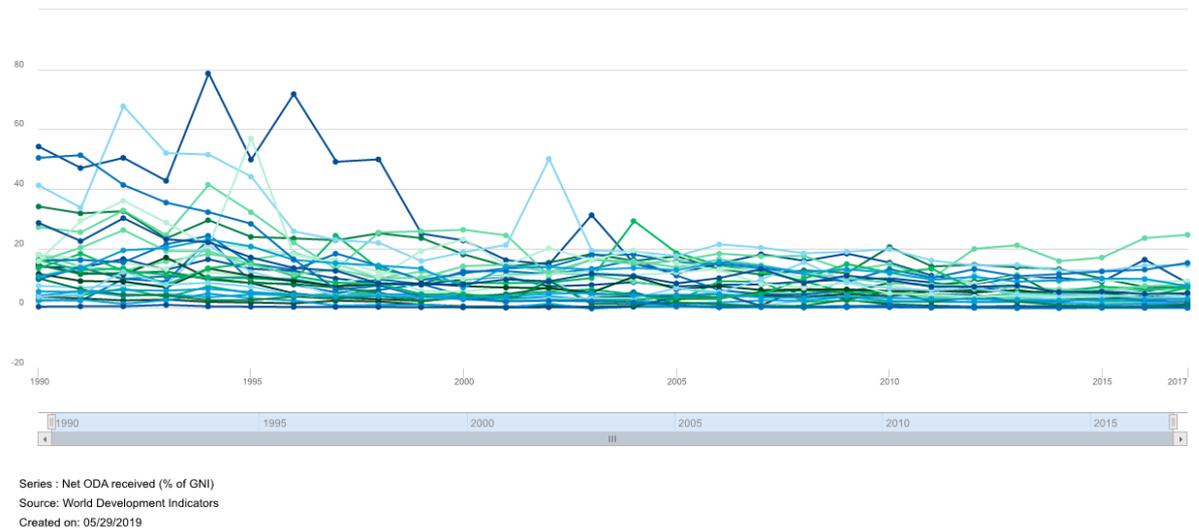
Figure 35: The net ODA received by 29 countries in SSA region (% of GNI) (WDI of WB, 2019)

According to the figure above, many countries in Sub-Saharan Africa region believe and depend on the foreign assistance to develop and grow economically and socially. This situation may create a hazard or potential problem about the negation of external assistance from other regions in following years. Therefore, the efficiency and effectiveness of assistance and aid are so substantial for the development progress of these countries in the long run.

The impact of assistance on economic growth is a main subject of debates about this problem. A range of studies has conducted many causality and relationship tests and try to explain the efficiency of foreign aids and donations. The political condition is formed by Burnside and Dollar (2000). According to them, the foreign aid methods and policies are efficient when these recipient countries have good and stable macroeconomic and fiscal policies. In other way, Lensink and White (2001) determined that the foreign aid has no efficient and productive impacts on undeveloped countries in the long run via research with 111 countries. According to them, GDP growth rate, and then economic growth rate of these undeveloped and needy countries turns to negative numbers, so these foreign aid policies were

inefficient generally. On the other side, according to Headey (2008), after Cold War period, the foreign aid policies have positive impact, but insignificantly. Therefore, according to many researches and studies, the foreign aid policies has no positive effect in the long run without some macroeconomic conditions and stabilities. Therefore, many undeveloped countries still want to benefit from foreign aid opportunities. Also, when look at the foreign aid and investment relation, some foreign aid types and policies aim to increase investments and promote productivity. For example, Boone (1996) and Payne and Kumazawa (2005) confirmed the positive correlation between foreign assistance and productivity & economic growth with study of 29 African countries between 1980 and 2001.

Consequently, these major and significant indicators and data give us information about the history and amount of aid and assistance from developed organizations and countries to the whole Africa and Sub-Saharan Africa region. Although the countries and institutions aim the humanity and development of nations with these assistance policies, there are also some purposes and goals of countries behind these applications. We will review these aims and effects briefly in the next part.

3.2. Aim and Effects of Foreign Aid

The assistance and aid theme are described by some organizations and institutions. For instance, as we stated above, OECD defines foreign aid as fund flows ensured by official institutions and states to needy countries to stimulate growth and development of economy. These assistance and subsidization can be in cash and in kind with grants, loans or gifts. The foreign assistance, or official development assistance (ODA) according to OECD, involves some categorizes or purposes like infrastructure, economic basis, production and manufacturing, general budget backing, humanity assistance, multi-sectoral assistance and debt relief. Also, there can be different categorizes or purposes except these. The

assistance thoughts and ideas aim the economic infrastructure and progress, in general. This way is used by countries and organizations to expand potential and capacity of economy and then enhance the basic macroeconomic indicators for promotion of economic growth. Therefore, there are occasions and motives behind the foreign aid policies and applications.

When look at the reasons and motives of external aid, the major motives are human security, human rights, living conditions of people and poverty. Poverty and great inequalities of people in needy and destitute countries and regions can create the needs for external assistance if these needy countries do not have sufficient capacity and abilities. For example, humanity issues and moral problems are initial motivations of external aid with the allocation and applications, according to Lumsdaine (1993). Consequently, scientists and researchers have found that the external aid have the aims of reducing of inequalities and poverty gap.

Outside of humanistic matters and issues, foreign assistance policies and applications can have different motives and reasons. The international relations, interstate policies and geopolitical positions can influence the policies and decisions of foreign aid. Geostrategic interests and potential, foreign policies, alliances between states and cooperation can be main factors behind these policies, also. The best example for this can be Cold War period. The disquiets of US about spreading of communism by the USSR formalized the policies and motives of foreign aid of US again. (Williams, 2013) The Truman Doctrine and the Marshall Plan are major applications of US for this statement, as we stated above detailed. In parallel with these examples, we can see same thing about external aid to Sub-Saharan Africa region and countries.

As stated in the history of foreign aid and assistance part, the assistance to Africa region in 18th and 19th centuries had some motives and aims. The colonization

process of European states and empires into SSA region and then the independence period of these colonies after Second World War had caused the formalization of foreign assistance and aid policies. (Apodaca, 2017) Because European states and US want to save positions and relations with African countries about trade, investment and resources. Outside of the humanistic matters and issues in Africa region, these governments and organizations want to have a voice for these regions about ideology, politic regimes or international relations.

The most prominent motive behind the foreign assistance is humanitarian problems. The poverty gap, economic instabilities, human rights and living conditions are main factors in these policies seemingly. For instance, hungry crisis, access to electricity and fresh water, mortality rates and population, drought and climate change are major current issues on the world, particularly in Africa region.

The Cold War period in history can give us opinions about the international foreign assistance. The policies of the USSR were formalized in this period with weak communist countries like Cuba, North Korea and North Vietnam. Moreover, post-Cold War period, the support and martial support to Afghanistan and Pakistan to prevent Russian expansionism into these regions are instances for these motives. On the other side, the US, European area and some organizations like NATO concentrated on Africa and Southern Asia with same aims. The foundation of the African Development Bank (AfDB) in 1964 and the foundation of the Asian Development Bank (AsDB) in 1966 indicate the application of the US and WB. Also, the foundation of African Development Fund in 1973 caused the formalization of foreign assistance to Africa region because of oil crisis during 1970s and the wealth of natural resources in this region. We can see many examples except these instances in the literature and database of official institutions and governments.

All foreign assistance applications have conditions for recipient and donor countries and organizations and two sides have interests. For example, Collier and Hoeffler (2007) stated that approximately 40% of African military spending is supported by OECD. This means that Africa states can spare their budget to other expenses from martial and OECD member countries can apply and save their policies by cooperation with these African countries. Therefore, the foreign assistance can be useful as a foreign policy mean with the matter of exchangeability or fungibility.

In brief, according to the applications and policies of external aid and foreign assistance, needy countries can benefit from the international support to maintain their social and economic life and to solve humanitarian problems and economic instabilities. On the other side, developed countries can also improve their international policies and position against the alliances and governments, so they can use the foreign aid tool. These examples and applications gives us opinions about these aims and effects.

CHAPTER FOUR

4. EMPIRICAL STUDY OF THE EFFECT OF FOREIGN AID ON ECONOMIC GROWTH IN SUB-SAHARAN AFRICA

4.1. Model Estimation

The economic growth issue was discussed and modeled by economists in different ways for many years. As remarked in concept and definition section, there are several models and theories about economic growth. However, the prevailing theories are classical, neo-classical, endogenous and Keynesian growth theories. In this paper, we use the neo-classical theory, as known as Solow/Swan growth model because it is an exogenous theory that formulate the model of economic growth and it involves the analysis of changes in the level of total output in an economy.

There are some assumptions of Solow/Swan economic growth model, also. According to this theory, population growth rate is at a constant rate, primarily, to correlate the current and future population. Moreover, all people have constant saving proportion according to their income levels. Other and final assumption is that all companies and firms are at the identical production technology level and they produce goods and services according to that technology. Moreover, the production model has capital and labor variables.

This part consists the model specification and estimation about the correlation about foreign aid and economic growth. The final model is set by usage of panel least squares estimation method. This model can be formulated from the production function that consists capital, labor and aid variables:

(2) Y = f(K, L, A)

Here, Y describes the real GDP (gross domestic product) and then capital is denoted as K, labor is denoted as L and finally, the amount of aid is denoted as A. (Ekanayake and Chatrna, 2010). On the other side, other variables like level of technology, population, investment, inflation, education level and so on can be counted in this model, but we focus on this fundamental model. Assume the equation above to be linear in logarithms, taking logs and differencing, the next formula can be concluded as a real GDP growth ratio.

(3) y = α + βl + σk + φa

The lower-case letters of l, k and a show the growth rate of these independent variables, and α, β, σ, φ are coefficients. Based on this model, labor and capital stock variables are respective to population and growth, also. According to Karras (2006), some variables can affect the growth rate of real GDP. Moreover, according to studies in the literature like Feeny and McGillivray (2008), there is the law of diminishing returns to aid because recipient states and organizations have constraints of absorbent capacity. Therefore, the variance in real GDP depends on these variables and the formula is shaped like this:

(4) GGDP$_{it}$ = β$_0$ + β$_1$GPOP$_{it}$ + β$_2$(INV/GDP)$_{it}$ + β$_3$(AID/GDP)$_{it}$ + β$_4$(AID/GDP)$^2{}_{it}$ + β$_5$ln(GDP)$_{i0}$ + β$_6$INF$_{it}$ + ε$_{it}$

In this formula, *GGDP$_{it}$* is the dependent variable and it shows the growth rate of real GDP per capita of a country, so the rate of economic growth and "i" is country and "t" is year. *GPOP$_{it}$* indicates the rate of labor force growth of a country. *INV$_{it}$* is the variable that shows investment amount of a country. *AID$_{it}$* variable shows the amount of the foreign aid received of a country. *GDP$_{i0}$* is the first level of gross domestic product of a county, and finally, *INF$_{it}$* is the rate of inflation of a country.

According to Feeny and McGillivray (2008) the resent findings shows the robust relationship between growth and aid. It indicates that there is an U sharped relationship. This shows that there are diminishing returns to aid according to absorptive capacitiy of the recipient country. Absorptive means the capacity how a recipient country use the aid effectively. In order to accommodate this relationship, a square term is added to the model.

According to this model, growth rate of economy depends on initial GDP level, population growth, amount of foreign assistance and its ratio to GDP, the ratio of investment and GDP and inflation. There are also some coefficients β_0, β_1, β_2, β_3, β_4, β_5 and β_6. These coefficients have the meanings with signs. The coefficients of growth rate of population and the investment to GDP, so β_1 and β_2, are expected to have a positive sign because when the population, labor force and capital stock of an economy raise, the potential and capacity of the economy and economic activities can increase, so total output increase, also. Hence, this can lead to economic growth or expansion. On the other side, the coefficient of inflation rate is expected to have negative sign by the way of the inflation or the rise in price levels affect the purchasing power and production costs negatively in an economy, generally. (Khan, 2015) The sign of coefficient of the foreign aid variables is the main matter of the paper and the hypothesis is that foreign aid can promote the economic growth for a country. We will test this hypothesis in the next parts.

Moreover, we should add some dummy variables that can affect the economic statistics and structure, policies and growth process of an economy, directly or indirectly. The economic freedom (independent economy or colonization) and ethnic wars in a country (civil wars or political chaos) are most substantial variables about economic growth and development process. These variables and data can be found at WB and the Freedom House. Consequently, we can analyze the correlation between foreign aid and economic growth depending on this model and data with regression analysis.

4.2. Data and Econometric Analysis

As stated in literature review and other parts, the data and indicators of these variables is taken from official institutions that are WB, OECD, IMF, the Freedom House and so on. In addition, the accuracy of these data and numerical information are confirmed with comparison between each other.

We used 29 countries from Sub-Saharan Africa area and we analyzed the relation between 1990 and 2017 years. The list of countries used in this empirical study is given in Appendix part. If we explain the variables and their meanings again, the dependent variable, the growth rate of real GDP per capita, measures the economic growth, numerically. This data is received from World Development Indicators database of WB and they are in constant prices to eliminate price changes. The growth rate of population is the first independent variable that is taken from WB, a. The data set about the amount of foreign aid is taken from OECD Development Assistance Committee (DAC) database and the net disbursements to countries are used. The inflation rate data is taken from International Monetary Fund (IMF), and it is used as consumer price index (CPI) because the CPI shows anything bought by consumers including imported goods and services, but GDP deflator does not contain imported goods and services. Finally, the data of dummy variables of economic independency and civil war are from the database and reports of the Freedom House.

We analyzed the relationship between foreign aid and economic growth for different ways. These are time and income level. The 1990 – 2017 period are separated into three groups: 1990 – 1999 period, 2000 – 2009 period and 2010 – 2017 period. In addition, we analyzed the entire period of 1990 – 2017 at the end. The econometric tests are also applied for the correlation of foreign aid and economic growth. Now, we can analyze and discuss the results of the empirical analysis.

Variables	1990 - 1999	2000 - 2009	2010 – 2017	1990 – 2017
Constant	-8.122757	-5.967777	1.312545	-5.356123
	(-2.677085)	(-4.490236)	(1.084954)	(-4.776406)
Population Growth	1.782139	1.343118	-1.404507	0.537262
	(1.884681)	(3.439563)	(-4.776172)	(1.603467)
Capital Growth	0.273260	0.220378	0.070703	0.226207
	(7.070893)	(6.562850)	(2.971967)	(10.73893)
(AID/GDP)	-0.046469	-0.063062	0.489789	0.069172
	(-0.343805)	(-0.590864)	(3.643216)	(1.121984)
The square of (AID/GDP)	-7.92E-06	0.001616	-0.019478	-0.001571
	(-0.003597)	(0.473589)	(-2.741665)	(-1.336587)
Initial level of GDP	-1.27E-10	1.61E-11	1.64E-10	2.10E-11
	(-1.092947)	(0.263459)	(3.697330)	(0.440716)
Inflation rate	-0.003980	-0.011575	-0.026367	-0.003418
	(-1.954921)	(-0.830967)	(-0.623032)	(-2.421488)
Economic independency	1.817	-0.0121	-0.1512	-0.2621
	(1.201)	(-1.012)	(-1.215)	(-2.016)
Civil war	-0.346	-1.3257	-1.8127	-0.7921
	(-1.158)	(-3.120)	(-3.215)	(-3.219)
LIC countries	0.1735	0.8248	-1.8254	0.4921
	(0.192)	(1.415)	(-3.428)	(1.198)
LMI countries	0.8631	0.9202	-1.4912	0.6782
	(0.997)	(1.592)	(-3.402)	(1.549)
UMI countries	1.0712	0.6792	-1.7156	0.2182
	(1.402)	(1.182)	(-3.821)	(0.684)
Number of observations	290	290	232	812
Number of Countries	29	29	29	29
R^2 and Adjusted R^2	0.176804	0.199477	0.174342	0.136541
	0.159351	0.182505	0.152324	0.130106

Table 8: The effects of foreign aid on economic growth in Sub-Saharan Africa countries.

Variables	Low Income	Low-Middle Income	Upper-Middle Income	All Countries

Constant	-2.4129	-1.7286	-2.9201	0.2261
	(-1.291)	(-1.723)	(-1.224)	(0.421)
Population Growth	0.5692	0.2104	0.1468	0.1421
	(1.696)	(1.232)	(4.716)	(9.672)
Capital Growth	0.1915	0.1104	0.6588	0.0432
	(6.281)	(5.237)	(2.563)	(0.256)
(AID/GDP)	0.0827	-0.0167	0.0844	0.0152
	(1.638)	(-0.521)	(0.589)	(1.423)
The square of	-0.0212	-0.0021	-0.0021	-0.0021
(AID/GDP)	(-0.640)	(-0.348)	(-0.329)	(-0.155)
Initial level of GDP	-0.8216	-0.4233	-0.0921	-0.2721
	(-5.602)	(-2.245)	(-0.562)	(-4.664)
Inflation rate	-0.0021	-0.0012	-0.0212	-0.0032
	(-3.215)	(-2.432)	(-2.043)	(-5.213)
Economic	-0.0829	-0.0124	-0.0821	-0.1247
independency	(-0.629)	(-0.854)	(-2.421)	(-1.124)
(dummy)				
Civil war (dummy)	-1.5322	-0.6423	-0.3621	-0.6352
	(-1.675)	(-1.672)	(-0.643)	(-3.214)
Number of	392	280	140	812
observations				
Number of Countries	14	10	5	29
R^2 and Adjusted R^2	0.218261	0.329482	0.282304	0.382914
	0.208294	0.327563	0.252143	0.359692

Table 9: The effects of foreign aid on economic growth in Sub-Saharan Africa countries based on different income levels.

The values in parenthesis are t-values of these variables. In addition, there are also dummy variables of economic independency and civil war. The econometric regression analysis is done with Eviews Package Software. Now, we can discuss the results in the tables above.

4.3. Results of Panel Data

In the table 8, according to the effects of foreign aid on economic growth in Sub-Saharan Africa countries, we can conclude some findings. The population growth and capital stock growth variables (investment) have positive sign, so these have a positive effect on economic growth. However, in the first period (1990-1999), the population growth variable is insignificant statistically. While the capital stock growth variable have a positive sign for all periods, this variable is significant statistically, also. Therefore, the investment to GDP have an affirmative impact on economic growth, significantly. On the other side, population growth variable is significant statistically in only one period. (2010-2017)

In addition, inflation rate variable has also negative sign as expected, so this means inflation affects the economic growth negatively in Sub-Saharan Africa, generally, but these are statistically insignificant, generally. Also, the initial GDP value is just statistically significant in 2010 – 2017 period and it has positive sign in last two 10-years period. When we look over the foreign aid variable, the most important variable, have positive sign in the period of 2010 – 2017 and 1990 – 1999 and 2000 – 2009 have negative sign and both statistically insignificant. 2010 – 2017 period is statistically significant. Therefore, the foreign aid has a positive impact on economic growth in 2010– 2017 significantly and in 1990 – 1999 insignificantly and then there is a negative impact on economic growth in 2000 – 2009. Moreover, the square term of this variable has only one positive sign in 2000 - 2009, but all of them are statistically insignificant. The adjusted R^2 values are about 0.2, so these relatively low values can help us to compare with other studies.

In addition, we should look over the dummy variables. The dummy variables are defined as follows: 1 if free; 0 if not free. In this case, the negative sign can be interpreted as countries which have no economic freedom. The civil war dummy variables have negative signs and these are significant. Therefore, the civil war

situation affects the economic growth of Sub-Saharan Africa negatively. However, economic independency variable is not significant statistically. Although the sign is positive in 1990 – 1999 period, this is insignificant and signs in other periods are negative. Consequently, when we look over the results generally, foreign aid could not promote the economic growth in the 1990 – 1999 and 2000 – 2009 periods, it could promote the economic growth in the 2010 – 2017 period, significantly.

On the other side, when we investigate based on income levels, population growth and capital stock growth variables have positive signs, so these variables have a positive influence on economic growth for all income levels. However, the population growth is statistically insignificant for lower-middle income countries, only and other countries in the income levels are significant.

The inflation rate coefficients also have negative signs for all income levels and these are statistically significant. Therefore, there is a negative impact of inflation rate on economic growth. In addition, the initial level of GDP has also negative sign, so there is adverse relation between the initial GDP and economic growth, but only upper-middle income countries are statistically insignificant. Moreover, when we look at the relationship between foreign and economic growth based on income levels of countries, there is also negative or insignificant impacts. For low-income and upper-middle income countries, the foreign aid has a positive effect on economic growth, but this is statistically insignificant. For lower-middle income countries, the foreign aid has a negative impact on economic growth, but this is also insignificant. Therefore, as stated in the table, the foreign aid could not promote the economic growth for SSA countries, effectively. On the other side, economic independency and civil war dummy variables has negative effects on economic growth and also it can be related to efficiency of foreign aid on economic growth. The adjusted R^2 values are relatively low, so these results can be compared with the other studies and calculations.

4.4 A brief history of Malawi & the results of Panel Data

Malawi and other Sub Saharan African countries are the poorest in the world. Many countries in this region depend on agriculture. These countries need the substantial inflows of external resources because they are not able to save and they luck capital accumulation. The inflows which the external force provides to these country helps to reduce the gap created by luck of savings, lack of foreign exchange and the capabilities of raising revenues. Economy of a country can grow if there is savings according to Harrod-Domar growth traditional. Growth in sub Saharan African is needed to overcome the widespread poverty and to lift the living standards to level which is acceptable

Now we talk about Malawi's brief economic history so that we can be able to understand the results we found. Malawi gained independence in 1964. Since that time Malawi depend on agriculture and foreign aid for its economy. The economic performance and development has been tied to export of agricultural products. Malawi has experienced rapid economic progress since it got independence. It has received foreign aid from Britain, and the substantial inflows were more than the aid Malawi received from different sources. The first 15 years after independence (1964-1979, Malawi economy was impressive and its real GDP growth rate was 6.4% per annum. The government was successful in obtaining funds from both external and internal sources (Pryor 1990). In late 1970s things changed, the growth slowed down due to the combination of internal

imbalances and international shocks. High inflation and budget deficit increased. In additional to global recession, sharp fall in foreign loans, shocks like falling of world price tobacco and rising of oil prices, Malawi lost the trade route which enable it to perform 80-90% of export and import due close of the railway road in 1979 and 1981. This caused many problems like high transportation cost and many more.

In 1981 government with the help of International Monetary Fund (IMF) made reform plans in order to stabilize the economy. They start to implement Structural Adjustment Loan (SAL) from 1981 to 1987 but it was in three phases, 1981-1984, 1984-1986 and 1986-1987. Mainly these reforms were focusing on the agricultural sector. Even these reforms were carried out the results were not impressive due to decline in the term of trade and influx of refugees from Mozambique. After another structural adjustment program in 1986 growth was recovered in 1987 and 1991.

In early 1990s political situation was not good for Banda. 1991 to 1994 was a political transformation. It was the transition period to democracy and the number of donor increases and the aid inflow also increased. This time the structural adjustment was mainly focused in reduction of poverty but it includes other programs like trade reforms, privatization of parastatals to increase efficiency, liberalization of markets and agricultural markets, and smallholder farmers' conditions.

Economic growth during 1991 and 1994 was too volatile due to droughts and declining of tobacco prices. The expenditure of government also added the

volatility of growth because Banda' regime spending were not checked. The new government also added to this volatility because it wanted to fulfill some of things it promised during campaign period like free primary school. After primary school schools were made free, the enrollment increased to 60% and there was a need to increase the number of new teachers (EIU 2001).

In 1994 the government lost control on expenditures and the budget deficit rose to 37% of the GDP and the inflation high rocketed to 80% in 1995. The situation caused the donors to suspend aid. The new government reacted well to suspension of aid and brought back the inflation to 8% while budget deficit was down to 7.5%by 1996. They were able to achieve this by introducing the Medium Term Expenditure Framework (MTEF) in 1995. Each ministry was given a resource envelope which need to be spend according to MTEF and no ministry should spend more that it was allocated to them by the Ministry of Finance (World Bank 2003).

The fiscal deficit was started to deteriorate even though MTEF was being followed, this was due to failure of the new government to collect taxes. The government projected revenue was higher that collected. The elections in 1999 also weakened the economy growth because the expenditure was more than planned. Although the deficit increased by 1999 the donors keep on donating aid. The growth in 1999 was negative and too weak.

The country was hit by drought on 2000 and 2002. The problem was aggravated by the mismanagement of the Strategic Grain Reserve. The IMF again withhold the financial assistance in 2001 and 2002 and bilateral donors followed (World

Bank 2003). The program which was introduced by government and IMF, Poverty Reduction and Growth and Facility (PRGF) was out off track since 2000. This also contributed to holding of aid by IMF. Muluzi who was the president since 1994 he changed the way he implement agreements in 2002-2004. Policymaking deteriorated in this period. There was a shift in priorities from governing to politicking. The president needed the support from the MPs, in order this to happen he needed resources to distribute and he started appointing unqualified people who were loyal to him. This caused the deficit to deteriorate more (Khembo 2004).

The new government in 2005 changed the way they govern. Economic performance improved, GDP growth rates went up and the inflation rate remained in single digits. People saw interest rates going down due to improvement of inflation. This time the government was able to collect taxes because good reforms were implemented. After 2012 GDP growth rates started to go down due the change of govenment although the country was recieving foreign aid. We can see that even Malawi receive foreign aid, the GDP growth rate depend on the other factors for example good governance, political stability and many more.

CONCLUSION

The debates about the effects of foreign aid on economic growth continue for the economic literature and economists. Because the macroeconomic policies and international relations are based on foreign aid and external assistance for many needy countries, the method and effect of foreign aid is also substantial for donor and recipient countries.

The concept of foreign aid is also a matter of debate for economists and policy-makers. However, general idea of foreign aid is the assistance and support of states, global organizations, institutions or countries to needy countries and regions in terms of financial, social or political. This aid or assistance can be done as a transfer of capital, goods and services. However, the aim and method of foreign aid is more important than the concept. The foreign assistance programs are benefited from the developing or poor countries to promote economic growth and develop financial and social structure of society and government, but there are some purposes of aid giving nations to guarantee their own international policies and positions in short and long term. Therefore, this foreign assistance concept is so significant for the world political and financial order.

The foreign aid and assistance programs contain the solutions and support plans for humanity problems. This foreign aid can be done in some ways such as financial investment, education support, health aid, infrastructure investment etc. Also, the foreign assistance can be advice programs technically or non-technically such as development plans, growth prescriptions etc. Apart from humanitarian reasons, developed countries and global organizations can have some purposes to support developing countries and regions like diplomatic purposes or international relations. For example, we mentioned above the NATO applications and precautions for communism propagation. Therefore, states or institutions may want to gain and have control about the world order and they may use the foreign aid tool for this.

Although there can be many political and diplomatic purposes of foreign assistance programs to needy countries and regions, the main purpose of foreign aid is to promote economic growth of governments and societies. Therefore, economic growth concept and meaning is very important for application and method of foreign aid. Although the economic growth is not meaningful by oneself, it is the most important indicator for countries to understand state of affairs and general trend of general economy in a country. When we look at the general policies and purposes of foreign aid and assistance programs, they aim to promote the economic growth, constitutively. According to general statistics and reports of Sub-Saharan African region economy and its economic growth structure, many countries in SSA region have many problems about poverty, scarcity and low-income. Therefore, they need the foreign assistance and aid from abroad to promote economic growth and financial development. However, there are a big matter of debate, as we mentioned initially in this part. Can foreign aid or official development assistance promote the economic growth, especially for Sub-Saharan Africa region? Are there positive relationship or correlation between foreign aid and economic growth for Sub-Saharan African countries? Is this correlation significant, or not?

This thesis analyzes the effects of foreign aid on economic growth for 29 countries in Sub-Saharan Africa region and determines whether foreign aid promotes the economic growth of a country in this area. This thesis investigates the data between 1990 – 2017 periods and examines based on 10 years periods and income levels of countries. To find the correlation between foreign assistance and economic growth for Sub-Saharan Africa countries, the model based on the Solow growth model is used and population growth, investment share in GDP (or capital stock), inflation rate, initial GDP level and the amount of foreign aid received are used to understand this.

The conclusion about the correlation between foreign aid and economic growth has mixed and different results depending on years and income levels. In the 10-

years investigation, although 1990 – 1999 period indicates the positive relation, this result is statistically insignificant, and in the 2000 – 2009 period, there is adverse relationship between foreign aid and economic growth. However, we can see the positive and significant correlation between foreign aid and economic growth in the 2010-2017 period, significantly. On the other side, we cannot see the positive cohesion between economic growth and foreign assistance depending on income levels, so the foreign aid cannot promote the economic growth effectively in the long run. Consequently, the hypothesis about the promotion of foreign aid to economic growth cannot be proved and there are mixed results based on time and income levels as negative or insignificant.

REFERENCES

Acemoglu, D. (2012). Introduction to modern economic growth. Ventura, CA.

Adedokun, A. J. (2017). Foreign Aid, Governance and Economic Growth in Sub-Saharan Africa: Does One Cap Fit All? *African Development Review,29*(2), 184

Addison, T., Mavrotas, G., & Mcgillivray, M. (2005). Aid to Africa: An unfinished agenda. *Journal of International Development,17*(8), 989-1001.

African Economic Outlook 2018 (Summary in English). (2018). African Development Bank 2018

Aid (ODA) disbursements to countries and regions. (n.d.). Retrieved from https://stats.oecd.org/Index.aspx?DataSetCode=Table2A.

Alesina, A., & Dollar, D. (1998). Who Gives Foreign Aid to Whom and Why?

Alvi, E., & Senbeta, A. (2011). Does Foreign Aid Reduce Poverty? Journal of International Development, 24(8), 955-976.

Annen, K., & Kosempel, S. (2009). Foreign Aid, Donor Fragmentation, and Economic Growth. The B.E. Journal of Macroeconomics, 9(1).

Apodaca, C. (2017). Foreign Aid as Foreign Policy Tool. Oxford Research Encyclopedia of Politics.

Asiedu, E. (2014). Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability. SSRN Electronic Journal.

Barro, R. (1996). Determinants of Economic Growth: A Cross-Country Empirical Study.

Bauer, P. T. (1976). Dissent on development. London: Weidenfeld and Nicolson.

Bigsten, A., & Tengstam, S. (2015). International Coordination and the Effectiveness of Aid. World Development, 69, 75-85.

Belair, F. (n.d.). Asks 400 Million to Aid Greece and Turkey. New York Times. Retrieved from https://archive.nytimes.com/www.nytimes.com/learning/general/onthisda /9031onthisay_big.html

Boone, P. (1996). Politics and the Effectiveness of Foreign Aid.

Borensztein, E., Gregorio, J. D., & Lee, J. (1995). How Does Foreign Direct Investment Affect Economic Growth

Bräutigam, D., & Knack, S. (2004). Foreign Aid, Institutions, and Governance in Sub Saharan Africa. *Economic Development and Cultural Change,52*(2), 255-285.

Burnside, C. and D. Dollar, 2000. "Aid, Policies, and Growth", American Economic Review, Vol. 90, No. 4, pp. 847-868.

Chenery, H. B. (1967). Foreign Assistance and Economic Development. Capital Movements and Economic Development, 268-292.

Chheang, V. (2009). *The effect of foreign aid on economic growth and corruption in 67 developing countries* (Unpublished master's thesis).

Collier, P., & Hoeffler, A. (2007). Unintended Consequences: Does Aid Promote Arms Races Oxford Bulletin of Economics and Statistics, 69(1), 1-27.

Commitment to Development Index 2017. (2017, September 05). Retrieved from https://www.cgdev.org/publication/commitment-development-index-2017

Dalgaard, C., Hansen, H., & Tarp, F. (2004). On the Empirics of Foreign Aid and Growth. *The Economic Journal,114* (496).

Dhakal, D., K. P. Upadhyaya and M. P. Upadhyay (1996). "Foreign Aid, Economic Growth, and Causality," Rivista di Scienze Economiche e Commerciali, vol. 43,pp. 597-606.

Dollar, D. and Kraay, A. (2001) Trade, Growth and Poverty. World Bank, Development Research Group, Macroeconomics and Growth.

Dowling, M., Hiemenz, U. (1982), "Aid, Savings and Growth in the Asian Region," Economic Office Report Series 3, Asian Development Bank: Manila. Eicher, C. K. (2003). Fifty Years of Donor Aid to African Agriculture.

Ekanayake, E. M., & Chatrna, D. (n.d.). The effect of foreign aid on economic growth in developing countries. *Journal of International Business and Cultural Studies*.

Easterly, W. (2003). Can Foreign Aid Buy Growth? *Journal of Economic Perspectives.*

Ekanayake, E. M., & Chatrna, D. (2010). The effect of foreign aid on economic growth in developing countries. Journal of International Business and Cultural Studies.

Empirical Analysis. World Bank Policy Research Working Paper 2396.

Feeny, S. (2005). The Impact of Foreign Aid on Economic Growth in Papua New Guinea. *Journal of Development Studies,41*(6), 1092-1117.

Freedom in the World Data and Resources. (2018, May 08). Retrieved from https://freedomhouse.org/content/freedom-world-data-and-resources

Friedman, M. (1958), 'Foreign Economic Aid', Yale Review, Vol. 47, No. 4, pp. 500–16.

Gomanee, K., Girma, S., & Morrissey, O. (2005). Aid and growth in Sub-Saharan Africa: Accounting for transmission mechanisms. Journal of International Development.

Gupta, K.L., Islam M.A. (1983), —Foreign Capital, Savings and Growth—An International CrossSection Study, Reidel Publishing Company: Dordrecht.

Gür T.H. *External Debt and Empirical Models for Country Risk Assessment.* Ankara: Sermaye Piyasasi Kururu, 1998.

Hansen, H., & Tarp, F. (2001). Aid and growth regressions. *Journal of DevelopmentEconomics, 64*(2), 547-570.

Haroon, M. (2003). *The impact of foreign aid on national development: A case* Islam, M.N. (2005) Regime Changes, Economic Policies and the Effect of Aid on Growth. The Journal of Development Studies , 41, 1467-1492. *study of Bangladesh.*

Hatemi-j, A., & Irandoust, M. (2005). Foreign Aid And Economic Growth: New Evidence From Panel Cointegration. Journal of Economic Development, 30(1).

Hoy, P. (1998). *Players and issues in international aid.* West Hartford, CT: Kumarian.

Jennings, A., & Mosley, P. (1987). Overseas Aid: Its Defence and Reform. *The Economic Journal,97*(388), 1023.

Jensen, P. S., & Paldam, M. (2006). Can the two new aid-growth models be replicated Public Choice, 127(1-2), 147-175.

Jones, C. (2015). The Facts of Economic Growth.

Karras, G. (2005). Foreign aid and long-run economic growth: Empirical evidence for a panel of developing countries. *Journal of International Development,18*(1).

K. B. Griffin and J. L. Enos, Economic Development and Cultural Change Vol. 18, No. 3 (Apr., 1970), pp. 313-327

Knack, S. (1999) Aid Dependence and the Quality of Governance: A Cross Country

Lensink, R., & White, H. (2001). Are There Negative Returns to Aid? Changing the Conditions for Development Aid, 42-65.

Lanza, V. (2012). The Classical Approach to Capital Accumulation.

Leontief, W. (1964). Disarmament, Foreign Aid and Economic Growth. Journal of Peace Research, 1(3-4), 155-167.

Levy, V. (1988). Aid and Growth in Sub-Saharan Africa: The Recent Experience. European Economic Review, 32 (1988), pp. 1777-1795.

Lumsdaine, D. H. (1993). Moral vision in international politics: The foreign aid regime: 19491989. Princeton, N.J: Princeton University Press.

Marshall Plan Payments in Millions to European Economic Cooperation Countries [Marshall Foundation]. (n.d.). Retrieved from

https://www.marshallfoundation.org/library/documents/marshall-plan paymentsmillions-european-economic-cooperation-countries/

M.p.t., & Bauer, P. T. (1977). Dissent on Development. *Population and DevelopmentReview, 3*(1/2), 141.

Mcgillivray, M., Feeny, S., Hermes, N., & Lensink, R. (2006). Controversies over the impact of development aid: It works; it doesnt; it can, but that depends…. *Journal of International Development,18*(7), 1031-1050.

McKelvey, John. 1965. "Agricultural Research." In The African World: A Survey of Social Research, R. A. Lystad, ed. New York: Praeger. pp. 317-351.

Minoiu, C., & Reddy, S. G. (2010). Development aid and economic growth: A positive long-run relation. The Quarterly Review of Economics and Finance, 50(1), 27-39.

Morgenthau, H. (1962). A Political Theory of Foreign Aid. American Political Science Review, 56(02), 301-309.

Morrissey, O. (2001). Does aid increase growth? *Progress in Development Studies,1*(1).

Mosley, P. (1980). Aid, Savings And Growth Revisited. Oxford Bulletin of Economics and Statistics, 42(2), 79-95.

Mosley, P., Hudson, J., & Horrell, S. (1992). Aid, the public sector and the market in less developed countries: A return to the scene of the crime. Journal of International Development, 4(2), 139-150.

Ndambendia, H., & Njoupouognigni, M. (2010). Foreign aid, foreign direct investment and economic growth in Sub-Saharan Africa: Evidence from pooled mean group estimator (PMG). International Journal of Economics and Finance, 2(3).

Ndikumana, L., & Pickbourn, L. (2017). The Impact of Foreign Aid Allocation on Access to Social Services in sub-Saharan Africa: The Case of Water and Sanitation. World Development, 90, 104-114.

OECD (Organization for Economic Cooperation and Development) (2019). Development Aid at a Glance: Statistics by Region. Paris. http://www.sourceoecd.org/develpomentreport

OECD (Organization for Economic Cooperation and Development). What is Official Development Assistance (ODA)? (Rep.). (2019).

Okello, W. (n.d.). Industry Highlights Archives. Retrieved from https://www.africaengineeringnews.com/category/industry-highlights/

Papanek, G. F. (1972). The Effect of Aid and Other Resource Transfers on Savings and Growth in Less Developed Countries. *The Economic Journal,82*(327), 934.

Payne, J. E., & Kumazawa, R. (2005). Additional Panel Data Evidence on the Savings Investment Relationship and Foreign Aid in LDCs. Frontiers in Finance and Economics, 2(2), 59-66.

Phillips, K. (2013). The history of foreign aid. Australian Broadcasting Corporation.

Pomerantz, P. R. (2007). Foreign Aid: Diplomacy, Development, Domestic Politics by Carol Lancaster. Political Science Quarterly, 122(3), 518 519.

Raffer, Kunibert and H. W. Singer. The Foreign Aid Business. Cheltenham: Edward Elgar Publishing Limited, 1996.

Reci, A. (2014). Advantages and Disadvantages of Foreign Assistance in Albania. Forum Scientiae Oeconomia, 2(3).

Reinert, E. S. (2019). Mechanisms Of Financial Crises In Growth And Collapse:. The Visionary Realism of German Economics, 529-554.

Salisu, A. A., & Ogwumike, F. O. (2010). Aid, Macroeconomic Policy Environment and Growth: Evidence from Sub-Saharan Africa. *Journal of Economics Theory,4*(2).

Solow, R. M. (1956). A Contribution to the Theory of Economic Growth. The Quarterly Journal of Economics, 70(1), 65.

Svensson, J., 1999. "Aid, Growth and Democracy", Economics and Politics, Vol. 11, No.3, pp. 275-297.

Sub-Saharan Africa Regional Economic Outlook (Rep.). (2019). International Monetary Fund.

Tang, K., & Bundhoo, D. (2017). Foreign Aid and Economic Growth in Developing Countries: Evidence from Sub-Saharan Africa. *Theoretical Economics Letters, 07*(05), 1473-1491.

Tarp, F., & Hansen, H. (2000). Aid effectiveness disputed. *Foreign Aid and Development*.

Todaro*, M. P., & Smith, S. C. (2015). Economic development. Boston: Pearson.*

Trevino, L. J., & Upadhyaya, K. P. (2003). RESEARCH NOTE Foreign aid, FDI and economic growth: evidence from Asian countries. United Nations, 12 (2), 119.

Veiderpass, A. (2015). Foreign aid and productivity. Journal of Productivity Analysis, 43(3), 249-258.

Williams, D. (2013). The history of international development aid. Handbook of Global Economic Governance, 233-248.

Wood, R. E. (1986). *FROM MARSHALL PLAN TO DEBT CRISIS: Foreign aid and development choices in   the world economy.* Place of publication not identified: UNIV OF CALIFORNIA Press.

World Bank (2014b), World Development Indicators, World Bank, Washington,DC. Availabel at: http://data.worldbank.org/data catalog/worlddevelopment indicator

World Economic Outlook Database April 2019. (n.d.). Retrieved from https://www.imf.org/external/pubs/ft/weo/2019/01/weodata/index.aspx

APPENDIX.1. SSA COUNTRIES BASED ON INCOME LEVELS

Appendix Table 1: Sub-Saharan Africa countries based on income levels. (WB, 2019)

	Countries
Low-income countries	Benin, Burkina Faso, Chad, Comoros, Guinea-Bissau, Madagascar, Malawi, Mali, Mozambique, Niger, Senegal, Togo, Uganda, and Zimbabwe
Lower-middle income countries	Angola, Cabo Verde, Cameroon, Cote d'Ivoire, Gabon, Ghana, Kenya, Lesotho, Nigeria, Zambia
Upper-middle income countries	Botswana, Equatorial Guinea, Gabon, Namibia, Seychelles

APPENDIX.2. DATA

Appendix Table 2: GDP per capita growth rate, population growth rate, investment to GDP, aid to GDP and inflation data of the 29 countries of Sub-Saharan Africa region.

Year	Country	GGDP	GPOP	INV/GDP	AID/GDP	INF
1990	Angola	-6,1805	2,868721	15,167	2,6506128	1,833
1991	Angola	-2,08184	3,09029	33,767	2,61302933	83,78378
1992	Angola	-8,85082	3,251618	57,951	9,82239789	299,5098
1993	Angola	-26,4526	3,302194	59,457	8,93855701	1378,528
1994	Angola	-1,86429	3,212362	57,799	23,0059602	949,7925
1995	Angola	11,55304	3,043198	62,776	8,72724932	2666,451
1996	Angola	10,34822	2,855267	78,017	7,87882328	4145,106
1997	Angola	4,382887	2,732315	57,265	5,26934997	219,1767
1998	Angola	1,886631	2,715382	79,145	6,05457852	107,2848
1999	Angola	-0,67225	2,832559	64,748	8,10601712	248,1959
2000	Angola	-0,02404	3,032943	30,493	4,05719907	324,9969
2001	Angola	0,878294	3,245491	30,493	3,83358739	152,561
2002	Angola	9,853363	3,411515	30,493	3,03297829	108,8974
2003	Angola	-0,5786	3,526303	30,451	3,06784243	98,22414

2004	Angola	7,057473	3,573962	30,894	5,43390621	43,54211
2005	Angola	10,98827	3,5759	27,557	1,25889389	22,95351
2006	Angola	7,639809	3,56616	23,301	0,35391533	13,30521
2007	Angola	10,01766	3,564539	25,731	0,45082648	12,2515
2008	Angola	7,27454	3,563448	30,804	0,49323004	12,47583
2009	Angola	-2,67534	3,566821	42,821	0,37637815	13,73028
2010	Angola	1,181679	3,570099	28,197	0,31060866	14,46966
2011	Angola	-0,15716	3,570352	26,424	0,18898573	13,48247
2012	Angola	4,746547	3,559496	26,668	0,20709658	10,2779
2013	Angola	1,312474	3,531824	26,143	0,22517186	8,777814
2014	Angola	1,232061	3,485413	27,5	0,17199039	7,280387
2015	Angola	-2,45815	3,428021	34,202	0,34461275	10,27805
2016	Angola	-5,80616	3,367572	27,215	0,21543976	32,37773
2017	Angola	-3,40162	3,313507	24,13	0,18855263	31,69169
1990	Benin	5,507107	3,235059	15,518	13,8925285	1,112
1991	Benin	0,764701	3,377159	16,017	13,5845896	2,1
1992	Benin	-0,5626	3,479003	15,51	16,4563822	2,51
1993	Benin	2,19519	3,500774	16,233	12,8767504	0,440599
1994	Benin	-1,41568	3,426061	17,769	16,4036729	38,53087
1995	Benin	2,609372	3,293614	22,173	13,2005152	14,46255
1996	Benin	1,094015	3,145324	17,396	12,4526188	4,91424
1997	Benin	2,580644	3,028375	19,889	9,87946525	3,466296
1998	Benin	0,930263	2,958613	18,946	8,40520001	5,753315
1999	Benin	2,277471	2,951754	26,907	7,93441788	0,326723
2000	Benin	2,7478	2,983995	23,568	9,57284777	4,165404
2001	Benin	2,193122	3,02378	26,066	10,5198095	3,984295
2002	Benin	1,508016	3,043083	21,793	7,32017244	2,489162
2003	Benin	0,346991	3,039675	22,174	7,80886249	1,487242
2004	Benin	1,337853	3,005342	22,134	8,73668516	0,873891
2005	Benin	-1,24744	2,952384	17,811	7,29385824	5,364521
2006	Benin	0,978332	2,897533	18,965	7,83053306	3,782177
2007	Benin	3,004341	2,854074	24,085	8,02708874	1,298068

2008	Benin	1,969729	2,823522	20,376	8,94083951	7,947299
2009	Benin	-0,50547	2,809337	21,903	9,59145674	2,15683
2010	Benin	-0,7153	2,806109	23,132	9,96521825	2,307357
2011	Benin	0,116355	2,803422	24,135	8,62477549	2,720909
2012	Benin	1,925341	2,79704	22,555	6,28112239	6,744417
2013	Benin	4,240193	2,790253	27,814	7,26423797	0,890009
2014	Benin	3,433604	2,782287	28,574	6,21296568	-1,00604
2015	Benin	-0,69639	2,772978	25,582	5,22931322	0,273668
2016	Benin	1,131092	2,763534	20,997	5,77735843	-0,84835
2017	Benin	2,964573	2,752298	25,522	7,36178302	0,079071
1990	Botswana	3,805929	2,818033	39,082	3,94112436	11,39635
1991	Botswana	4,514297	2,77828	31,841	3,27211682	11,76502
1992	Botswana	0,152836	2,722614	31,826	2,61241204	16,16761
1993	Botswana	-0,73357	2,634259	29,941	2,91666596	14,3308
1994	Botswana	1,063355	2,505916	25,982	2,11104238	10,54292
1995	Botswana	4,542597	2,351839	27,129	1,90839781	10,51255
1996	Botswana	3,522876	2,203953	23,443	1,62296761	10,08286
1997	Botswana	6,10498	2,071521	24,052	2,49456525	8,719931
1998	Botswana	-1,48084	1,934592	37,937	2,16393771	6,661399
1999	Botswana	7,716489	1,794802	25,626	1,16602909	7,749296
2000	Botswana	0,307236	1,661434	29,551	0,56326512	8,601485
2001	Botswana	-1,26866	1,527041	29,888	0,54049722	6,559038
2002	Botswana	4,578678	1,415514	30,193	0,78701986	8,032797
2003	Botswana	3,211855	1,360736	30,144	0,41275098	9,189903
2004	Botswana	1,302728	1,375546	31,48	0,5827795	6,945704
2005	Botswana	3,062426	1,439411	27,15	0,5306985	8,610225
2006	Botswana	6,731372	1,517961	25,905	0,71210378	11,55522
2007	Botswana	6,570049	1,588808	30,793	1,03000818	7,080998
2008	Botswana	4,502093	1,654477	36,187	7,0918181	12,70219
2009	Botswana	-9,2163	1,708091	38,93	2,81530273	8,027297
2010	Botswana	6,678648	1,751544	41,412	1,26394345	6,948877
2011	Botswana	4,162767	1,794006	38,575	0,7610507	8,459872

2012	Botswana	2,557541	1,834351	38,84	0,49607086	7,536903
2013	Botswana	9,293268	1,858453	29,409	0,73913281	5,884607
2014	Botswana	2,225018	1,864855	28,199	0,62476588	4,402253
2015	Botswana	-3,50557	1,855975	32,603	0,46183263	3,062032
2016	Botswana	2,411926	1,841666	28,57	0,60196252	2,814958
2017	Botswana	0,51085	1,823112	28,246	0,60648531	3,308281
1990	Burkina Faso	-3,21121	2,659152	18,247	10,5538024	-0,5043
1991	Burkina Faso	6,188997	2,676924	18,314	13,4252372	2,162601
1992	Burkina Faso	-2,43052	2,692988	18,765	19,4143028	-1,99114
1993	Burkina Faso	0,695588	2,709647	19,187	20,2289898	0,553456
1994	Burkina Faso	-1,41084	2,727322	19,984	23,0246543	25,17788
1995	Burkina Faso	2,852987	2,745914	20,757	20,6986343	7,458845
1996	Burkina Faso	7,987348	2,764895	23,245	16,1653356	6,097804
1997	Burkina Faso	3,398121	2,783685	25,186	15,093582	2,318691
1998	Burkina Faso	4,34171	2,80294	25,181	14,2792593	5,084333
1999	Burkina Faso	4,415316	2,822272	23,954	13,3430568	-1,07261
2000	Burkina Faso	-1,03264	2,841885	16,613	6,90868624	-0,30421
2001	Burkina Faso	3,608619	2,858869	13,677	14,0201135	5,007433
2002	Burkina Faso	1,394566	2,875992	16,427	13,8154385	2,175695
2003	Burkina Faso	4,722708	2,898432	17,719	12,9385869	2,034566
2004	Burkina Faso	1,464141	2,927561	16,205	13,465068	-0,40023
2005	Burkina Faso	5,493464	2,959188	20,316	12,8293337	6,41504
2006	Burkina Faso	3,124174	2,98907	17,155	15,4894735	2,333109
2007	Burkina Faso	2,520321	3,011809	18,809	13,9587666	-0,23063
2008	Burkina Faso	4,097479	3,024962	20,049	11,9839629	10,6598
2009	Burkina Faso	-0,1074	3,02645	17,936	12,9898153	2,608177
2010	Burkina Faso	2,239442	3,019245	18,041	11,9457494	-0,76423
2011	Burkina Faso	3,466317	3,008938	15,429	9,50713991	2,759767
2012	Burkina Faso	3,309382	2,997255	14,915	10,5268801	3,818152
2013	Burkina Faso	2,684958	2,981483	18,708	8,90147961	0,533739
2014	Burkina Faso	1,282016	2,961978	21,48	9,34694899	-0,25809
2015	Burkina Faso	0,884825	2,93969	13,776	9,88873786	0,954993

2016	Burkina Faso	2,890096	2,915614	16,453	9,78970787	-0,24476
2017	Burkina Faso	3,272832	2,891066	17,329	7,42731739	0,361247
1990	Cabo Verde	-1,28083	1,978894	36,961	34,0517615	10,65351
1991	Cabo Verde	-0,92888	2,327599	35,1	31,7732993	9,550907
1992	Cabo Verde	8,108983	2,582849	33,613	32,4961678	3,116664
1993	Cabo Verde	5,784787	2,726153	36,346	23,3953118	5,788396
1994	Cabo Verde	15,99464	2,711315	39,901	29,458023	3,452058
1995	Cabo Verde	11,28507	2,595804	35,469	23,8827084	8,351525
1996	Cabo Verde	8,653141	2,448656	34,374	23,4053695	5,96362
1997	Cabo Verde	8,558898	2,330367	35,383	22,7936251	8,556063
1998	Cabo Verde	10,05083	2,21645	28,715	25,1307841	4,394235
1999	Cabo Verde	8,88436	2,124763	31,441	23,4721515	4,356434
2000	Cabo Verde	11,97489	2,041949	27,862	18,0225869	-2,47746
2001	Cabo Verde	0,2417	1,965709	28,986	14,0152706	3,349965
2002	Cabo Verde	3,297688	1,873195	32,743	15,2578325	1,884534
2003	Cabo Verde	2,355795	1,762934	28,329	18,1790461	1,18817
2004	Cabo Verde	8,425819	1,620409	35,674	15,867562	-1,89082
2005	Cabo Verde	5,357321	1,465272	35,399	17,3576176	0,418892
2006	Cabo Verde	6,584978	1,303817	34,648	13,0874139	5,369077
2007	Cabo Verde	13,83463	1,166847	49,79	11,2004092	4,410997
2008	Cabo Verde	5,504249	1,08061	48,535	12,73535	6,774435
2009	Cabo Verde	-2,31143	1,060003	43,789	11,7935562	0,991103
2010	Cabo Verde	0,371908	1,084919	47,647	20,5499539	2,078665
2011	Cabo Verde	2,805939	1,124856	47,509	14,0294513	4,473883
2012	Cabo Verde	-0,08077	1,156908	37,194	14,6496893	2,540396
2013	Cabo Verde	-0,38469	1,185023	31,63	13,7277873	1,506543
2014	Cabo Verde	-0,59875	1,209903	37,004	13,0931309	-0,23878
2015	Cabo Verde	-0,22058	1,222652	38,752	9,93794778	0,131188
2016	Cabo Verde	3,41589	1,239581	37,147	7,08517009	-1,40843
2017	Cabo Verde	2,713444	1,257535	38,164	7,20856994	0,783901
1990	Cameroon	-8,85521	2,972042	10,582	4,16332071	1,099381
1991	Cameroon	-6,56425	2,906596	9,745	4,42773419	0,060051

1992	Cameroon	-5,81907	2,846182	7,548	6,64872339	-0,01606
1993	Cameroon	-10,4573	2,781112	8,541	3,68171909	-3,20655
1994	Cameroon	-0,60862	2,712178	7,879	7,27552142	35,09446
1995	Cameroon	0,769215	2,644681	8,247	4,87043444	9,069691
1996	Cameroon	1,70547	2,577578	9,085	4,14583438	3,924064
1997	Cameroon	2,609338	2,523204	9,68	4,89089517	4,786239
1998	Cameroon	1,925295	2,496885	9,424	4,91632415	3,170752
1999	Cameroon	1,712563	2,504399	9,677	4,04895169	1,871745
2000	Cameroon	0,961237	2,535052	19,061	3,97408429	1,22719
2001	Cameroon	1,719625	2,570367	23,431	4,73454074	4,419772
2002	Cameroon	1,561046	2,600905	22,011	5,55392825	2,834423
2003	Cameroon	1,851129	2,631765	19,962	6,31536543	0,623164
2004	Cameroon	3,977432	2,660572	25,476	4,58491157	0,233647
2005	Cameroon	-0,68325	2,686117	20,414	2,38631687	2,01354
2006	Cameroon	0,690444	2,711164	17,887	8,98368	5,117578
2007	Cameroon	2,074681	2,732379	14,993	8,87220517	0,921402
2008	Cameroon	0,688419	2,743261	25,875	2,12249889	5,337806
2009	Cameroon	-0,56519	2,741638	29,057	2,48526917	3,043618
2010	Cameroon	0,63657	2,73069	27,995	2,08745625	1,27538
2011	Cameroon	1,338592	2,716587	27,95	2,10816085	2,939699
2012	Cameroon	1,756738	2,701596	27,879	2,08370649	2,735297
2013	Cameroon	2,613703	2,683163	28,318	2,36996289	2,050347
2014	Cameroon	3,102739	2,661876	29,318	2,47051787	1,854899
2015	Cameroon	2,900267	2,638536	27,684	2,17549537	2,676235
2016	Cameroon	1,948837	2,613585	28,37	2,36110594	0,87419
2017	Cameroon	0,903558	2,588059	28,126	3,53926222	0,640409
1990	Chad	-7,21506	3,220302	12,227	18,0489071	-0,73828
1991	Chad	5,125202	3,192192	11,809	13,9926406	3,193875
1992	Chad	4,616209	3,184609	10,088	12,5591793	-3,11303
1993	Chad	-18,3651	3,200877	4,396	15,7019994	-8,42793
1994	Chad	6,615406	3,2496	20,986	18,113948	41,7249
1995	Chad	-2,06905	3,319718	14,454	16,3120744	9,230326

1996	Chad	-1,17914	3,376454	16,097	18,5193851	11,33088
1997	Chad	2,098591	3,422492	17,182	14,9178251	5,572257
1998	Chad	3,285009	3,488396	16,275	10,0016262	4,258851
1999	Chad	-4,17282	3,577195	17,756	12,2585726	-8,02506
2000	Chad	-4,45254	3,671135	22,154	9,60301964	3,822601
2001	Chad	7,527795	3,769246	38,498	11,1808073	12,43129
2002	Chad	4,409367	3,834976	64,852	11,8913009	5,191819
2003	Chad	10,4102	3,830641	55,587	11,0555548	-1,75257
2004	Chad	28,71852	3,744207	25,913	8,92578005	-5,3554
2005	Chad	13,17204	3,610293	20,632	6,87351443	7,890366
2006	Chad	-2,77623	3,461665	22,123	4,68071513	8,036289
2007	Chad	-0,12221	3,341405	22,228	4,94554805	-8,97474
2008	Chad	-0,2623	3,269666	21,799	5,08422129	10,29698
2009	Chad	0,875156	3,259826	30,136	6,29597757	9,952423
2010	Chad	9,878045	3,287309	34,388	4,75774998	-2,07787
2011	Chad	-3,18666	3,321379	28,42	3,86517155	-3,7043
2012	Chad	5,313322	3,333009	31,4	3,93698217	14,01821
2013	Chad	2,251775	3,316675	27,374	3,71670118	0,145451
2014	Chad	3,466368	3,264706	30,387	2,94266907	1,680836
2015	Chad	-0,45981	3,19094	26,905	5,71545236	3,6699
2016	Chad	-9,12983	3,114092	16,702	6,30451277	-4,888
2017	Chad	-5,8681	3,049043	21,114	6,65076446	5,382
1990	Comoros	2,03701	2,94933	11,937	10,4635642	1,516
1991	Comoros	-8,13597	2,93941	11,219	14,9434011	4,389
1992	Comoros	5,403723	2,923772	17,434	10,3781564	-1,395
1993	Comoros	0,065415	2,896371	14,853	10,6926767	3,368
1994	Comoros	-7,94117	2,853133	19,521	12,1073446	-1,232
1995	Comoros	0,751409	2,797966	15,528	10,4135497	-7,032
1996	Comoros	-3,96491	2,745548	7,85	9,88847026	0
1997	Comoros	1,26833	2,690707	10,894	8,28126523	1,513
1998	Comoros	-1,35712	2,64077	11,526	10,9861455	4,247
1999	Comoros	-0,6703	2,578686	8,888	5,77280314	-1,287

2000	Comoros	8,086885	2,52234	10,093	5,50761575	3,348
2001	Comoros	-0,158	2,464238	10,053	7,30283785	5,554594
2002	Comoros	-0,11711	2,415507	11,011	6,51686443	3,533042
2003	Comoros	-0,30022	2,382713	10,305	4,52132624	3,799081
2004	Comoros	-0,4724	2,374991	9,358	4,10527413	4,474993
2005	Comoros	0,416533	2,382367	9,309	3,54955257	3,013324
2006	Comoros	0,222133	2,390643	9,627	4,59523785	3,374364
2007	Comoros	-1,58713	2,396717	11,171	5,65832713	4,466167
2008	Comoros	1,530003	2,403628	14,282	4,61882925	1,700782
2009	Comoros	0,744011	2,408719	12,401	5,63927294	4,362348
2010	Comoros	1,325683	2,412542	15,403	7,71426992	3,354758
2011	Comoros	1,613334	2,417574	14,899	5,42135214	1,842663
2012	Comoros	0,733992	2,418819	16,82	10,0186506	6,314745
2013	Comoros	2,01499	2,406611	20,358	7,27786753	-4,29487
2014	Comoros	-0,30465	2,383373	18,548	6,51983708	0
2015	Comoros	-1,24591	2,347699	18,623	6,63104388	1,986
2016	Comoros	-0,14648	2,311191	21,116	5,22040773	0,8
2017	Comoros	0,396991	2,275445	21,528	6,2221895	2,893
1990	Cote d'Ivoire	-4,55062	3,55545	6,014	7,45344876	-0,80588
1991	Cote d'Ivoire	-3,44007	3,541552	6,677	6,90564929	1,683348
1992	Cote d'Ivoire	-3,67769	3,502159	4,989	7,7055197	4,231384
1993	Cote d'Ivoire	-3,56058	3,432849	4,542	7,88951042	2,164715
1994	Cote d'Ivoire	-2,4878	3,327199	8,13	21,138207	26,08157
1995	Cote d'Ivoire	3,757375	3,194809	14,512	12,1090637	14,29507
1996	Cote d'Ivoire	4,464605	3,077355	10,937	8,59614758	2,480807
1997	Cote d'Ivoire	0,716161	2,961575	13,816	4,06260267	4,020833
1998	Cote d'Ivoire	2,033586	2,79979	14,49	8,04662743	4,611448
1999	Cote d'Ivoire	-0,97388	2,583234	10,547	3,81329953	0,702376
2000	Cote d'Ivoire	-4,33572	2,342426	9,941	3,61211993	2,530775
2001	Cote d'Ivoire	-1,95619	2,096878	10,118	1,87736631	4,361529
2002	Cote d'Ivoire	-3,51558	1,89716	5,688	9,87815593	3,077265
2003	Cote d'Ivoire	-3,10499	1,785353	10,467	1,94887522	3,296807

2004	Cote d'Ivoire	-0,55903	1,784851	8,941	1,08859185	1,457988
2005	Cote d'Ivoire	-0,15695	1,863678	11,328	0,55547259	3,88583
2006	Cote d'Ivoire	-0,45554	1,961044	7,59	1,44600094	2,467191
2007	Cote d'Ivoire	-0,29579	2,045868	9,911	0,87574461	1,892006
2008	Cote d'Ivoire	0,375835	2,135919	12,069	2,50622994	6,308528
2009	Cote d'Ivoire	0,981061	2,223432	8,697	10,2944412	1,019505
2010	Cote d'Ivoire	-0,30744	2,305464	13,437	3,52620905	1,226456
2011	Cote d'Ivoire	-6,64761	2,392464	4,039	5,89386948	4,912434
2012	Cote d'Ivoire	8,001761	2,473506	16,09	11,2169615	1,304511
2013	Cote d'Ivoire	6,174368	2,525016	20,711	4,26451755	2,58117
2014	Cote d'Ivoire	6,065755	2,539767	19,74	2,68637833	0,448682
2015	Cote d'Ivoire	6,124572	2,529163	20,104	1,69939306	1,2515
2016	Cote d'Ivoire	5,295011	2,510354	17,689	1,74666335	0,723178
2017	Cote d'Ivoire	5,047386	2,495744	19,494	2,28471959	0,685881
1990	Equatorial Guinea	-4,68339	3,022404	54,355	50,3575691	0,857872
1991	Equatorial Guinea	-4,1172	3,176861	46,192	51,291671	-3,42529
1992	Equatorial Guinea	30,44553	3,243074	35,155	41,2721049	-4,27874
1993	Equatorial Guinea	7,385191	3,340708	39,654	35,449329	5,452285
1994	Equatorial Guinea	12,70994	3,452183	53,542	32,1915485	31,84102
1995	Equatorial Guinea	13,36016	3,575139	78,15	28,3032821	19,87243
1996	Equatorial Guinea	60,49918	3,718682	115,102	16,4423134	4,540728
1997	Equatorial Guinea	140,5011	3,862791	73,121	6,16717434	3,016505
1998	Equatorial Guinea	18,96109	3,966474	107,981	7,63148541	7,935711
1999	Equatorial Guinea	20,70829	4,023503	75,978	3,89055552	0,372266
2000	Equatorial Guinea	13,52139	4,05034	60,229	3,14734867	4,802289
2001	Equatorial Guinea	56,88336	4,057538	52,688	2,25317048	8,825389
2002	Equatorial Guinea	14,68634	4,080436	55,424	2,45318725	7,592478
2003	Equatorial Guinea	9,328209	4,145138	43,266	2,26464819	7,323544
2004	Equatorial Guinea	32,24777	4,256723	34,898	1,96765313	4,219688
2005	Equatorial Guinea	11,73847	4,386271	28,897	0,91372813	5,631634
2006	Equatorial Guinea	2,96013	4,505342	26,501	0,33012019	4,4159
2007	Equatorial Guinea	10,12357	4,577918	29,586	0,30007426	2,803738

2008	Equatorial Guinea	12,4965	4,605864	27,542	0,21917311	6,551767
2009	Equatorial Guinea	-3,19291	4,579403	39,393	0,31975529	4,691066
2010	Equatorial Guinea	-12,9453	4,515622	38,056	0,88900548	7,789165
2011	Equatorial Guinea	1,897163	4,44055	32,049	0,17788391	4,805389
2012	Equatorial Guinea	3,692597	4,359328	41,148	0,09733863	3,65662
2013	Equatorial Guinea	-8,12738	4,255665	30,308	0,03086749	2,948877
2014	Equatorial Guinea	-3,64608	4,128421	28,709	0,00351905	4,309999
2015	Equatorial Guinea	-12,6644	3,989139	24,701	0,07534439	1,676631
2016	Equatorial Guinea	-11,986	3,847227	16,699	0,07925102	1,411939
2017	Equatorial Guinea	-8,38167	3,712413	12,609	0,07095629	0,744355
1990	Gabon	2,365273	2,724198	23,011	2,45917187	7,725322
1991	Gabon	3,290967	2,694996	28,923	2,94294198	-11,6861
1992	Gabon	-5,64177	2,668272	23,976	1,40840312	-9,54291
1993	Gabon	1,243048	2,635283	23,514	2,69281442	0,533747
1994	Gabon	1,052102	2,598886	22,817	4,90223582	36,11625
1995	Gabon	2,318518	2,562057	24,7	3,34790718	9,646531
1996	Gabon	1,033758	2,532439	21,035	2,56560538	0,689693
1997	Gabon	3,116022	2,511303	33,373	0,84224	3,97345
1998	Gabon	0,924514	2,498457	41,402	1,12491397	1,448739
1999	Gabon	-11,1736	2,491616	25,443	1,16754034	-1,9366
2000	Gabon	-4,3017	2,496043	21,585	0,27627962	0,50492
2001	Gabon	-0,38421	2,497702	29,227	0,1968239	2,137621
2002	Gabon	-2,72661	2,515125	31,94	1,48314473	0,036683
2003	Gabon	-0,34991	2,572976	28,661	-0,188791	2,235353
2004	Gabon	-1,97191	2,678786	26,516	0,60989144	0,408205
2005	Gabon	-0,17191	2,813076	24,958	0,58343314	3,708333
2006	Gabon	-5,61291	2,929875	26,607	0,34836428	-1,4094
2007	Gabon	2,851127	3,023301	26,258	0,50148235	5,030319
2008	Gabon	-6,28002	3,121481	22,82	0,4802045	5,264301
2009	Gabon	-3,04651	3,224124	29,091	0,72896643	1,885708
2010	Gabon	3,599726	3,313386	26,105	0,85204838	1,461544
2011	Gabon	3,501774	3,409722	23,832	0,44261989	1,263317

2012	Gabon	1,673486	3,458215	29,115	0,4454046	2,652418
2013	Gabon	2,124484	3,383228	33,26	0,54895818	0,505441
2014	Gabon	1,0648	3,165293	35,926	0,64566875	4,690458
2015	Gabon	0,947843	2,862182	34,817	0,74927469	-0,3388
2016	Gabon	-0,46684	2,537809	34,175	0,32105601	2,106707
2017	Gabon	-1,75518	2,264859	30,475	0,75572801	2,651926
1990	Ghana	0,543016	2,733066	31,588	9,68915909	37,25907
1991	Ghana	2,402905	2,772573	27,698	13,5698373	18,03144
1992	Ghana	1,028888	2,78243	26,307	9,73761839	10,05612
1993	Ghana	1,996794	2,758938	26,729	10,7151682	24,95984
1994	Ghana	0,556272	2,691988	26,936	10,2693626	24,87026
1995	Ghana	1,439531	2,60084	25,324	10,2632511	59,46155
1996	Ghana	2,014784	2,504933	23,548	9,58978524	46,56102
1997	Ghana	1,692139	2,432717	27,028	7,31290154	27,88521
1998	Ghana	2,217731	2,399769	26,22	9,60387155	14,62417
1999	Ghana	1,907645	2,416269	7,965	8,07483087	12,40867
2000	Ghana	1,174954	2,465088	36,889	12,4202318	25,19322
2001	Ghana	1,414443	2,517538	37,466	12,3847001	32,90541
2002	Ghana	1,862304	2,556513	30,757	11,4192907	14,81624
2003	Ghana	2,512939	2,587428	34,646	13,1911439	26,67495
2004	Ghana	2,884067	2,605558	44,207	16,3420377	12,62457
2005	Ghana	3,169312	2,612385	45,626	10,8732949	15,11819
2006	Ghana	3,650514	2,617995	41,366	6,09532592	10,91517
2007	Ghana	1,649516	2,618937	39,548	4,7237373	10,73273
2008	Ghana	6,346275	2,602073	42,958	4,6185515	16,52214
2009	Ghana	2,190061	2,564375	40,757	6,12228044	19,25071
2010	Ghana	5,222158	2,51283	51,159	5,3639901	10,70757
2011	Ghana	11,27926	2,45688	24,714	4,70540064	8,726837
2012	Ghana	6,69669	2,404028	33,17	4,51972014	7,12635
2013	Ghana	4,814854	2,354987	26,457	2,14477569	11,66619
2014	Ghana	0,545403	2,312336	29,349	2,16470555	15,48962
2015	Ghana	-0,11949	2,27438	29,814	3,67933216	17,14997

2016	Ghana	1,159623	2,236738	27,595	2,44706662	17,45463
2017	Ghana	5,792191	2,198185	22,003	2,23390036	12,37192
1990	Guinea-Bissau	3,609646	2,375162	20,396	54,1526351	33,00198
1991	Guinea-Bissau	2,579294	2,427618	15,727	46,978899	57,59528
1992	Guinea-Bissau	-1,33951	2,442555	20,232	50,4197453	69,58364
1993	Guinea-Bissau	-0,31695	2,395705	16,273	42,6616334	48,10817
1994	Guinea-Bissau	0,885662	2,268104	27,223	78,7071422	15,17635
1995	Guinea-Bissau	2,235011	2,095548	10,925	49,8418147	45,36531
1996	Guinea-Bissau	9,487701	1,910882	10,627	71,7854782	50,73405
1997	Guinea-Bissau	4,634284	1,767372	14,655	49,0563732	49,10092
1998	Guinea-Bissau	-29,3097	1,696767	6,247	49,9122739	8,013755
1999	Guinea-Bissau	-0,70228	1,725075	8,599	25,0301405	-2,08631
2000	Guinea-Bissau	3,524478	1,821056	11,984	22,6596102	8,636321
2001	Guinea-Bissau	0,231171	1,93439	10,552	16,1243124	3,348123
2002	Guinea-Bissau	-2,97623	2,031358	7,553	14,7088077	3,300122
2003	Guinea-Bissau	-1,53839	2,117242	9,083	31,2367227	-3,50259
2004	Guinea-Bissau	0,543617	2,181819	8,825	14,9473811	0,883303
2005	Guinea-Bissau	1,963594	2,233045	11,026	11,6030906	3,329199
2006	Guinea-Bissau	0,00407	2,279026	9,991	15,0447028	1,954737
2007	Guinea-Bissau	0,885625	2,329125	12,52	18,1334301	4,617438
2008	Guinea-Bissau	0,772483	2,383809	12,786	15,9428896	10,46007
2009	Guinea-Bissau	0,875296	2,441981	10,802	18,2954822	-1,6514
2010	Guinea-Bissau	2,026961	2,501133	10,785	15,258791	2,517851
2011	Guinea-Bissau	5,357595	2,555568	9,935	10,9194802	5,046102
2012	Guinea-Bissau	-4,23176	2,596386	6,699	8,07468802	2,130546
2013	Guinea-Bissau	0,593534	2,612244	7,224	10,2977167	1,207126
2014	Guinea-Bissau	-1,62422	2,597498	11,417	10,1068192	-1,50924
2015	Guinea-Bissau	3,449628	2,561842	8,61	8,85427541	1,404609
2016	Guinea-Bissau	3,619137	2,519329	8,808	16,294108	1,575302
2017	Guinea-Bissau	3,325092	2,479607	9,001	8,40403014	1,362149
1990	Kenya	0,766169	3,343316	26,302	14,3943819	17,78181
1991	Kenya	-1,82171	3,266607	23,385	11,7828334	20,0845

1992	Kenya	-3,91632	3,192368	17,205	11,2662108	27,33236
1993	Kenya	-2,72574	3,116148	18,884	16,98248	45,97888
1994	Kenya	-0,43815	3,037834	17,439	9,9895048	28,81439
1995	Kenya	1,359642	2,961422	17,581	8,40105026	1,554328
1996	Kenya	1,182104	2,887991	13,519	5,04451876	8,864087
1997	Kenya	-2,32335	2,824545	14,267	3,46619742	11,36185
1998	Kenya	0,460074	2,778226	13,814	2,97377021	6,722437
1999	Kenya	-0,47151	2,751843	16,317	2,44632798	5,742001
2000	Kenya	-2,11945	2,740136	18,054	4,08665147	9,980025
2001	Kenya	0,983247	2,731775	19,403	3,67963329	5,738598
2002	Kenya	-2,15504	2,723966	16,437	2,98031086	1,961308
2003	Kenya	0,167443	2,722998	16,878	3,54786479	9,815691
2004	Kenya	2,275306	2,728493	17,517	4,11144724	11,62404
2005	Kenya	3,04703	2,737271	18,215	4,03898129	10,31278
2006	Kenya	3,588091	2,746431	18,634	3,65612047	14,45373
2007	Kenya	3,950219	2,752069	20,457	4,17853605	9,75888
2008	Kenya	-2,48807	2,751559	19,613	3,80163733	26,23982
2009	Kenya	0,511533	2,743208	19,333	4,82052842	9,234126
2010	Kenya	5,487937	2,728406	20,735	4,09324786	3,961389
2011	Kenya	3,269458	2,711826	21,703	5,90730943	14,02249
2012	Kenya	1,784727	2,693169	21,476	5,28750848	9,377767
2013	Kenya	3,091062	2,668122	20,106	6,06795708	5,717494
2014	Kenya	2,616082	2,636116	22,432	4,39260223	6,878155
2015	Kenya	3,005917	2,599337	21,466	3,89140361	6,582174
2016	Kenya	3,192388	2,560925	16,199	3,11682274	6,297158
2017	Kenya	2,260954	2,523111	16,208	3,15486111	8,005723
1990	Lesotho	4,199788	1,75579	46,748	14,534044	11,63476
1991	Lesotho	4,965446	1,888549	57,6	11,4213991	17,6781
1992	Lesotho	4,864612	1,975084	58,421	11,8140385	17,20852
1993	Lesotho	1,486216	1,974298	60,101	12,2521405	13,13566
1994	Lesotho	4,02853	1,858401	55,605	9,57518007	8,214739
1995	Lesotho	1,584317	1,666049	58,804	8,41212285	9,270833

1996	Lesotho	4,065964	1,460532	59,608	8,14800304	9,330315
1997	Lesotho	2,375842	1,28861	50,143	6,92238043	7,3
1998	Lesotho	0,38189	1,144791	45,018	5,18846093	8,947
1999	Lesotho	-0,56803	1,044546	40,783	2,64994653	6,33
2000	Lesotho	2,865418	0,9772	36,485	3,28783861	6,131975
2001	Lesotho	2,614021	0,919186	31,075	4,65092285	-9,61615
2002	Lesotho	-0,14224	0,863566	25,841	6,8548588	33,81258
2003	Lesotho	3,699301	0,826356	24,557	4,78162014	6,629164
2004	Lesotho	0,870359	0,81162	22,408	4,59794771	5,023421
2005	Lesotho	2,626789	0,814524	19,893	3,13454708	3,437884
2006	Lesotho	3,375378	0,82341	20,865	3,17332805	6,072719
2007	Lesotho	3,953753	0,842214	23,364	5,50305029	8,012437
2008	Lesotho	5,797898	0,886095	26,248	6,06946217	10,71567
2009	Lesotho	1,178959	0,959367	27,898	5,25806847	7,379439
2010	Lesotho	4,962638	1,051402	26,806	8,53840356	3,598262
2011	Lesotho	5,678334	1,15064	25,156	7,78676912	4,994598
2012	Lesotho	4,691461	1,240334	31,398	8,93046048	6,129492
2013	Lesotho	0,524254	1,304089	30,156	11,1439204	4,96904
2014	Lesotho	1,755716	1,333495	30,703	3,70419447	5,306491
2015	Lesotho	1,40283	1,335998	28,654	2,98022142	3,171861
2016	Lesotho	1,813018	1,332724	27,939	4,28176797	6,596505
2017	Lesotho	-3,57778	1,33051	23,409	5,06825184	5,317121
1990	Madagascar	0,196034	2,8862	14,818	13,4207441	11,78448
1991	Madagascar	-9,00965	2,924293	10,56	18,3086967	8,592648
1992	Madagascar	-1,76287	2,95777	11,296	12,5101928	14,51238
1993	Madagascar	-0,91688	2,995997	11,448	11,1590283	10,00836
1994	Madagascar	-3,06248	3,038715	10,903	10,180815	38,94179
1995	Madagascar	-1,37384	3,081081	11,252	9,97462561	49,08021
1996	Madagascar	-0,99055	3,12164	12,24	9,24348556	19,75635
1997	Madagascar	0,47623	3,151818	12,813	24,2500939	4,486383
1998	Madagascar	0,697349	3,162061	15,082	13,2251088	6,208016
1999	Madagascar	1,414876	3,148877	14,903	9,85973057	9,929534

2000	Madagascar	1,54231	3,119709	15,045	8,52287035	11,85968
2001	Madagascar	2,796228	3,085858	18,5	8,37846879	7,916945
2002	Madagascar	-15,3	3,053494	14,263	8,64401607	16,49853
2003	Madagascar	6,518985	3,019969	16,846	10,1098794	-1,704
2004	Madagascar	2,1598	2,986676	25,836	29,2324537	13,9558
2005	Madagascar	1,558224	2,953901	23,773	18,4713072	18,36382
2006	Madagascar	1,999111	2,921153	24,973	14,430289	10,76564
2007	Madagascar	3,216004	2,888221	33,018	12,3078393	10,28797
2008	Madagascar	4,112603	2,855614	40,961	9,04843049	9,296508
2009	Madagascar	-6,68615	2,823526	35,648	5,13673768	8,954218
2010	Madagascar	-2,49815	2,792647	23,424	5,52640043	9,247322
2011	Madagascar	-1,30924	2,761807	17,638	4,59341621	9,48254
2012	Madagascar	0,249147	2,733746	17,561	3,83624687	5,713844
2013	Madagascar	-0,48174	2,713051	15,861	4,86343764	5,826429
2014	Madagascar	0,562544	2,701097	15,58	5,66891531	6,080408
2015	Madagascar	0,375158	2,694578	16,808	7,22622642	7,404192
2016	Madagascar	1,416051	2,688871	18,551	6,4813387	6,654802
2017	Madagascar	1,415502	2,680585	18,879	6,99432093	8,284224
1990	Malawi	1,852318	3,700809	10,258	27,2311064	11,82354
1991	Malawi	6,434088	2,134398	10,109	25,4780976	12,61532
1992	Malawi	-8,17647	0,91441	9,921	32,8333812	23,75135
1993	Malawi	9,39793	0,268301	7,558	24,5134491	22,77271
1994	Malawi	-10,6169	0,420594	14,107	41,378993	34,64964
1995	Malawi	15,40814	1,137855	8,669	32,2310205	83,32577
1996	Malawi	5,186215	2,005185	6,214	21,9684431	37,60205
1997	Malawi	1,072376	2,655608	5,834	13,1234978	9,137352
1998	Malawi	0,761511	3,062676	6,746	25,4327469	29,74865
1999	Malawi	-0,12625	3,123252	7,291	25,7630839	44,80416
2000	Malawi	-1,38666	2,960146	6,627	26,25125	29,58149
2001	Malawi	-7,57235	2,77142	7,439	24,4213998	22,7
2002	Malawi	-0,99069	2,681339	12,304	11,0025553	14,74463
2003	Malawi	2,938253	2,652893	12,922	16,4039243	9,576798

2004	Malawi	2,598279	2,713593	13,755	14,7925302	11,42981
2005	Malawi	0,388597	2,828595	17,095	15,8638173	15,41034
2006	Malawi	1,662902	2,943666	20,014	18,2532971	13,97429
2007	Malawi	6,33989	3,01969	23,036	17,3769293	7,95221
2008	Malawi	4,394495	3,061294	23,167	17,452394	8,712602
2009	Malawi	5,064059	3,059443	24,419	12,6170762	8,422044
2010	Malawi	3,6856	3,028794	22,823	14,8420177	7,411591
2011	Malawi	1,76416	2,991145	12,425	10,1196383	7,622823
2012	Malawi	-1,08702	2,961213	12,049	19,8705563	21,27127
2013	Malawi	2,154881	2,937319	12,702	21,1418964	27,28333
2014	Malawi	2,655168	2,92294	11,986	15,8416855	23,79206
2015	Malawi	-0,15274	2,914371	12,166	17,006699	21,86735
2016	Malawi	-0,45011	2,904819	10,665	23,4518835	21,71111
2017	Malawi	1,037152	2,89029	13,355	24,5982281	11,54339
1990	Mali	-4,29517	1,855906	28,445	17,9729652	0,60634
1991	Mali	9,325932	2,188769	29,36	16,5234697	1,800427
1992	Mali	-5,57318	2,462903	27,473	15,2189006	-6,24251
1993	Mali	0,484403	2,63966	28,613	13,1168622	-0,26377
1994	Mali	1,02923	2,686276	36,342	21,380839	23,17679
1995	Mali	-1,7171	2,648822	35,864	20,3231596	13,44177
1996	Mali	4,314879	2,593605	28,225	17,9511718	6,80546
1997	Mali	2,162366	2,576731	29,735	16,2381481	-0,363
1998	Mali	4,807557	2,603142	22,923	12,086097	4,036589
1999	Mali	2,896902	2,688629	17,893	10,4390059	-1,2019
2000	Mali	-2,83063	2,810607	17,176	9,85071671	-0,67766
2001	Mali	12,05011	2,925223	20,49	10,6610988	5,187012
2002	Mali	0,044097	3,014952	15,746	11,5213201	5,032823
2003	Mali	5,790524	3,097846	20,812	12,2418854	-1,34673
2004	Mali	-1,60991	3,170963	21,629	11,1215532	-3,09978
2005	Mali	3,148153	3,230501	20,882	11,9997319	6,397883
2006	Mali	1,273157	3,291651	21,192	13,0856626	1,543526
2007	Mali	0,099161	3,334863	23,874	12,8837139	1,412002

2008	Mali	1,345142	3,326782	24,236	10,1574271	9,170988
2009	Mali	1,322385	3,259179	22,021	9,90222351	2,463752
2010	Mali	2,137521	3,157011	24,026	10,638263	1,108927
2011	Mali	0,145209	3,04376	19,723	10,1277443	2,955644
2012	Mali	-3,72115	2,952453	17,183	8,33741527	5,323128
2013	Mali	-0,62157	2,90096	19,323	10,9066311	-0,60674
2014	Mali	3,982607	2,901031	20,16	8,85174784	0,883815
2015	Mali	2,898828	2,933977	20,761	9,40441798	1,450691
2016	Mali	2,701922	2,971969	22,709	8,85767945	-1,79965
2017	Mali	2,289821	2,995247	22,07	9,06533545	1,759857
1990	Mozambique	-0,43359	1,429561	37,204	41,2470452	47,099
1991	Mozambique	2,242601	2,565907	25,178	33,7466841	35,214
1992	Mozambique	-8,45912	3,465318	28,316	67,7353325	54,5
1993	Mozambique	4,562964	3,941987	28,82	52,0083079	43,638
1994	Mozambique	2,112259	3,886389	24,812	51,5378309	56,558
1995	Mozambique	-1,27948	3,500389	35,174	44,0721535	56,537
1996	Mozambique	23,02706	3,05641	22,205	25,8413206	19,343
1997	Mozambique	7,834812	2,750551	21,749	22,8932655	6,197
1998	Mozambique	9,017155	2,573742	25,54	21,92164	-0,956
1999	Mozambique	5,075482	2,581179	41,055	15,8083095	6,216
2000	Mozambique	-1,03862	2,708628	39,97	18,8115892	11,438
2001	Mozambique	9,561227	2,84319	29,178	21,1724893	21,935
2002	Mozambique	5,66262	2,920553	37,114	50,0725908	9,119
2003	Mozambique	3,384224	2,96983	28,588	19,3215304	13,815
2004	Mozambique	4,647304	2,978573	15,746	19,0482418	9,067
2005	Mozambique	5,549083	2,960583	16,192	17,5157441	11,148
2006	Mozambique	6,667839	2,940571	15,338	21,3860381	9,374
2007	Mozambique	4,322999	2,931096	13,843	20,3413835	10,264
2008	Mozambique	3,796373	2,924018	14,182	18,3645602	11,817
2009	Mozambique	3,28939	2,921463	14,64	18,9340899	2,258
2010	Mozambique	3,616158	2,921289	18,295	19,8009978	17,44
2011	Mozambique	4,035383	2,91963	25,667	15,9604455	6,14

2012	Mozambique	4,118749	2,914726	47,382	14,3247063	2,016
2013	Mozambique	4,070367	2,908483	54,469	14,4903661	3,537
2014	Mozambique	4,372212	2,900696	55,363	12,5662884	1,927
2015	Mozambique	3,556041	2,891417	45,326	12,5140786	10,554
2016	Mozambique	0,816298	2,881208	38,118	14,2633735	23,666
2017	Mozambique	0,802146	2,86988	39,235	14,4928166	5,648
1990	Namibia	-1,90253	3,947641	27,847	4,20918548	14,578
1991	Namibia	4,398479	3,544839	16,344	5,80330386	22,099
1992	Namibia	3,791721	3,221062	20,57	4,1077502	12,127
1993	Namibia	-4,49824	3,010407	15,613	4,65875698	10,791
1994	Namibia	-1,22916	2,951867	20,735	3,71756077	12,693
1995	Namibia	0,84605	2,982431	21,636	4,64390374	8,591
1996	Namibia	0,099495	3,042014	23,31	4,62781631	9,227
1997	Namibia	1,109188	3,030401	19,351	3,96156926	7,38
1998	Namibia	0,349437	2,889745	24,695	4,61999069	9,485
1999	Namibia	0,728025	2,588374	25,909	4,69880556	8,564
2000	Namibia	1,246342	2,193951	20,076	3,8664334	12,09
2001	Namibia	-0,61888	1,791872	23,702	3,08856722	9,044
2002	Namibia	3,263892	1,46578	19,386	3,97698236	14,254
2003	Namibia	2,960079	1,235263	20,064	2,87545138	2,576
2004	Namibia	11,00153	1,135865	19,3	2,62067073	4,233
2005	Namibia	1,370471	1,136641	19,842	1,58597825	2,281946
2006	Namibia	5,847195	1,151598	22,544	1,88383869	4,961167
2007	Namibia	4,14897	1,169407	24,419	2,57446064	6,547881
2008	Namibia	1,360339	1,264143	32,297	2,46149035	9,094643
2009	Namibia	-1,1432	1,445323	24,695	3,80223668	9,451727
2010	Namibia	4,276296	1,676524	22,872	2,4087085	4,87492
2011	Namibia	3,077802	1,934579	18,909	2,30399084	5,005595
2012	Namibia	2,819636	2,157128	25,624	2,0203154	6,721998
2013	Namibia	3,21722	2,296205	21,237	2,06651923	5,600925
2014	Namibia	3,908317	2,324237	34,847	1,77294461	5,349526
2015	Namibia	3,6997	2,27544	32,194	1,2276593	3,395661

2016	Namibia	-1,55616	2,207999	23,722	1,54352328	6,727795
2017	Namibia	-3,062	2,157496	17,617	1,42940131	6,143924
1990	Niger	-4,2887	3,090706	11,019	15,9938033	-0,77565
1991	Niger	-0,71869	3,194642	7,476	16,1525882	-7,79664
1992	Niger	-9,53926	3,286961	6,926	15,412727	-4,47562
1993	Niger	-1,91206	3,369612	6,401	21,3905945	-1,21503
1994	Niger	0,488998	3,438651	10,393	24,3375163	36,04106
1995	Niger	-0,91901	3,495641	7,831	14,8837889	10,56329
1996	Niger	-0,18933	3,551451	10,209	12,8639538	5,288858
1997	Niger	-0,88073	3,601355	11,579	18,3414265	2,933453
1998	Niger	6,484171	3,631542	11,924	14,238427	4,548016
1999	Niger	-4,12247	3,639475	11,847	9,3704566	-2,30213
2000	Niger	-4,92783	3,633848	12,341	11,7405661	2,90015
2001	Niger	3,292148	3,624214	13	13,4163641	4,005514
2002	Niger	-0,66336	3,620601	15,857	13,7824775	2,628866
2003	Niger	1,548962	3,627235	16,333	17,7810683	-1,61441
2004	Niger	-3,48507	3,647194	14,593	18,0487371	0,262544
2005	Niger	0,729	3,675333	23,094	15,4048615	7,797498
2006	Niger	1,95481	3,702084	23,584	14,8560489	0,040486
2007	Niger	-0,62447	3,724504	22,876	13,4108691	0,053959
2008	Niger	5,556471	3,747902	32,092	11,481594	11,30511
2009	Niger	-4,38802	3,771981	32,113	8,81605748	0,582907
2010	Niger	4,328891	3,794963	49,524	13,0647734	0,804073
2011	Niger	-1,54741	3,81685	43,883	10,1393324	2,942385
2012	Niger	7,642446	3,834202	39,501	13,0917079	0,45509
2013	Niger	1,299431	3,843262	40,176	10,6545093	2,297231
2014	Niger	3,475428	3,842681	39,236	11,3614549	-0,93029
2015	Niger	0,410747	3,83575	42,428	12,2863122	-0,57609
2016	Niger	0,987224	3,826066	38,352	12,9171791	1,653889
2017	Niger	0,96501	3,817093	39,951	15,1931861	2,796373
1990	Nigeria	8,930975	2,579037	12,192	0,49870709	7,3644
1991	Nigeria	-2,16414	2,545611	12,234	0,55359522	13,00697

1992	Nigeria	2,026165	2,521242	13,36	0,57713768	44,58884
1993	Nigeria	-4,45672	2,502971	13,153	1,13524951	57,16525
1994	Nigeria	-4,23241	2,492996	10,654	0,60248139	57,03171
1995	Nigeria	-2,52958	2,489435	11,601	0,50418395	72,8355
1996	Nigeria	1,635142	2,488365	11,878	0,38642673	29,26829
1997	Nigeria	0,407438	2,488183	13,25	0,38267635	8,529874
1998	Nigeria	0,057794	2,490724	16,042	0,39271821	9,996378
1999	Nigeria	-1,8952	2,495813	17,915	0,2625183	6,618373
2000	Nigeria	2,419602	2,503397	14,361	0,27456262	6,933292
2001	Nigeria	3,290984	2,511214	15,14	0,23996516	18,87365
2002	Nigeria	12,45793	2,521106	20,072	0,33548609	12,87658
2003	Nigeria	4,65822	2,53684	17,546	0,3186045	14,03178
2004	Nigeria	6,49005	2,559239	16,553	0,45742416	14,99803
2005	Nigeria	3,722109	2,585222	15,576	3,93310293	17,86349
2006	Nigeria	3,326685	2,610391	16,268	4,93903895	8,239527
2007	Nigeria	3,822609	2,631654	18,654	0,74252026	5,382224
2008	Nigeria	3,973447	2,648967	15,611	0,40192508	11,57798
2009	Nigeria	5,199743	2,661221	19,418	0,59110257	11,53767
2010	Nigeria	5,16138	2,668747	17,291	0,59688429	13,7202
2011	Nigeria	2,528532	2,674755	16,212	0,46700045	10,84003
2012	Nigeria	1,47617	2,677659	14,908	0,43819122	12,21778
2013	Nigeria	3,857866	2,672919	14,904	0,51399414	8,475827
2014	Nigeria	3,519624	2,659551	15,803	0,45104154	8,062486
2015	Nigeria	-0,02224	2,640357	15,49	0,50491855	9,009387
2016	Nigeria	-4,16011	2,619034	15,367	0,6309347	15,67534
2017	Nigeria	-1,78002	2,598705	15,474	0,92210374	16,52354
1990	Senegal	-3,65995	3,050676	7,98	11,5297575	0,325099
1991	Senegal	-0,52541	3,050505	9,237	9,07299275	-1,75356
1992	Senegal	-1,7843	3,035397	13,715	8,86790709	-0,10994
1993	Senegal	-1,66819	2,974659	13,211	7,04645564	-0,58643
1994	Senegal	-2,83637	2,860039	15,135	13,3329679	32,29367
1995	Senegal	2,539443	2,716848	17,448	10,8336054	7,864008

1996	Senegal	-0,57363	2,567435	16,741	9,05134308	2,754307
1997	Senegal	0,629609	2,448593	18,566	7,26538648	1,753165
1998	Senegal	3,404063	2,383846	19,973	7,95390982	1,156781
1999	Senegal	3,838212	2,387438	17,993	8,34929063	0,827251
2000	Senegal	0,713048	2,438369	20,782	7,40788764	0,731982
2001	Senegal	1,996499	2,50226	18,57	6,9472611	2,974501
2002	Senegal	-1,88521	2,555878	17,201	6,69512401	2,337302
2003	Senegal	3,942623	2,602491	17,708	5,33556596	-0,052
2004	Senegal	3,117171	2,63533	16,939	10,58162	0,514782
2005	Senegal	2,850236	2,659852	19,212	6,41482861	1,711333
2006	Senegal	-0,24695	2,679015	18,96	7,37720283	2,112286
2007	Senegal	2,13866	2,704302	22,485	6,08867294	5,853304
2008	Senegal	1,239238	2,744642	24,953	6,30598147	7,347202
2009	Senegal	-0,72974	2,803349	19,314	6,3313858	-2,24802
2010	Senegal	0,633662	2,869085	19,087	5,82878683	1,228681
2011	Senegal	-1,47593	2,934787	20,194	5,99296414	3,403228
2012	Senegal	2,029093	2,981977	24,965	6,13886639	1,418229
2013	Senegal	-0,21302	2,996267	24,742	5,33592733	0,710245
2014	Senegal	3,49273	2,970878	25,931	5,7167061	-1,09026
2015	Senegal	3,3069	2,919162	26,092	5,05934132	0,135212
2016	Senegal	3,232722	2,860609	25,312	3,98657564	0,837285
2017	Senegal	4,186355	2,808389	27,546	4,43791663	1,318153
1990	Seychelles	6,472166	0,49036	30,467	10,0047532	3,888889
1991	Seychelles	1,400771	1,331962	17,829	6,25474165	1,986755
1992	Seychelles	6,67081	0,458918	21,538	4,58322391	3,246753
1993	Seychelles	4,006664	2,083758	26,208	4,26284946	1,383648
1994	Seychelles	-3,40824	2,665768	35,487	2,70827927	1,736973
1995	Seychelles	-2,27301	1,470172	30,325	2,69962439	-0,2439
1996	Seychelles	3,38942	1,467193	39,845	3,9464141	-1,10024
1997	Seychelles	10,65542	1,173454	28,053	3,1232789	0,618047
1998	Seychelles	6,303964	1,955686	33,996	4,14532951	2,579853
1999	Seychelles	-0,10944	1,964196	30,772	2,22694727	6,347305

2000	Seychelles	0,612195	0,892659	27,565	4,04632068	6,268769
2001	Seychelles	-2,35661	0,087475	21,454	2,21716508	5,969622
2002	Seychelles	-1,83481	3,057385	27,62	9,20240939	0,175
2003	Seychelles	-4,81618	-1,13152	10,902	1,41690753	3,302554
2004	Seychelles	-2,49001	-0,37033	21,079	1,25241996	3,857304
2005	Seychelles	8,501897	0,463308	35,745	1,85162948	0,907188
2006	Seychelles	7,153344	2,080597	30,445	1,33525679	-0,35347
2007	Seychelles	9,859155	0,510515	29,015	0,63223272	5,3206
2008	Seychelles	-4,31088	2,236283	26,904	0,8465869	36,96476
2009	Seychelles	-1,49268	0,392531	27,275	2,92490425	31,75444
2010	Seychelles	3,037277	2,792329	36,622	5,88942854	-2,40464
2011	Seychelles	10,76087	-2,62866	35,407	2,29064188	2,559268
2012	Seychelles	0,272337	0,98098	38,106	3,47392663	7,110371
2013	Seychelles	4,078024	1,846876	38,457	2,18665768	4,338938
2014	Seychelles	2,891898	1,555396	37,693	0,95599337	1,385835
2015	Seychelles	2,623392	2,229795	33,788	0,52383823	4,041944
2016	Seychelles	3,11447	1,337635	30,221	0,43690581	-1,01548
2017	Seychelles	4,003956	1,224034	28,947	1,37582845	2,856796
1990	Tanzania	3,692349	3,188722	32,417	28,562531	35,82677
1991	Tanzania	-1,23953	3,304657	32,378	22,4893906	28,69565
1992	Tanzania	-2,75205	3,379839	33,868	30,221688	21,84685
1993	Tanzania	-2,13034	3,358548	31,355	23,0708787	25,27726
1994	Tanzania	-1,64465	3,220439	30,659	22,1152082	34,08336
1995	Tanzania	0,499427	3,016119	24,469	16,9936047	27,42779
1996	Tanzania	1,663426	2,801043	20,364	13,4990601	20,97726
1997	Tanzania	0,837458	2,637255	17,848	12,4809677	16,09065
1998	Tanzania	1,106032	2,548119	19,874	8,23018998	12,79975
1999	Tanzania	2,225368	2,555008	14,633	7,8687219	7,890433
2000	Tanzania	1,816582	2,628008	13,787	8,03457613	5,923961
2001	Tanzania	3,241579	2,710249	13,211	9,61400626	5,147468
2002	Tanzania	4,167378	2,776785	13,19	8,97451133	5,317834
2003	Tanzania	3,682487	2,848505	15,969	11,4823696	5,303566

2004	Tanzania	4,415093	2,920435	18,945	10,7880007	4,735801
2005	Tanzania	4,316821	2,989028	21,472	8,2711803	5,03457
2006	Tanzania	3,327636	3,059506	26,04	10,1341444	7,250973
2007	Tanzania	3,491825	3,122317	32,849	13,0965946	7,025514
2008	Tanzania	2,403182	3,161122	32,076	8,43798268	10,27839
2009	Tanzania	1,98876	3,17101	25,125	10,8645041	12,14223
2010	Tanzania	3,033302	3,160941	27,296	9,4167477	6,200156
2011	Tanzania	4,345244	3,143889	33,24	7,17945304	12,69097
2012	Tanzania	1,286198	3,129141	34,845	7,22232235	16,00109
2013	Tanzania	3,510883	3,116185	37,471	7,63369849	7,870724
2014	Tanzania	3,472186	3,107572	37,653	5,39380817	6,131614
2015	Tanzania	2,924771	3,100829	32,757	5,55578457	5,58817
2016	Tanzania	3,618412	3,092454	32,174	4,76281508	5,174766
2017	Tanzania	3,553146	3,079237	34,017	4,95939014	5,318716
1990	Togo	-2,89281	2,691526	15,786	16,160782	1,015342
1991	Togo	-3,13833	2,486199	12,752	12,679989	0,387082
1992	Togo	-6,18114	2,318349	11,673	13,3552033	1,393787
1993	Togo	-17,0091	2,279176	3,924	7,93746208	-1,00688
1994	Togo	12,25629	2,399463	11,815	13,3867035	39,16277
1995	Togo	5,060579	2,61656	13,751	15,1273343	16,4335
1996	Togo	5,762485	2,864823	12,93	10,7988223	4,6875
1997	Togo	10,93908	3,052206	11,458	8,5119502	8,250825
1998	Togo	-5,31652	3,136326	14,922	8,21377546	0,975338
1999	Togo	-0,63326	3,08673	9,608	4,65222596	-0,05321
2000	Togo	-3,67119	2,953705	23,154	4,77178701	1,862606
2001	Togo	-4,34803	2,805204	23,451	3,17471428	3,919591
2002	Togo	-3,55786	2,696269	24,387	3,04891462	3,059819
2003	Togo	2,2304	2,629686	25,224	2,39935758	-0,93
2004	Togo	-0,52307	2,621366	26,504	2,93063995	0,393079
2005	Togo	-1,4664	2,650748	21,598	3,67916381	6,782929
2006	Togo	1,298187	2,682622	19,433	3,45330289	2,228978
2007	Togo	-0,43154	2,69709	19,147	4,65948339	0,945673

2008	Togo	1,285631	2,704475	19,592	10,0188005	8,694828
2009	Togo	2,725844	2,700651	21,106	14,7761779	3,713606
2010	Togo	3,285153	2,688143	21,584	11,8552175	1,445945
2011	Togo	3,589335	2,675427	25,717	13,2259043	3,563515
2012	Togo	3,744587	2,662143	23,313	6,31729995	2,577182
2013	Togo	3,348159	2,63949	29,584	5,20793585	1,825395
2014	Togo	3,195735	2,606212	27,916	4,57074913	0,190875
2015	Togo	3,064125	2,565901	32,223	4,62015259	2,585004
2016	Togo	2,480608	2,523861	26,544	3,66493447	1,285448
2017	Togo	1,838508	2,484147	27,733	7,00111547	-0,98189
1990	Uganda	2,854666	3,458516	12,318	15,6857685	26,877
1991	Uganda	2,034555	3,391205	15,871	20,3240108	32,325
1992	Uganda	0,022707	3,338525	15,829	26,1671549	66,31
1993	Uganda	4,827708	3,282977	15,396	19,2332489	-2,358
1994	Uganda	3,024547	3,227246	13,718	19,1373084	10,03676
1995	Uganda	8,035644	3,177183	16,701	14,6366575	6,55014
1996	Uganda	5,718858	3,122598	19,264	11,2502963	7,191647
1997	Uganda	1,909342	3,082868	17,14	13,009205	8,169021
1998	Uganda	1,714826	3,088463	17,881	10,0071228	0,068804
1999	Uganda	4,705468	3,147928	19,462	10,1541244	5,777369
2000	Uganda	-0,14586	3,239523	25,846	14,0648623	3,392022
2001	Uganda	1,732039	3,336568	25,458	14,6461311	1,865125
2002	Uganda	5,08337	3,413841	26,509	12,1262758	-0,28751
2003	Uganda	2,847057	3,465086	27,844	16,1752771	8,680477
2004	Uganda	3,151422	3,482763	29,428	15,8205845	3,721287
2005	Uganda	2,698594	3,477316	29,338	13,6635168	8,448726
2006	Uganda	7,010567	3,466149	27,941	16,3926754	7,310676
2007	Uganda	4,727295	3,458293	31,598	14,4164082	6,138511
2008	Uganda	5,023515	3,448803	28,15	11,754814	12,05086
2009	Uganda	3,190619	3,439418	27,082	10,0003653	13,01726
2010	Uganda	2,076684	3,429003	26,734	8,5149374	3,976553
2011	Uganda	5,718076	3,415883	28,683	7,9182568	16,56435

2012	Uganda	0,367852	3,39848	28,322	7,25003212	12,67904
2013	Uganda	0,147417	3,376766	27,536	7,04721534	4,905209
2014	Uganda	1,64291	3,35065	25,658	6,12205598	3,075707
2015	Uganda	1,751375	3,321556	25,399	6,11840964	5,589686
2016	Uganda	1,388912	3,290872	24,166	7,4258539	5,706375
2017	Uganda	0,531221	3,260462	25,14	7,91235798	5,209717
1990	Zambia	-3,12728	2,694995	46,182	15,7994007	107,0238
1991	Zambia	-2,61391	2,612544	30,421	29,3169032	97,64232
1992	Zambia	-4,20202	2,546782	31,676	35,9588247	165,7065
1993	Zambia	4,125324	2,533719	40,35	28,7225054	183,312
1994	Zambia	-10,9564	2,584117	40,155	20,9086566	54,60132
1995	Zambia	0,183995	2,672654	40,368	56,9603048	34,92959
1996	Zambia	3,310159	2,776302	34,824	17,9304152	43,0731
1997	Zambia	0,889927	2,857082	32,091	15,0448525	24,41872
1998	Zambia	-3,2254	2,892069	41,166	10,5023045	24,45846
1999	Zambia	1,691593	2,867863	39,812	19,2324833	26,7877
2000	Zambia	1,021417	2,807058	38,999	23,0696825	26,03041
2001	Zambia	2,466963	2,743317	30,259	14,5269152	21,39378
2002	Zambia	1,721633	2,700463	31,677	20,0510101	22,23334
2003	Zambia	4,121302	2,675785	37,728	16,1900964	21,40158
2004	Zambia	4,206339	2,675858	37,015	19,3812081	17,96779
2005	Zambia	4,38471	2,694506	30,965	15,1821879	18,32444
2006	Zambia	5,016985	2,711702	36,699	12,6875313	9,019572
2007	Zambia	5,436059	2,728452	31,7	8,17179121	10,65735
2008	Zambia	4,836691	2,763166	29,63	6,75074021	12,44558
2009	Zambia	6,185552	2,817933	30,277	8,52348303	13,39525
2010	Zambia	7,163546	2,883152	29,878	4,86347229	8,501761
2011	Zambia	2,495517	2,950426	33,644	4,63339773	6,429397
2012	Zambia	4,412267	3,005133	31,755	3,80271451	6,5759
2013	Zambia	1,91677	3,036918	34,039	4,25851197	6,977676
2014	Zambia	1,560751	3,040211	34,043	3,74611931	7,806876
2015	Zambia	-0,14595	3,024123	42,791	3,83102619	10,11059

2016	Zambia	0,687855	3,002816	38,206	4,70573336	17,86973
2017	Zambia	0,362072	2,985124	41,003	4,09337989	6,577312
1990	Zimbabwe	4,040722	2,793947	17,37694276	3,9270113	-0,92043
1991	Zimbabwe	2,905069	2,520526	19,10339983	4,66183932	-6,7773
1992	Zimbabwe	-11,0581	2,270532	20,2372647	12,2109147	-14,1297
1993	Zimbabwe	-1,0138	2,064939	22,77488758	7,90571184	-3,79112
1994	Zimbabwe	7,160025	1,918007	23,72905557	8,51262572	-3,89567
1995	Zimbabwe	-1,64156	1,813085	19,66018675	7,24363141	3,038538
1996	Zimbabwe	8,464391	1,733214	18,54193988	4,51485768	8,984384
1997	Zimbabwe	0,999342	1,650915	18,13390253	4,14348001	-2,87905
1998	Zimbabwe	1,299754	1,552994	20,75046077	4,34338343	-27,0487
1999	Zimbabwe	-2,22579	1,429746	14,39628046	3,76196191	8,006813
2000	Zimbabwe	-4,3101	1,298782	13,56942382	2,77520199	0,6279
2001	Zimbabwe	0,259089	1,170597	10,26647344	2,48490607	-0,13089
2002	Zimbabwe	-9,87326	1,080653	4,999999685	3,2793013	2,71295
2003	Zimbabwe	-17,8713	1,06128	7,999999232	3,39378508	8,801275
2004	Zimbabwe	-6,86622	1,130323	4,509114857	3,39185629	7,611525
2005	Zimbabwe	-6,89531	1,263909	1,525176678	6,8047088	5,136601
2006	Zimbabwe	-4,81668	1,41372	1,571161391	5,42266659	-2,01768
2007	Zimbabwe	-5,13968	1,554735	7,109753359	9,68601083	0,894887
2008	Zimbabwe	-19,0568	1,700106	5,127906253	15,4254436	1,349223
2009	Zimbabwe	9,974501	1,842497	12,74680165	8,76778645	74,29817
2010	Zimbabwe	17,33286	1,976756	18,76330091	6,71290054	3,710957
2011	Zimbabwe	11,81003	2,109672	17,39776603	5,97093879	3,910491
2012	Zimbabwe	14,09452	2,228306	9,856976893	6,72150601	2,302678
2013	Zimbabwe	-0,33883	2,309366	9,209479116	4,80752682	4,184376
2014	Zimbabwe	0,004321	2,344799	9,639223978	4,31081866	1,338692
2015	Zimbabwe	-0,57974	2,345643	10,03564042	4,38407271	-2,4095
2016	Zimbabwe	-1,57058	2,33607	9,861370596	3,48506718	-1,56641
2017	Zimbabwe	2,299933	2,322864	9,702187646	3,61476382	0,909733

APPENDIX.3. ETHICS COMMISSION FORM OR ETHICS' BOARD

ETHICS COMMISSION FORM FOR THESIS

HACETTEPE UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
ECONOMICS DEPARTMENT

Date: 11/07/2019

Thesis Title: FOREIGN AID AND ECONOMIC GROWTH IN SUB SAHARAN AFRICA COUNTRIES

My thesis work related to the title above:

1. Does not perform experimentation on animals or people.
2. Does not necessitate the use of biological material (blood, urine, biological fluids and samples, etc.).
3. Does not involve any interference of the body's integrity.
4. Is not based on observational and descriptive research (survey, interview, measures/scales, data scanning, system-model development).

I declare, I have carefully read Hacettepe University's Ethics Regulations and the Commission's Guidelines, and in order to proceed with my thesis according to these regulations I do not have to get permission from the Ethics Board/Commission for anything; in any infringement of the regulations I accept all legal responsibility and I declare that all the information I have provided is true.

I respectfully submit this for approval.

11/07/2019

Date and Signature

Name Surname:	Amin Fikila SALIM		
Student No:	N11220467		
Department:	Economics		
Program:	Economics		
Status:	☒ MA	☐ Ph.D.	☐ Combined MA/ Ph.D.

ADVISER COMMENTS AND APPROVAL
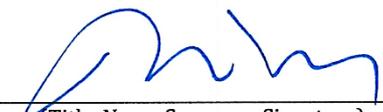
(Title, Name Surname, Signature)

Prof. Dr. Timur Han Gür

APPENDIX.4.THESIS ORIGINALITY REPORT

HACETTEPE UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
MASTER'S THESIS ORIGINALITY REPORT

HACETTEPE UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
ECONOMICS DEPARTMENT

Date: 11/07/2019

Thesis Title : FOREIGN AID AND ECONOMIC GROWTH IN SUB SAHARAN AFRICA COUNTRIES
According to the originality report obtained by my thesis advisor by using the Turnitin plagiarism detection software and by applying the filtering options checked below on 11/07/2019 for the total of 94. pages including the a) Title Page, b) Introduction, c) Main Chapters, and d) Conclusion sections of my thesis entitled as above, the similarity index of my thesis is 18 %.

Filtering options applied:
1. ☒ Approval and Decleration sections excluded
2. ☐ Bibliography/Works Cited excluded
3. ☐ Quotes excluded
4. ☒ Quotes included
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I declare that I have carefully read Hacettepe University Graduate School of Social Sciences Guidelines for Obtaining and Using Thesis Originality Reports; that according to the maximum similarity index values specified in the Guidelines, my thesis does not include any form of plagiarism; that in any future detection of possible infringement of the regulations I accept all legal responsibility; and that all the information I have provided is correct to the best of my knowledge.

I respectfully submit this for approval.

11/07/2019

Date and Signature

Name Surname:	Amin Fikila SALIM
Student No:	N11220467
Department:	Economics
Program:	Economics

ADVISOR APPROVAL

APPROVED.

(Title, Name Surname, Signature)

Prof.D. . Tiu Ha Ci