THE EFFECT OF POLITICAL INSTABILITY ON FOREIGN AID: THE CASE OF SUB-SAHARAN AFRICAN COUNTRIES

LIDET ANDARGIE

JUNE, 2023

ADDIS ABABA, ETHIOPIA

THE EFFECT OF POLITICAL INSTABILITY ON FOREIGN AID: THE CASE OF SUB-SAHARAN AFRICAN COUNTRIES

LIDET ANDARGIE

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY FOR PARTIAL FULFILLMENT OF MASTERS OF ART DEGREE IN DEVELOPMENT ECONOMICS

ADVISOR: MARU ESHETE (PhD)

ADDIS ABABA, ETHIOPIA

JUNE, 2023

Declaration

I, Lidet Andargie, declare that, this study, "**The effect of political instability on foreign aid: the case of sub-Saharan African countries"** is my own work. I have undertaken the research work independently with the guidance and support of the research supervisor. This study has not been submitted for any degree or diploma in this or any other institution. It is in partial fulfillment of the requirements for the Degree of Master of Science in Economics (Development Economics). All sources of material used for the research have been duly acknowledged.

Prepared by: Lidet Andargie

Signature: ----------

ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES

The Effect of political instability on foreign aid: The case of Sub-Saharan African countries

Lidet Andargie

APPROVED BY BOARD OF EXAMINERS

Dean Graduate studies	Signature
Advisor	Signature
External Examiner	Signature
Internal Examiner	Signature

Acknowledgements

First of all, I would like to provide great appreciations and thanks for my almighty GOD who gave me ability and strength in completing my MSc. Degree program. Next to God, I would like to express my deepest gratitude to my advisor Dr. Maru Eshete for his expert advice and comments that helped me conduct this paper successfully. I was fortunate enough to have him as my supervisor in my postgraduate program where he was the first one to instill research interest in me and taught me how to maintain high research standards. I would also like to thank Mr. Phetros Terefe for his time and effort to check the manuscript.

Lastly, but most importantly, I wish to extend my deepest thanks to my family who support me and encourage me to complete the thesis. I am also glad to extend my heartfelt thanks to my Dad, who has contributed a lot in my life journey and supported me emotionally since my childhood, what a beautiful memory you left behind! Further, I would like to provide gratitude to all my classmates and friends who support me in completing my thesis.

Abbreviations and Acronyms

ODA	Official Development Assistance
DAC	Development Assistance Committee
NODA	Net Official Development Assistance
OECD	Organization for economic cooperation and development
SSA	Sub -Saharan African countries
WDI	World development indicators
WGI	World Governance Indicators
NGOs	Non- Governmental Organizations
IMF	International Monetary fund
UNDP	United Nations Development Program
FE	Fixed Effect
RE	Random Effect
GDP	Gross Domestic Product
LDCs	Least Developed Countries

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Abstract

Since the end of the Second World War Sub-Saharan Africa countries have been the recipients of significant amounts of foreign aid, provided mainly with the aim of reducing political stability easing poverty and promoting economic growth and development. Sub-Saharan Africa, a region of forty-eight countries with a combined population of over 1.1 billion as of 2021, has consistently been one of the largest recipients of foreign aid. For example, in 2021, the region received over 62 billion of total world aid. While foreign aid has many determinants, an important factor influencing aid allocation is the political stability in the aid receiving country. This paper uses panel approach to investigate empirically how different political instabilities in the aid receiving country influence aid allocation by donors. The paper specifies and estimates models using fixed effect, random effect and to capture their limitation Mundlak approach is used to explain the allocation of ODA among SSA Countries over the period 2012-2021. This paper utilizes the World Bank, World Development Indicators dataset, World Governance Indicators dataset to conduct an analysis of whether the instability in SSA countries results in more or less to greater flow of foreign aid, as measured by net Official Development Assistance (ODA). By doing so, the regressions result shows political instability does have a negative effect on the allocation of aid to SSA, as it is specified by its indicator political stability and absence of violence. Based on the models, ODA has a positive relationship with political stability, Inflation, Trade openness, and total population. GDP/Capita and unemployment shows insignificant effect on the flow of official development aid to SSA countries with a negative coefficient. As the result indicated, political stable sub-Saharan African countries have received more aid. However, GDP/Capita and unemployment do not have a significant effect on the allocation of ODA to SSA Countries. Thus, the paper argues that political stability in SSA is not only a worthy objective in itself, but also because stability promotes growth and augments the growth-promoting power of aid in a way that SSA country reduces the dependency on aid. Otherwise, countries would be in a vicious circle of dependency.

Key Words: foreign aid, political instability, Sub-Saharan Africa, Panel Data

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Foreign aid is viewed as a redistribution of resources from developed countries/donors to developing countries/recipients, motivated primarily by the donors' altruistic desire (Azam and Laffont, 2003). Foreign aid generally refers to Official development assistance (ODA), has three main components that is grants, which do not have to be repaid; concessional loans, which have to be repaid but at lower interest rates and over longer periods than commercial bank loans; and contributions to multilateral institutions promoting development, such as the United Nations, International Monetary Fund, World Bank, and regional development bank sconce such as African Development Bank and Inter-American Development Bank (Brautigam, D. A., and S. Knack, 2004). Most aid assistance, however, comes in the form of tied aid, which requires recipients to purchase goods and services from the donor country or from a specified group of countries (Roger C. Riddell, 1999).

Following World War II, foreign aid began in 1947 with the establishment of the Marshall Plan (1939 – 1945) as an initiative with economic and political purposes by the United States of America to give economic support in reconstructing Europe after WWII evolved into economic and political development interests as well as a humanitarian motive (Deborah A. Brautigm and Stephen Knack, 2004). Furthermore, foreign aid given to developing countries was designed to meet one or more of broad economic and development objectives, to stimulate economic growth, to strengthen education, health, environmental, or political system, to support subsistence consumption of food and other commodities especially during relief operations or humanitarian crises and to help stabilize an economy due to economic shocks (Arellano, 2009)

Sub-Saharan Africa has received the most aid, from about $46 billion in 2012 to $62 billion in 2021, making the region the largest aid recipient. Altruism, colonialism, and self-interest were the main driving forces behind the creation of political and economic alliances, the improvement of living conditions, and the emancipation of people from poverty (Easterly, 2003).

The debate over the effect of aid to Sub-Saharan African countries has existed for decades. Recently, it has come to the fore due to the prominence of work and subsequent publicity of William Easterly and Deborah A. Brautigm and Stephen Knack. According to Easterly, a development economist, foreign aid is clearly the "white man's burden," Because the notion of aid was founded on the belief that low-income countries cannot grow economically without the support of wealthier ones (William Easterly, 2006). This simply indicates that, although wealthy countries can get by without outside help, emerging countries are unable to do the same. Easterly contends that aid has done more harm than good, citing extensive data that shows foreign aid programs hold countries back and make them reliant.

In contrast, foreign aid has rendered several Sub-Saharan African governments reliant. Without foreign aid, administered in the form of projects or technical assistance, several SSA countries are unable to carry out any of their fundamental functions, such as the establishment of newly established structures, the maintenance of basic systems and services, or the provision of necessary public services and infrastructures (Deborah A. et al. 2004).

Foreign aid has been at the core of Western efforts to stabilize failed governments in order to reduce the threat of fundamentalist Islam since the early 2000s (Boutton and Carter, 2012). The premise that help may truly promote stability is central to this attempt. Researchers have identified critical processes via which help might promote political stability. Aid, for example, might lessen economic unhappiness among the public, reducing calls for political reform (Morrison, 2007). Similarly, non-democratic ruling coalitions might utilize aid to strengthen oppressive measures, successfully suppressing protest activities (Bueno et al, 2009).

On the other hand, there is empirical evidence that aid can have detrimental effects on stability if there are unexpected severe aid shocks (Nielsen et al. 2011). Shocks and other forms of volatility is a pervasive feature of foreign aid practice (Bulir and Hamann, 2007). This raises important doubts about the effectiveness of stability-oriented aid, since recipient governments that depend on aid to preserve political stability should be especially vulnerable to negative aid shocks. Scholars have discussed the causal effect between foreign aid, how it weakens Institutions and leads to political instability, and use various variables to measure the degree of efficiency of the institution: Weak governance, decrease of the economic growth and political/civil liberties (including military repression and violence between political parties and ethnic groups (Menard & Weill, 2016).

A high level of dependency on foreign aid but still politically instable by most Sub-Saharan African countries has led to a lot of antipathy against foreign aid. These antagonists contend that foreign aid, whether in the form of conditional loans or Official Development Assistance (ODA), is supposed to be mainly beneficial to the recipient countries, but oftentimes, foreign aid has done more harm than good despite any intentions of aid donor countries. Research shows that corrupt governments receive as much financial assistance as governments with lower levels of corruption (Alberto Alesina and Beatrice Weder, 2002).

In general, political instability plays a critical role in the model of aid allocation; an important issue that we cannot afford to ignore is the existence of instabilities and risks, whether social, political, or economic, in aid-receiving countries that can affect donor aid allocation. In this paper, the relevant analytical question is to assess the effect of political instability on the allocation of aid to SSA countries.

1.2. Statement of the problem

It is obvious that a number of studies have been conducted on foreign aid, political instability and their relationship at individual country, regional and international levels by applying different methodologies and using different data sets. Even using the same data and similar econometric techniques of estimation, different researchers have come up with different and contrasting findings and conclusions.

The relationship between Foreign Aid and political stability has been discussed by various scholars, including Deborah A. Brautigam and Stephen Knack (2004), who argue that even though an important amount of foreign aid is included into government budgets in various Sub-Saharan African countries, these states are still characterized by weak institutions and weak systems of governance, as well as a high level of corruption. Milton Friedman (1995) believe that foreign aid needs to be revised or abolished since it has consequently harmed recipient countries, by decreasing economic growth and affecting the development of the population, as well as democracy.

Oeschlin (2009) conducts one of the few studies that investigate the possibility of a relationship between foreign aid and political stability. The major goal of Oeschlin's research was to build a theoretical model of how foreign aid may generate weaker macroeconomic development due to higher political instability caused by that aid. However, there was a brief section in which the author attempts to empirically investigate a possible relationship between political instability, as

measured by the number of forced governmental changes in a country every ten years, and foreign aid, as measured by aid as a percentage of the recipient country's GNP. After examining 1980s and 1990s data and adjusting for factors such as GDP per capita, democracy levels (based on the Polity IV data set), and inflation (all of these control variables are averaged over the relevant decades) and he founded that foreign aid is statistically significant in making recipient countries more politically unstable.

Jeffrey Chao (2015) examined the effect of foreign aid on political stability with different political stability indexes from a period of 1996-2013 by using two stages least squares regression and explored that foreign aid does not significantly affect political stability. Yet, for Moss et al. (2006), Fielding (2007), Killick and Foster (2007), aid has negatively affected the developing world via real appreciation of domestic currency (of the South) and the resulting loss of competitiveness ("Dutch Disease"), encouraging corruption and harming institutional development, etc.

Moreover, some studies also presented in the area for evaluating the effect of political instability on foreign aid using net per capita ODA. For instance, Mahjabeen M. (2015) studied whether political instability in developing countries attracts more aid taking 50 developing countries over the period of 1990-2012 and he founded that the rise in aid flow as instabilities in developing counties rises and this aid will be worsening of government stability, law and order and bureaucratic. Brautigam, D. (2000) contend that a high degree of political instability in low-income countries especially in Sub- Saharan Africa countries promote aid intensity and dependency of aid in those countries. Besides he showed that, high level of aid is common in countries troubled by political upheaval and war.

A study by Alesina, A., & Dollar, D. (2000) examined that the determinants of aid flows to Sub-Saharan African countries and finds that aid is influenced by the recipient country's economic and political conditions, as well as the donor's strategic interests and cultural ties with the recipient.

Asiedu, E. (2006) investigated the impact of aid on poverty reduction in Sub-Saharan Africa and finds that aid inflows have a positive effect on poverty reduction, but that the effectiveness of aid depends on the recipient country's institutions and policies.

Thus, it deserves enormous attention and endeavor to join this debate on the effect of political instability on the flow of aid despite the existing literatures analyzed the impact of foreign aid on political stability (Blanton, R.G. and Blanton, S.L, 2007, Dreher, A. and Langlotz, S., 2016). et. al) in this era of massive aid flows to Sub Saharan countries in particular. So that, this paper will then offer a rich case study analysis among disaggregated analysis of SSA countries to illustrate the theory and to assess whether political stability is the main determinants for the enormous amount of aid flow to Sub- Saharan African. This research also contributes on its focuses on the SSA region and used recent data (2012-2021) in estimating the effect of political instability on the flow of official development aid. It uses dependable measure of aid constructed with official development assistance to analyze the effect of political instability of SSA region specifically on the development aid. Finally, the possibility of endogeneity bias is addressed: the current literature treatment of endogeneity with fixed and random model is criticized while to address certain limitations of fixed and random effect model Mundlak approach is employed to analyze the effect of political instability on the allocation of ODA.

1.3. Objectives

1.3.1 General Objective

- The main objective of the study is to explore the effect of political instability on the allocation of aid in Sub-Saharan African Countries.

1.3.2 Specific Objectives

- To show the trend of foreign aid flow to Sub–Saharan African countries
- To examine the effect of political instability on aid flow at the disaggregated level

1.4. Research Hypothesis

Based on the previous literatures the study hypothesized

H0: Political stability has positive and significant effect on the allocation of aid to SSA countries

1.5. Significance of the study

This study is significant to developing countries in general and to SSA countries in particular since in these economies the long run targets, among others, is reducing instabilities, plummeting excess dependency on foreign aid and ensuring growth and stability. Thus, the

outcomes of the study are helpful in this line. It also adds value to the already existing knowledge and will supplement the existing empirical literature on the effect of political instability on the allocation of aid to SSA countries.

Moreover, the paper gives policy recommendations from a macroeconomic policy perspective, since with SSA Countries political instability is high compared to other countries and also the amount of aid received in SSA countries are high- questions on the effect of political instability on the allocation of foreign aid continue to arouse the interest of policy makers and researchers. However, knowledge about the effect of foreign aid on the foreign aid is limited and requires special analysis.

1.6. Limitations of the Study

The effects of foreign assistance in SSA will explore only in general terms in this paper. Attributing specific economic or social improvements in a SSA country to a particular source of foreign aid is beyond the scope of this study. This is due to the dynamics boosting material and social progress are extremely complex historical processes and are influenced by many factors and some possibly remaining unidentified and of which foreign assistance is only one. Furthermore, no clear and universally accepted framework exists for evaluating political instabilities; this paper tried to use the dominant one among many indicators. Besides, aid is a comprehensive concept and many types are included in it. However, only aid used for development assistance is included in this study.

Even though the scope of the study is Sub Saharan African countries this paper only takes disaggregated SSA countries and explore the result for all countries under the study. Apart from possible sample selection bias that may emerge since not all SSA countries are included in the dataset, there are also missing observations. However little theoretical empirical evidence is available in the literature to contest or back this claim so more research into the problem is needed. The world development indicators and World governance indicators provided most of the statistical data on sub–Saharan African countries for this study. But the data are not always complete or accurate.

1.7. Scope of the study

As is introduced in an earlier section, foreign aid has different factors to its flow to Sub-Saharan Africa countries. This paper analysis the effect of political instability on the flow of aid to SSA countries with other explanatory variables used to capture economic and socio-economic

condition of countries which could affect the flow of aid to SSA countries. In addition, while there are various components of political instability indexes political stability and absence of terrorism could be used as its indicator. The study covers fifteen countries in Sub-Saharan Africa for the period 2012 to 2021, which would provide a comprehensive view of the trends and patterns of foreign aid flows to the SSA. Again, though many indicators of foreign aid, net official development assistance will be used throughout the paper and utilized in the econometrics analysis.

1.8. Organization of the thesis

This thesis is organized in to five chapters. The first one, which is already brought to a close, is an introductory one. The second chapter presents review of the theory of aid literature both theoretical and empirical. The source and description of the data used, the specification of econometric models and the method of analysis are detailed in the third chapter. Chapter four presents data and descriptive analysis of data as well as econometric support for the descriptive analysis. The fifth chapter summarizes the main findings and concludes the paper.

CHAPTER TWO: LITERATURE REVIEW

2.1. Definition and concepts of foreign aid

Foreign assistance is a concessional transfer of resources conducted by government bodies to help the economic, social, and political development of poor countries (Sharma, 1997; Radelet, 2006). The transfer's concessionally is reflected in the fact that a transfer is deemed foreign aid if it contains a grant element of 25% or more. Country governments and international organizations such as the World Bank are among the supporting (official) institutions. This definition of foreign aid better represents development assistance (also known as Official Development Assistance, or ODA). Foreign aid, on the other hand, comprises resource transfers such as humanitarian help and military aid (Tarno and Nowels, 2004).

ODA definitions are established in the Development Assistance Committee (DAC) by the representatives of DAC member countries. The DAC defines ODA as a category of development aid. The full definition of ODA is, flows of official financing administered with the promotion of the economic development and welfare of developing countries. By convention, ODA flows comprise contributions of donor government agencies, at all levels, to developing countries (bilateral ODA) and to multilateral institutions. ODA receipts comprise disbursements by bilateral donors and multilateral institution.

2.2. Theories of aid

There is a substantial body of theories on the flow of foreign aid and its relationship with political instability. The first prerequisite for the development of a viable foreign aid policy is the recognition of the diversity of policies that go by name. Six such can be distinguished which have only one thing in common: the transfer of money, goods and services from one nation to another. They are humanitarian foreign aid, subsistence foreign aid, military foreign aid bribery, prestige foreign aid for economic development (Morgenthau, 1962).

Of these distinct types, only humanitarian foreign is per se nonpolitical. The aid which governments have traditionally extended to nations which are victims of natural disasters, such as floods, famines and epidemics falls in that category. So do the services, especially in the fields of medicine and agriculture, which private organizations, such as churches and foundations, have traditionally provided in Asia, Africa and Latin America.

2.2.1. Theories on the flow of aid

- **Two gap model**

Chenery (1960) developed the two gap model that explains the development challenges faced by developing countries. The model identifies two gaps that exist in developing countries: the savings gap and the foreign exchange gap. The savings gap refers to the difference between the amount of savings needed to finance a country's investment needs and the amount of savings that is actually available within the country. Developing countries typically have a low savings rate due to low-income levels and a lack of financial institutions that can mobilize savings. As a result, they may not have enough savings to finance their investment needs, such as infrastructure, education, and healthcare. The foreign exchange gap refers to the difference between the amount of foreign exchange needed to finance a country's imports and the amount of foreign exchange that is actually available. Developing countries often have to import capital goods and technology, as well as essential goods such as food and fuel. However, they may not have enough foreign exchange to pay for these imports, which can lead to balance of payment problems and a shortage of foreign exchange.

The Two Gap Model suggests that aid can be used to address both the savings gap and the foreign exchange gap. Aid can be used to finance investment in physical and human capital, which can increase savings and productivity in developing countries. In addition, aid can be used to provide foreign exchange, which can help developing countries to pay for imports and reduce balance of payment problems (Ricard D, 2010).

Critics of the two-gap theory argue that it oversimplifies the complex factors that contribute to economic growth and development in developing countries, and that it fails to account for issues such as corruption, political instability, and environmental degradation. Nonetheless, the two-gap theory remains a useful tool for understanding the economic challenges faced by many developing countries, and for guiding the allocation of foreign aid to address these challenges (David G., 2012).

- **Three gap model**

Bacha 1990, extended two gap model in to Three gap model by introducing the fiscal constraint as a third gap that create a limitation on the growth prospects of highly indebted developing

countries. The fiscal constraint is intended to reflect the impact of the availability of resources to finance the public investment required to support a given level of potential output. Hjertholm et al. (1998), stated the Chenery Strout two-gap model import taken as aiding capital accumulation, whereas the three-gap model relates fiscal gap to capacity utilization. In the literature, capacity utilization, i.e., the extent to which new and existing productive capacities (the legacy of past investments) are utilized, has been found to be of major importance for growth in developing countries. Government efforts to increase capacity utilization are thus important, and involve spending on infrastructure, education, and health services etc. Curbing these efforts to increase capacity utilization can occur when government resources for investment and imports are insufficient, as a result of large public debt service; indeed, evidence is available suggesting that government expenditure in the Sub-Saharan African region has been curtailed by foreign debt service (Fielding, 1997; Gallagher et al., 1994). The closing of this fiscal gap could thus be facilitated by external resources directed to the government budget.

Generally, The Three Gap Model suggests that aid can be used to address all three gaps. Aid can be used to finance investment in physical and human capital, which can increase savings and productivity in developing countries. Aid can also be used to provide foreign exchange, which can help developing countries to pay for imports and reduce balance of payment problems. Finally, aid can be used to provide access to advanced technology, which can help to close the technology gap and improve productivity.

- **The big push theory of aid**

The major contribution for the concept of the Big Push were made by Paul Rosenstein-Rodan in 1943 and later on by Murphy, Shleifer and Vishny in 1989. Also some contribution of Matsuyama (1992), Krugman (1991) and Romer (1986) proved to be seminal for later literature on the Big Push. The big push theory of Rosen-Rodan (1943) examined the backwardness and under development was caused by insufficient investment across sectors of the economy and infrastructure. Hence, especially poor countries were trapped in the vicious circles of poverty as their growth was constrained by low savings and lack of foreign exchange. The theory was used to determine the financing requirements gap that must be removed in order to achieve the minimum required economic growth rate. Therefore, aid in the big push theory was considered as a temporary assistance to encourage certain long-term behavior such as tax collection, investment in physical and human capital, increasing savings and the establishment of good institution (Aime, 2010).

2.2.2. Theories of foreign aid and political stability

- **The "Dependency Theory"**

The theory was popular in the 1960s and 1970s, and suggests that political instability can create a cycle of dependency on foreign aid. Instability can disrupt economic growth and development, leading to increased poverty and a greater need for aid. However, as aid continues to flow in, local governments may become less incentivized to address the root causes of instability, perpetuating the cycle of dependency. Cardoso and Faletto (1979) draw on this theory to argue that aid can reinforce dependency and undermine local institutions and economies.

On the other hand, the theory stated the effect of aid flow on the institution of aid dependent countries. Aid dependent countries rank worse in terms of level of corruption than in countries that are not dependent. Foreign aid is a potential source of rents, and rent-seeking can manifest as increased public sector employment. As public firms displace private investment, there is less pressure on the government to remain accountable and transparent as a result of the weakened private sector. Aid assists corruption which then fosters more corruption and creates a cycle. Foreign aid provides corrupt governments with free cash flow which further facilitates the corruption. Donor aid has a number of challenges and effects.

Evidence from literature and what happens in practice have shown that foreign aid has never been immune to severe criticism. Abuzeid (2009) argues that the influx of massive amounts of foreign aid have deleterious effects on the governments of the receiving countries, and can end up doing more harm than good in several circumstances. Clearly, Abuzeid (2009) does not have confidence in foreign aid in the sense that in some instances donor aid can bring more harm than good. Arguments that regard donor aid as a panacea for Sub Saharan African development warrant inspection and scrutiny. Donor aid, while intended to benefit the generality of the people in the poorer states, has at times fallen prey to corruption and been diverted to serve the insatiable desires of rogue individuals.

According to Nazneen (1993), aid from Western countries has resulted in the imposition of ethnocentric solutions to local challenges. Aid resources have been dwindling rapidly, and the stampede for aid results subsequently from countries listening to advisors from the North, who inherently lack appreciation of local problems. The mere fact that Third World countries are in need of aid compels them to listen to the advisors. Nazneen (1993) further submits that advisors are without doubt products of their own experiences and environments – no doubt some bad

advice has been tendered by some culturally unaware and incompetent people. This however becomes antithetical and antagonistic to sustainable development.

Donor aid should not be considered as a panacea for the underdevelopment that has become a permanent feature of most Third World countries. Instead of considering it as a solution to the ever spiraling levels of poverty, donor aid should be considered a problem – as it is famed for its colonial and neo-colonial culture of dependency. Instead of appreciating local solutions to local problems, donor aid encourages dependency on flimsy imported ideas. It is not over-ambitious to argue that donor aid stifles creativity within communities and erodes the self-confidence of the community

- **Donor Interest Theory**

The donor interest theory of aid in relation to political stability suggests that donor countries provide based on their own strategic interests, including consideration of political stability. The theory posits that donors may allocate aid to politically stable countries as a means to protect their own interests, promote regional stability, and foster relationships with reliable partners. Donors may have strategic interest in providing aid. Political stability in recipient countries is seen as conducive to achieving their interest. In addition, donor's countries often seek to exert influences and shape regional dynamics through aid. By providing assistance to politically stable countries, donors can establish and strengthen diplomatic relationships, enhance their visibility and soft power, and position themselves as reliable partners. Aid can be used as a tool for building alliances, fostering cooperation and maintain influences in regional or global affairs. According to this theory, donor countries are more likely to provide aid to politically stable and friendly countries. Political instability in recipient countries may lead to a decrease in foreign aid as donors become more cautious about investing in uncertain or volatile environments.

- **Selectivity Theory**

This theory suggests that donor's countries tend to be selective in providing aid based on the political stability of recipient countries, as stability is seen as prerequisite for the achievement of developing goals. They are more inclined to provide aid to countries that demonstrate a stable political environment, including strong governance, rule of law, respect for human rights, and absence of conflicts or political unrest. Donors may be more likely to provide aid to certain sectors, such as humanitarian assistance or emergency relief, rather than longer-term

development projects. Additionally, donors may provide aid to specific regions or factions within politically unstable countries, rather than to the government as a whole.

- **Conditionality Theory**

The conditionality theory of aid in relation to political stability suggests that foreign aid should be conditional upon recipient countries' adherence to certain political and economic reforms. The theory argues that by attaching conditions to aid, donors can promote good governance, democracy, and economic stability in aid receiving countries, ultimately contributing to political stability.

On the other hand political instability in recipient countries can create tensions and conflicts with donors over the conditions attached to aid. If recipient countries are unable or unwilling to meet these conditions, donor countries may withhold or reduce aid.

- **Security Theory**

This theory suggests that donors may increase aid to politically unstable countries in order to promote stability and security. For example, donors may provide aid to support peacekeeping efforts, counter-terrorism initiatives, or other security-related programs. According to this theory it is believed that aid can promote political stability and discourage corruption and authoritarianism.

2.3. Empirical literature review

Foreign aid is a relatively new element in international relations. As explained above, foreign aid predominantly became a major actor in international relations, especially in the North-South relationship or in other worlds, between developed and underdeveloped countries after the end of the colonization era. Even though we can track back forms of direct aid from rich countries to poorer countries back to the 1800s, it is only after the decolonization of Africa, Latin America and Asia that foreign aid became regular between the new autonomous countries and their former colonizer (Chiba & Heinrich, 2016). Eyben (2014), the principal goal for these new states was to catch up with the developed countries and find their place in the status quo and the only way to achieve this goal was to reestablish strong and efficient institutions, economy and system of governance, with foreign aid as a major tool to rebuild the countries' infrastructures.

The Pearson Commission on International Development in 1969 emphasized that aid is flow to developing countries for humanitarian purpose and moral and humanitarian motive has been the reason for providing aid, and the Brandt Commission in 1980 and the Earth Summit in 2002 reiterated this view.

Maizels & Nissanke (1984) stated that recipient need/donor interest studies estimate two separate models of aid allocation one containing variables to reflect recipient need and one containing variables to reflect donor interest. The recipient need model is derived from the moral and humanitarian argument that absolutely poverty is intolerable and from the economic argument that if the marginal utility of income diminishes, total welfare will be increased by a redistribution of income from the rich to the poor. Hence, there is a moral imperative for governments of developed countries to provide aid because resources have been unequally distributed and/or there has been historical exploitation of poor country resources.

Dowling & Hiemenz (1985) stated that as population increases, the flow of aid would decrease as marginal political benefit to the donor decreases. Small countries are also chosen by the donors, since the cost of exerting political leverage is lower in less populous countries and small countries may be more likely to accept the conditionality attached to the aid programs. As a result, aid dependency may be higher in small countries than in large countries. Third, it has been argued that the capacity of large countries to absorb additional amounts of aid is questionable as technical and administrative expertise often present bottlenecks to effective utilization of additional aid.

Development economists have always been interested in issues concerning the al-locative patterns of foreign aid and its determinants. This has generated a large body of literature (Berthe´lemy, 2006a; Dollar & Levin, 2006; McGillivray & White, 1993). Studies can be categorized into three broad approaches: explanatory, descriptive, and prescriptive analyses (McGillivray & White, 1993). The explanatory studies attempt to explain the observed allocation of aid; the descriptive studies seek to describe or evaluate aid allocation against normative criteria; and the prescriptive studies aim to prescribe the inter-recipient allocation of aid by calculating the amounts of aid each recipient should receive.

Lumsdaine (1993) presents the most detailed justification for the connection between domestic and worldwide poverty problems. He contends that foreign aid was primarily the result of humanitarian ideals and values, and secondly these ideas and values found support in the West's

domestic political institutions as well as religious and moral traditions. According to Lumsdaine's theoretical framework, a country's degree of foreign aid is a function of its level of concern for poverty.

Alesina & Dollar, (2002); Dowling & Hiemenz, (1985); Isenman, (1976) also stated poorer countries tend to receive less aid, however, once a certain income threshold has been reached, aid and income per capita becomes positively correlated. Empirical researches on the subject of aid flow have come up with a range of answers from many scholars that have studied this problem.

A study by Alesina and Dollar (2000) on their study of the pattern of allocation of foreign aid from various donors to receiving countries, they found that political considerations are an important determinant of foreign aid. They had mentioned that the direction of foreign aid is dictated as much political and strategic consideration, as by the economic needs and policy performance of the recipients. The study showed that donors are more likely to provide aid to countries that have democratic institutions and are committed to good governance.

Feeny and McGillion, (2008) studied that specialization in the production process caused by economies of scale induces small countries to trade a high percentage of their specialized output and import a great deal of their non-specialized products. If business groups and sections of the donor bureaucracy concerned with trade promotion are particularly active, small countries with a high percentage of trade shares are likely to be favored by donors.

Foreign aid is also perceived as a major tool in the political and economic reconstruction following a period of conflict (Manning & Malbrough, 2014). The first large scale illustration of a post conflict aid is the Marshall Plan following the end of World War II. The economic aid distributed by the United States to the devastated Western European countries helped the former European powers to quickly rebuild their infrastructure and reposition their influence on the international level, alongside the United States, and against the USSR during the cold war period (Toussaint et al, 2008).

An empirical study by Dreher et al. (2015) investigated on the allocation of Chinese aid to Africa from a period of 2000-2013; they found that donor self-interest is a major determinant of foreign aid among other economic, institutional and institutional factors. The study showed that countries are more likely to receive aid if they are rich in natural resources, have strategic

geopolitical importance, or if they are a former colony of the donor country. Another study by Bermeo (2017) is built in the idea that donors are more likely to provide aid to countries that are aligned with their own political interests, or if there is pressure from domestic interest groups to provide aid. Hence, to make convincing and strengthen the idea the study focused on relationship between aid and democratization using a data from 1992-2007, aid from democratic donors is often found to be associated with an increase in the likelihood of a democratic transition. This was consistent with a scenario in which aid promotes democratization and/or a situation in which democratic donors reward countries that take steps in a democratic direction. In either case, it suggests that democratic donors use scarce aid resources to encourage democracy. During the same period, aid from authoritarian donors exhibits a negative relationship with democratization. Then he suggested that the source of funding matters, with donor preferences regarding democracy helping to determine the link between aid and democratization. So that domestic politics is a significant determinant of foreign aid and concluded that donors are more likely to provide aid to countries that are aligned with their own political interests, or if there is pressure from domestic interest groups to provide aid.

Kilby (2016) focused on how the war on terror has played a prominent role in the allocation of aid. The study explored how U.S. bilateral aid has changed overtime by analyzed U.S. aid budgets from 1955-2006 and controlled both domestic political and economic conditions, he founded that the War on Terror's effect on the aid budget is significantly larger than is immediately apparent. For these scholar's recipient need is a major determinant of foreign and showed that countries that are experiencing economic or humanitarian crises due to war are more likely to receive aid. In line with the above study, Pierskalla and Hollenbach (2020) explored the idea that donor countries are more likely to provide aid to countries that are threatened by terrorism. Which means countries showed that experience a terrorist attack are more likely to receive aid in the following years, and that the increase in aid is greater if the attack is more severe.

Recipient needs are proposed as a criterion for aid allocation by Dollar and Levin (2006), Hoeffler and Outram (2008), Feeny and McGillivray (2008), amongst others, who argue that aid should target the poorest and most needy countries. Social indicators, poverty level, and per capita revenue provide information on this factor. The merits of the recipient are also considered as criteria for the allocation of aid by some donors who refer to them as a discriminatory factor between the poorest beneficiaries. Claessens et al. (2009) find that starting in the 1990s, bilateral aid has been more aligned with the level of poverty and the quality of the institutional

environment in beneficiary countries. Burnside and Dollar (2004) confirm that aid is more effective when allocated according to the recipients' merits, such as institutional soundness criteria and the level of democracy. While Miller (2014) recommends that recipient merits be considered by donors when allocating aid for development and for biodiversity conservation, Hoeffler and Outram (2011) reveal that recipient merit matters little to many donors for whom the beneficiaries' needs and the donor's own interests play a significant role in the aid allocation decision.

According to Berthélemy (2006), the least self-interested donors take into consideration the recipients' needs in combination with their merits; for the most self-interested donors, their own political and economic interests dictate their aid allocation decisions. Some authors (Vreeland & Dreher, 2014; Alesina & Dollar, 2000) assert that Western donors' own interests have the greatest impact on their aid decisions. Clist (2011) states that these interests vary widely and may include religion, culture, history, geography, and trade on the allocation of aid. According to Bermeo (2017), a shared colonial past and a common language allow historical bonds to develop to the extent that donors provide more aid to their former colonies to retain influence. Evidence is provided by Zanger (2000), who shows that France uses this status to preserve ties with its former colonies, and by Carey (2007), who proves that former French and British colonies get twice as much aid in volume.

According to Lundsgaarde et al. (2010), having a common administrative language increases donor confidence about transparency and decreases the various costs involved in distributing aid. Emphasizing the potential self-interest of donors, Betzold and Weiler (2018) state that donor-recipient trade relation has a considerable influence on the amount of aid received by a beneficiary. Wagner (2003) finds that donors tie 50% of their foreign aid to exports, and Younas (2008) shows that the exports of products and services from a donor to a recipient increase at the same rate as the flow of aid. The fourth type of variable influencing aid allocation decisions is the donors' institutional quality. Szent-Iványi (2012), Chong and Gradstein (2011), and Schudel (2008) demonstrate that the donor's level of corruption affects the volume of aid received by beneficiaries. They show that donor countries with low corruption rates tend to allocate their aid to recipients with a low level of corruption.

The literatures on population and aid flow to Sub-Saharan African countries are mixed. Some studies as Elikplim Agabloyor et al. (2006) population does have a significant effect on aid allocation decisions. Their analysis covered 46 Sub-Saharan African countries over the period

1990-2012 and they have used panel data. They found that, aid flows tend to be higher to countries with larger populations. On the other side, Nyoni and Bonga (2016) examined the relationship between populations and aid allocations in Sub-Saharan African countries. However, this study finds no significant relationship between population and aid allocation decisions. With this result they conclude that, other factors such as economic development, political stability, and governance quality are also important determinants of aid flows.

Abegaz and Gebreeyesus (2020) in line with the study of Dreher et al. (2015) but specific to SSA countries they explored that donor country economic interests, such as the need for access to natural resources or new markets are a significant determinant of aid flows to SSA. The study also found that recipient country governance and institutions, such as corruption and political instability, negatively affect aid flows. In contrast of the study by Andone and Angheluta (2020) found that recipient country governance and political stability positively affect aid to SSA countries. Donor's country foreign policy objectives, particularly related to security and counterterrorism are a significant determinant of aid flows to SSA (Mshenga et al. 2021). Economic growths as of quality of infrastructure in recipient countries positively affects aid flows to SSA and also provide more aid to countries with a high demand for aid, such as those experiencing natural disaster or conflict (Matsumoto and Todo,2020).

Dunning, T., Grossman, H. I., & Humphreys, M. (2017) analyzes the effect of foreign aid on political stability in post conflict countries from 1990-2010 and examines the conditions under which aid contributes to peace building and political stability. Dorsch, M. T., & Maarek, P. (2018) examining the impact of foreign aid on political stability, this study analyzes data from Sub-Saharan African countries between 1990 and 2013. It investigates how foreign aid affects legislative behavior and the stability of ruling coalitions. However, Elkins, Z., Guzman, A. T., & Simmons, B. A. (2006) analyzed the effect of political instability on foreign aid in developing countries from 1960-2000.

To sum up, recipient needs, donors interest, and institutional performance variables all happen to explain the allocation decisions of donor. Important determinants of aid allocation that received less attention in the literature is captured in this study by taking political stability and absence of violence/ terrorism specific to SSA countries from the period of 2012-2021 in order to take the recent data. Mundlak approach is used in this study to capture the drawbacks in the fixed effect and random effect model unlike the study of Ouattara, B., & Strbl, E. (2020) which

used fixed and random effect model in the analysis of the effect of political instability on foreign aid.

Moreover, the paper gives policy recommendations from a macroeconomic policy perspective, since with SSA Countries the amount of aid is high compared to other countries - questions on the effect of political instability on the allocation of foreign aid continue to arouse the interest of policy makers and researchers. However, knowledge about the effect of political instability on foreign aid is limited and requires special analysis.

2.4. Conceptual Framework of the study

The main objective of this study is to explore the effect of political instability on the allocation of aid to SSA countries. In this part, the main objective is to show conceptually and graphically, the effect of political instability on the allocation of aid based on objective of the study.

More than half of the countries in sub-Saharan Africa have had significant political unrest, including civil war and violent coups. As per the "Global economy report" political stability index ranking with a value range between -2.5 which indicated weak and 2.5 strong stability index, the average for 2021 based on 48 SSA countries was 0.65 the highest value in Botswana and the lowest value was in Somalia which is -2.68 for the period of 1996-2021.

However, Sub-Saharan Africa countries have received high amounts of foreign aid in the period from 2012 -2021. According to World Bank data, 2021, the mean amount of aid given to a single country was $631.6 million but the median was $686 million. But for the whole region, the mean aid was $27.5 billion and the median was $31.4 billion with a max amount of $42.8 billion. The trend for the flow of foreign aid to SSA shows increasing throughout time. Economists have postulated different factors for the huge flow of aid to SSA countries and their effects on the allocation of aid, which could have differing implications for designing the allocation and type of foreign aid.

Empirical evidence presented by If donors consider socio-political stability as a merit variable, then high instability has a negative impact on aid allocation and more stability has a positive impact on aid allocation.

Jerker Carlsson, Gloria Somolekae, and Nicolas van de Walle (1997), on the other hand suggests that high levels of aid channeled to governments with clear development agendas have the potential to improve governance improving the quality of the civil service, strengthen policy and planning capacity, and establish strong central institutions as it works in Botswana and conclude that the same process can work in SSA.

This research expects that political instability has a negative effect on the allocation of while it is created dependency. However, Political stability is not the whole story that SSA countries giving attention to. Receiving a high amount of aid due to the stability of the region without consideration of a self-sustained economy will lead to a vicious circle of dependency. As shown later in the paper, the political instability in SSA has a negative effect on the allocation of aid to SSA countries. However, other independent variables such as GDP/Capita, the total population of the receiving countries, Inflation, trade openness, and unemployment is also considered to affect the allocation of aid. Thus, conceptual and graphical explanation of the variable in detail is indicated as follows: -

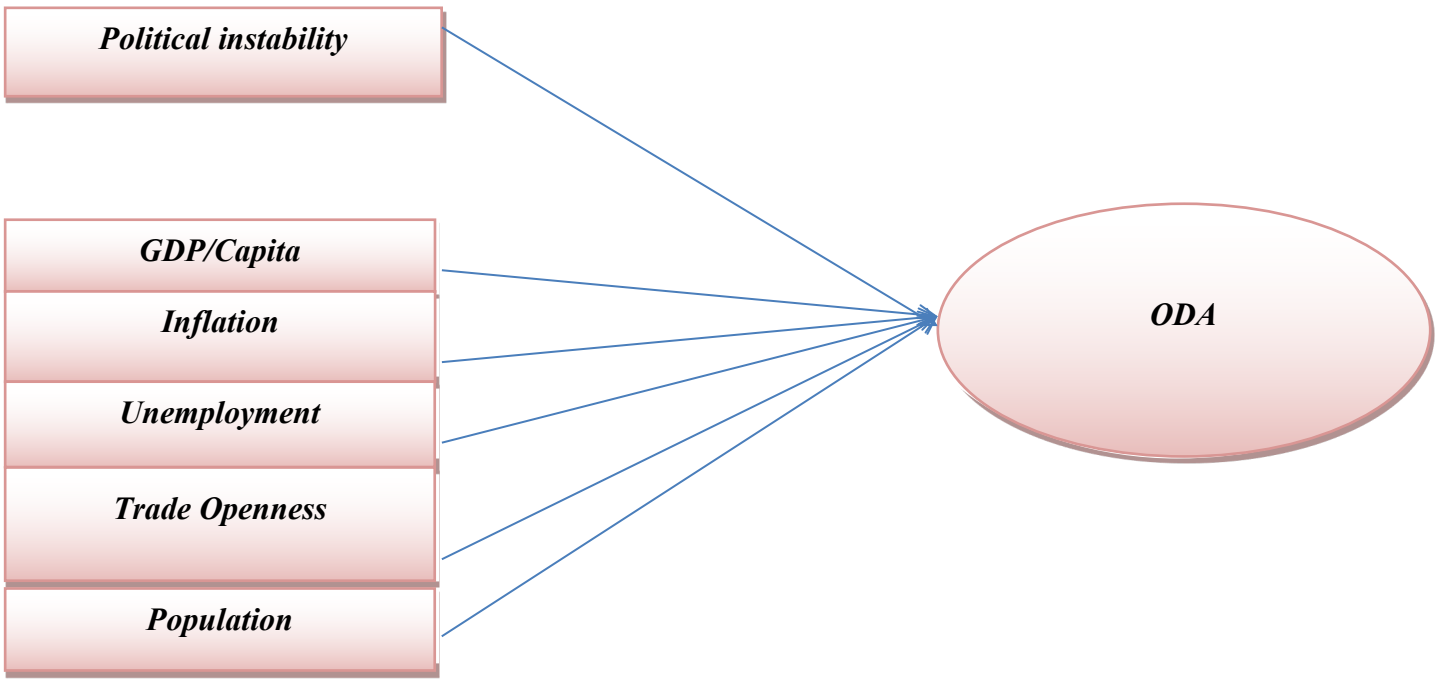


Figure1: Conceptual diagram

CHAPTER THREE: RESEARCH METHODOLOGY

In this section, the methods and approaches used (applied) in this study are described and organized into six sub-sections. The first sub-section briefly presents the data source and type of data for which this study is employed. The second sub-section is devoted to the method of analysis and the third and fourth subsection part, however, shortly summarizes the issues of estimation techniques and model specification. The last two sub-sections, wind up the entire section by providing reasons for sample selection, describing the variables and data sources, and Diagnostic tests.

3.1 Data source and type

Secondary data from world development indicators (WDI) and world governance indicators (WGI) is used in this study. Based on data availability, a balanced panel data for ten years from 2012-2021 has been collected for the disaggregated sub-Saharan African countries. However, to examine the data and to make it ready for regression analysis, graphical presentation and summary descriptive statistics are also presented in the first part of the next section. The aid variable (ODA), Inflation, GDP/Capita, Trade (% of GDP), Total Population, and unemployment, total (% of total labor force) are obtained from World development indicators data file. However, the data for Political stability and absence of Violence/terrorism is collected from World Governance indicator.

3.2 Method of Data analysis

The data gathered is analyzed using both descriptive and econometric methods. A descriptive statistical tool, such as averages, percentages, and graphs, is employed in descriptive analysis. The regression analysis is used to assess the effect of political instability on foreign aid flow. Furthermore, a unit root test and autocorrelation test will be carried out to investigate the stationariety of the variable and to assess the relationship between foreign aid flow and independent variables. Hausman test also be carried out to choose an appropriate model from fixed and random approach after regression.

3.3 Model specification

Based on the reviewed literature, the study made an effort to define the model that investigates the relationship between aid flow and political instability and other independent variables. The balanced panel data form the foundation of the study. The use of panel data is advantageous because cross-sectional and time-series data have been extensively discussed in recent works. Some of the major advantages of using panel data are the possibility of parameter identification in the presence of endogenous repressor or measurement error, the robustness of panel data-based models to omitted variables (Via introducing individual-specific effects with unknown parameters), and the efficiency of parameter estimates because of the larger sample size with explanatory variables changing over two dimensions (Verbeek, 2000). The choice of this study to rely on panel data in examining the effect of political instability is in line with these advantages of panel data over the other types.

Works on the econometric techniques of estimation largely criticized the adoption of OLS in panel data analysis. For instance, Bond et al. (2001), Bond (2002) and Roodman (2006) discuss that the correlation between the value of dependent variable or any endogenous explanatory variable and the individual- specific, time invariant effect makes the OLS estimates biased and inconsistent. It is also pointed out that this inconsistency of polled OLS persists even if serial correlation of the error term is assumed away (Bond, 2002).

3.3.1 Econometric model

On the ground of allowing for country-specific (individual) heterogeneity and to Show the effect of political stability, GDP/Capita, Inflation Rate, total population, unemployment and Trade Openness on the Foreign aid to SSA countries the fixed effect and random effect are employed. The econometric model expressed in multiple regressions for this study is defined by the equation below.

$$Aid_{it} = \beta_0 + \beta_1 POLST_{it} + \beta_2 GDP\ per\ Capita_{it} + \beta_3 Inf_{\ it} + \beta_4 Top\ it + \beta_5 Tpop_{it} + \beta_6 UEMP_{\ it} + U_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.. (1)$$

3.3.2 Description of the variables

The table below contains a description of the dependent variable as well as the explanatory variables that are believed to influence the dependent variable.

Table 1: Summary of the Variables

Variables	Description	Expected sign
Dependent Variable		
Foreign aid (Aid)	Is defined as net official development assistance flow from various organizations. It consists all grant component and concessional loans with grant elements of at least 25 percent.	+ve
Independent Variables		
[1]Political stability and absence of violence/ terrorism	Refers to Peace, stability and absence of violence within a country and predictable policies and governance practices over time. This will capture the political stability of aggregated SSA countries.	+ve
GDP per capita	Gross domestic product per capita measures a country's economic output per person and is calculated by dividing the GDP of a country by its population. This will help to capture overall economic conditions of the disaggregated SSA country.	+ve
Inflation	Is a percentage increase in the aggregate price level of good and service in an economy and hurts the purchasing power of the currency. It will capture the economic instability of aid receiving countries.	-ve
Population	Indicates the total population of the aid recipient SSA countries.	+ve
Trade openness	Is defined as a degree to which a country's willingness to have a trade with the rest of the world. This measured as the summation	+ve

[1] "political stability and the absence of violence/terrorism measure perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism" (worldwide Governance indicators, 2022)

	of both export and import as a share of gross domestic product.	
Unemployment	Is defined us the total amount of unemployed people as a percentage of total labor force	+ve

Net Official Development assistance: The dependent variable used in this study is Net official development assistance. I chose to look at net ODA, as opposed to other measures of foreign aid, because first, I did not want to lump in the effect of private donations or investments. Private assistance should not be lumped together with official assistance because they are very different from each other in terms of both intent and disbursement. Secondly, to look at net ODA because i did not want to track the effects of any kind of military assistance, which are not intended for overall development assistance and thus is not in the spirit of this paper analysis. Johnson, R., Smith, B., Brown (2017) used net official development assistance as an indicator of foreign aid to analyze the impact of political instability on aid allocation.

Political stability: Political Stability and Absence of Violence/Terrorism (PV) is a broader concept that encompasses specific aspects of peace, stability and absence of violence within a country. Conversely, political instability indicates the probability that a government can be destabilized by unconstitutional methods and/or politically motivated violence, including terrorism. I chose to use political stability and absence of violence/terrorism rather than something like the amount of forced government changes in a given time period, which is what Oeschlin (2009) does. This is because political instability is more than just about actual displayed violence and actions. It would seem that indices created by scholars who look at the overall situation in various countries would better capture the stability situation in any given country at any given time. Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010) introduces the Worldwide Governance Indicators (WGI), which include a political stability and absence of violence/terrorism index. The index is based on expert assessments and captures perceptions of the likelihood of political instability or violence occurring within a country. Dreher, A., & Fuchs, A. (2015) an empirical analysis of China's aid allocation, use the Political Stability and Absence of Violence/Terrorism indicator from the Worldwide Governance Indicators as a measure of political stability. They examine China's aid allocation patterns and how political stability influences its aid decisions.

GDP/Capita: This is consistent with most current aid studies, which use GDP/Capita in order to account for population growth and measure the real annual increase in GDP. Some studies use the Penn World Table (PWT) PPP adjusted growth rates instead of nominal growth rates,

however, Guillaumont et.al (1999) test both and obtain similar results for either measurement. Johnson, M., Smith, A., Brown, L. Journal (2019) used GDP/Capita as an indicator of overall economic condition. The study analyzes the impact of GDP/Capita on the flow of official development assistance to SSA countries.

Inflation: is used over the alternate measurement utilizing a GDP deflator also offered by the WDI, as inflation based on consumer prices is thought to better represent what the typical person in the country actually faces and thus is a more direct measure of a potential cause for economical unrest in the country in return leads to decrease the real value of aid. Fischer, S. (1981), Cukierman, A., Webb, S. B., & Neyapti, B. (1992) used inflation as an indicator of economic instability. In contrast, Ramey, V. A., & Ramey, G. (1995) used output volatility, investment volatility, and government consumption volatility as an indicator of economic instability. It is expected to have a negative and significant effect on the allocation of aid.

Population: a larger population can present economic challenges which are related to resource scarcity, urbanization and environmental sustainability that can arises the flow of aid to sub–Saharan African countries since SSA are one of the highly populated countries. The total population provides a comprehensive representation of the recipient country's size. By considering the entire population, including both rural and urban areas, it captures the magnitude of the potential impact on the overall population on aid. Dreher, A., Fuchs, A., Parks, B., Strange, A. M., & Tierney, M. J. (2017) used total population as explanatory variable to explore how recipient countries' population sizes influence the allocation of Chinese aid.

Trade Openness (Trade % of GDP): The data is taken from the WDI data set, is also included as an independent variable in this paper analysis. Trade openness refers to a country's degree of participation in international trade, measured by the volume of imports and exports as a percentage of its GDP. It is expected to have a positive and significant effect on foreign aid. The theory behind including this variable is that it potentially estimates the influences of trade with international community outside of political stability. Empirical literatures (Berthélemy, J. C., & Tichit, A. (2004) has been used this variable as percentage of GDP to analyzes the determinants of bilateral aid allocation decision. Alesina, A., & Weder, B. (2002) considers trade openness as a potential factor influencing aid allocation decision.

Unemployment: unemployment is taken as an independent variable used to capture the social instability of aid recipient SSA countries. Its data is taken from WDI with total unemployment

as a percentage of total labor force and it is expected to have a positive relation with the flow of aid so SSA countries. In the literature (for instance, Montada A. Akhunov, Karam J. Nassar, 2016; Dirk Willem te Velde, Andy McKay, 2007), this proxy variable has been used as a percentage of total labor force to assess the correlation between unemployment and foreign aid.

3.4. Estimation technique

The paper specifies and estimates models using fixed effect and random effect approach that explain the allocation of net ODA received among disaggregated SSA countries (listed in Table 2) over the period of 2012-2021. The dependent variable used is Net official development assistance. The relative aid variable is used following (Maizels and Nissanke 1984); Trumbell and Wall (1994); Gounder (1994) and Chauvet (2002).

A fixed and random model is used to account for unobserved heterogeneity that may be present in the data. Works on the econometrics techniques of estimation largely criticize the adoption of OLS in panel data analysis- particularly where the lagged dependent variable enters the set of explanatory variables. As it is discussed by Bond et al. (2001), Bond (2002) and Roodman (2006) discuss that the correlation between the lagged value of the dependent variable or any endogenous explanatory variable and the individual- specific, time-invariant effects makes the OLS estimates biased and inconsistent. It is also pointed out that this inconsistency of pooled OLS persists even if serial correlation of the error term is assumed away (Bond, 2002).

On the ground of allowing for country- specific (individual) heterogeneity and considering the potential effect of political instability, the fixed and random effect models will be employed. To discriminate between the fixed effects (the consistent) estimator and the random effects (the conditionality more efficient) estimator, Hausman test will be applied.

3.4.1. Fixed effect model

The fixed effects model takes into account the cross-sectional heterogeneity and uses a distinct intercept for each of the sampled nations. The slopes of a fixed effects model would remain constant, but the intercepts would vary depending on the cross-sectional (group) unit, such as the nation. In this sort of model, there are substantial disparities across nations even if there are no major temporal effects. The intercept may not change over time even if it is cross-section (group) specific and in this situation varies from country to country.

One of the most advantages of the fixed effects model is that the error terms may be correlated with the individual effects. If group effects are uncorrelated with the group means of the regressors, it would probably be better to employ a more parsimonious parameterization of the panel model.

Fixed effects models are not free from drawbacks. The fixed effects models may frequently have too many cross-sectional units of observations requiring too many dummy variables for their specification. Too many dummy variables may sap the model of sufficient number of degrees of freedom for adequately powerful statistical test. Moreover, a model with many such variables may be plagued with multicollinearity, which increases the standard errors and thereby drains the model of statistical power to test parameters. If these models contain variables that do not vary within the groups, parameter estimation may be precluded. Although the model residuals are assumed to be normally distributed and homogenous, there could easily be country-specific (group wise) heteroskedasticity or autocorrelation over time that would further plague estimation.

Based on the insight of the fixed affect model, a regression equation of the following form has been specified:

$$lnNODA_{it} = \beta_0 + \beta_1 POLST_{it} + \beta_2 lnGDP/Capita_{it} + \beta_3 Inf_{it} + \beta_4 ToP_{it} + \beta_5 lnTpop_{it} + \beta_6 UEMP_{it} + \varepsilon_{it} \quad \textit{...(2)}$$

Where;

NODA…….. Net official development aid

POLST…….. Political stability

GDP/Capita…….....GDP/Capita

INF……Inflation

Tpop……... Total population

UEMP……..Unemployment

TOP……Trade Openness

The dependent variable NODA is used as a proxy variable used to measure the flow of foreign aid to SSA countries. POLST represents political stability measured by political stability and absence of terrorism as an indicator of political instability occurred in disaggregated SSA countries.

3.4.2. Random effect model

Greene (2003) calls the random effects model a regression with a random constant term. One way to handle the ignorance or error is to assume that the intercept is a random outcome variable. The random outcome is a function of a mean value plus a random error. But this cross-sectional specific error term Vi, which indicates the deviation from the constant of the cross-sectional unit (in this case, country) must be uncorrelated with the errors of the variables if this is to be modeled. The time series cross-sectional regression model is one with an intercept that is a random effect.

Based on the insight of the random effect model, I specify a regression equation of the following form:

$$lnNODA_{it} = \beta_0 + \beta_1 POLST_{it} + \beta_2 lnGDP\ per\ Capita_{it} + \beta_3 Inf_{it} + \beta_4 ToB_{it} + \beta_5 lnTpop_{it} + \beta_6 UEMP_{it} + \mu_{it} + \varepsilon_{it} \quad \text{.....(3)}$$

The variables denote the same meaning as equation 1. The only difference is that in the equation for random effect there is an extra variable μ_{it} and the intercept is constant.

But still remain the question of reliability of these static panel data techniques under some conditions; apart from the fixed and random effect approaches Mundlak approaches treats the time- invariant variables. In order to capture time- invariant heterogeneity across entities in this case- country, Mundlak Approach is employed.

3.4.3. Mundlak approach

The Mundlak approach, also known as the Mundlak correction or Mundlak's method, is a statistical technique used to address the issue of omitted variables in fixed effects and random effects models. It was introduced by Yair Mundlak in 1978 and has since become a widely used method in econometrics.

In fixed effects and random effects models, it is assumed that individual-specific or time-specific factors are captured by the fixed effects or random effects terms. However, there may still be unobserved or omitted variables that are correlated with both the dependent variable and the independent variables, leading to biased estimates.

The Mundlak approach aims to account for these omitted variables by including additional variables that capture the average differences between individuals or time periods. It involves augmenting the model with the average value of each independent variable for each individual or time period and estimating the model using these augmented variables (Baltagi B., 2013).

The key idea behind the Mundlak approach is to capture the influence of the omitted variables by including the average values of the independent variables, which effectively eliminates the correlation between the omitted variables and the included variables. This helps to obtain unbiased estimates of the coefficients of interest. The Mundlak approach addresses this concern by incorporating time-varying means of the explanatory variables in the panel data regression model. Instead of assuming that the individual-specific effects are uncorrelated with the explanatory variables, the Mundlak approach allows for this correlation by including the individual-specific means of the variables in the regression equation. This helps capture the time-varying effects of the unobserved factors and provides more accurate estimates of the relationships between the dependent and explanatory variables (Cameron, A., 2005).

The Mundlak approach is particularly useful in studying phenomena where time-invariant characteristics play a significant role, such as analyzing the impact of institutional factors, technological progress, or unobservable individual traits on economic outcomes. By accounting for these unobserved factors, the Mundlak approach helps researchers control for omitted variable bias and obtain more reliable estimates (Pravin K. Trivedi, 2005).

Researchers employing the Mundlak approach typically to estimate panel data models using fixed effects or random effects specifications and include the individual-specific means of the explanatory variables as additional regressors. This approach contributes to a more robust and nuanced analysis of panel data, allowing for improved causal inference and policy evaluation (Wiley, 2013).

3.5 Diagnostics tests

Tests are used to determine which hypothesis is accepted and rejected, resulting in a range of outcomes and interpretations. To assess and validate the model's output, the study will run some pre- and post-estimation tests on the variables. The study will discuss the panel unit root tests and correlations as being the most significant panel model tests that would be relevant to the panel data analysis.

3.6 Sample selection

Sub-Saharan African countries are categorized into different income categories based on their Gross National Income (GNI) per capita. The World Bank uses these classifications to provide a broad overview of the economic status of countries. Here is a general breakdown of the income classifications used by the World Bank: among 48 sub Saharan Africa countries, 24 is categorized under low income sub Saharan Africa countries with a low GNI per capita, 17 is under lower middle income countries with a GNI per capita that is higher than low-income countries but below the threshold for upper middle- income status, 6 upper middle income SSA countries with higher GDP per capita relative to low income and lower middle income countries and 1 upper income countries. For this research purpose 15 disaggregated sub-Saharan Africa countries are selected by their proportion from the total number of SSA countries.

Table 2: List of countries included in the Sample

Low Income SSA	**Upper middle SSA**	**Lower Middle SSA**
Gambia	Botswana	Cameron
Mali	South Africa	Ghana
Rwanda		Kenya
Togo		Nigeria
Ethiopia		Tanzania
Chad		
Sudan		
Central Africa Republic		

As per world development indicator data, the net flow of official development assistance to low-income sub Saharan African countries took a huge amount which is us dollar 278 Billion from 2012 to 2021 which is (54.35% of the NODA to the SSA) and lower middle income countries received $158 billion (20.87%) and $16 billion or 3.16% of NODA is received by upper middle income SSA countries.

CHAPTER FOUR: RESULT AND DISCUSSION

4.1. The profile of Aid flow to Sub Saharan African

Sub-Saharan Africa, according to the World Development Indicator (2021) with about 1.15 billion inhabitants for 48 states, is one of the lowest economically developed subcontinents in the world. It represents 14.56% of the world population and 2-3% of the GDP.

According to World Bank (2001), Sub Saharan Africa countries, remains

- Inadequate structures: lack of infrastructures, limitedness of the market, signs of industrial sectors, weakness of the institutional environment,
- Inadequate policies: the overburden of corruption, mismanagements of the public and private sectors,
- International vulnerabilities: indebtedness, prices of raw materials. It remains a rented economy where enrichment is the result of withholding rather than from the substantial creation of wealth, consequently causing an international marginalization.

According to World Bank report (2002), official development assistance (ODA) flows to SSA countries (SSA) countries for several reasons, the key factors that contribute to the flow of aid to SSA:

- Development Needs: Many SSA countries face significant development challenges, including poverty, inadequate infrastructure, and low levels of education, healthcare issues, and food insecurity. Aid aims to address these needs by providing financial resources, technical expertise, and capacity-building support to promote sustainable development.
- Poverty Reduction: SSA has a high concentration of low-income countries, and poverty reduction is a priority for the international community. Aid plays a crucial role in supporting poverty reduction strategies, social safety nets, and programs that aim to uplift vulnerable populations and improve livelihoods.
- Sustainable Development Goals (SDGs): The United Nations' SDGs provide a global framework for addressing development challenges. Many SSA countries have identified SDGs as their development priorities, and foreign aid supports their efforts to achieve

these goals, such as improving healthcare, education, gender equality, and sustainable agriculture.

- Peace and Security: Some SSA countries have experienced conflicts or are prone to political instability. Aid is utilized to support peace building efforts, strengthen security institutions, and promote stability through conflict resolution, peacekeeping missions, and reconciliation processes.
- Market Access and Trade: aid can be used to enhance trade capacities, improve infrastructure, and facilitate market access for SSA countries. This assistance aims to promote economic growth, increase investment opportunities, and support the integration of SSA countries into the global economy.
- Climate Change and Environmental Protection: SSA is vulnerable to the impacts of climate change, including droughts, floods, and desertification. Foreign aid is channeled to support climate change adaptation, mitigation efforts, renewable energy projects, and environmental conservation in the region.
- International Commitments and Partnerships: Donor countries and international organizations have made commitments to support development efforts in SSA through various aid programs, initiatives and partnerships. These commitments stem from a sense of global responsibility and a desire to foster equitable and sustainable development worldwide.

ODA has a more precise definition and stricter reporting requirements compared to foreign aid in general. The DAC sets specific criteria for financial flows to qualify as ODA, including that they must be concessional in nature (i.e., provided on favorable terms), primarily aimed at development, and have the objective of promoting economic development and welfare in recipient countries.

The provision of ODA to SSA countries aims to promote sustainable economic growth, poverty reduction, and the improvement of social conditions. One reason for the focus on SSA countries is the high prevalence of poverty and underdevelopment in the region. According to the World Bank, Sub-Saharan Africa has the highest poverty rates globally, with a significant portion of the population living below the poverty line. ODA aims to address this issue by supporting initiatives and programs that enhance economic opportunities, improve access to basic services, and promote social welfare in SSA countries.

Another reason for the emphasis on SSA countries is the presence of significant development challenges such as inadequate infrastructure, limited access to healthcare and education, and vulnerability to natural disasters and climate change. ODA flows are directed towards addressing these challenges and building the capacity of SSA countries to overcome them.

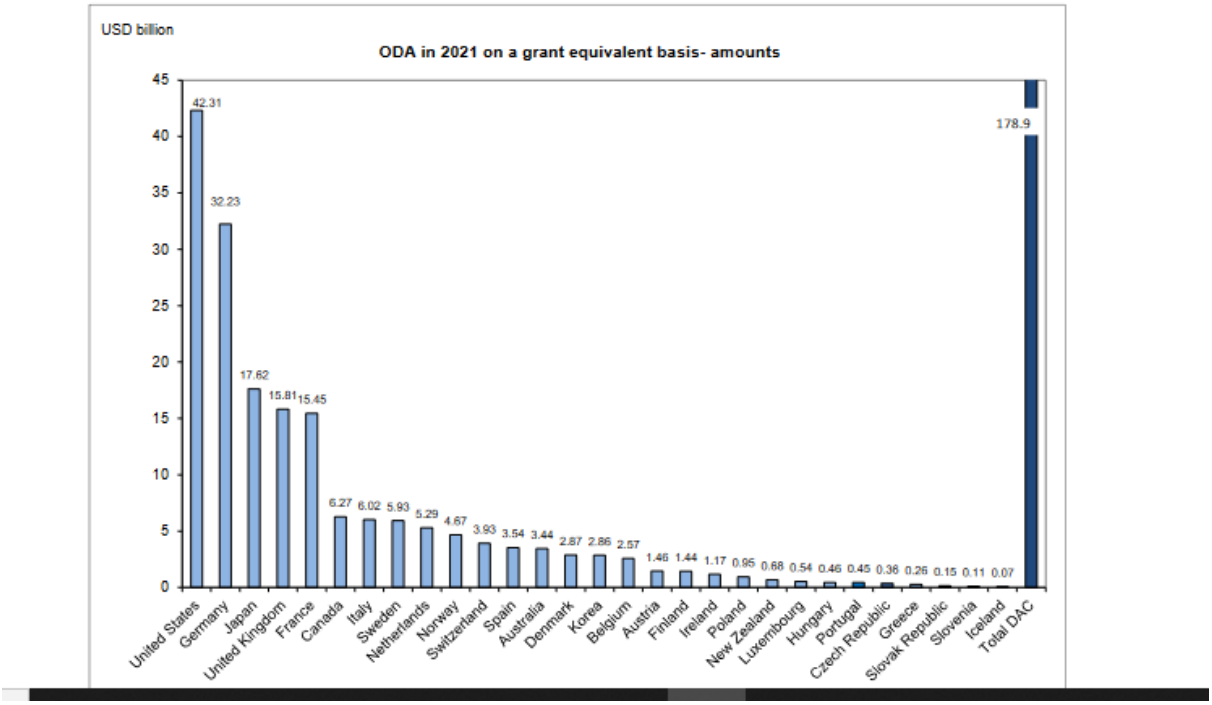
Sub-Saharan African (SSA) countries receive aid from various bilateral and multilateral donors; here are some of the major donors of ODA to SSA countries are;

Table 3: Top ten ODA Donor's countries

No	Donor country	Percentage (total ODA to SSA)
1	United States	25%
2	European Union Institution	19%
3	Germany	11%
4	United Kingdom	10
5	France	6%
6	Japan	5%
7	World Bank	4%
8	African Development bank	4%
9	Sweden	3%
10	Norway	3%

Source: World bank (2021)

Figure 2: DAC member's official development assistance in 2021 on a grant equivalent basis



DAC stands for Development Assistance Committee, which is a forum of the Organization for Economic Co-operation and Development (OECD). The DAC is composed of member countries that provide official development assistance (ODA) to support economic development and welfare in low-income and middle-income countries.

Development Assistance Committee is intended to assigns Official Development Assistance (ODA) to Sub-Saharan African (SSA) countries for a variety of purposes aimed at promoting economic development, poverty reduction, and sustainable growth.

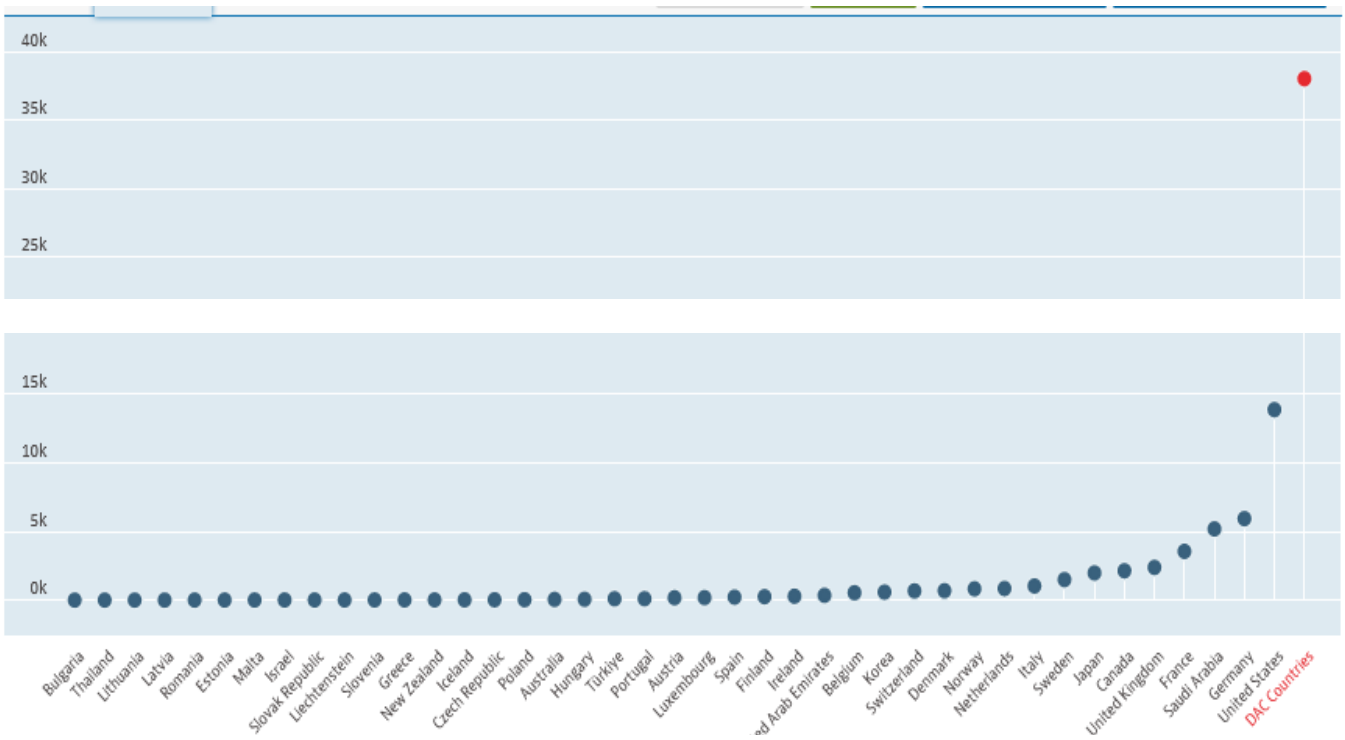
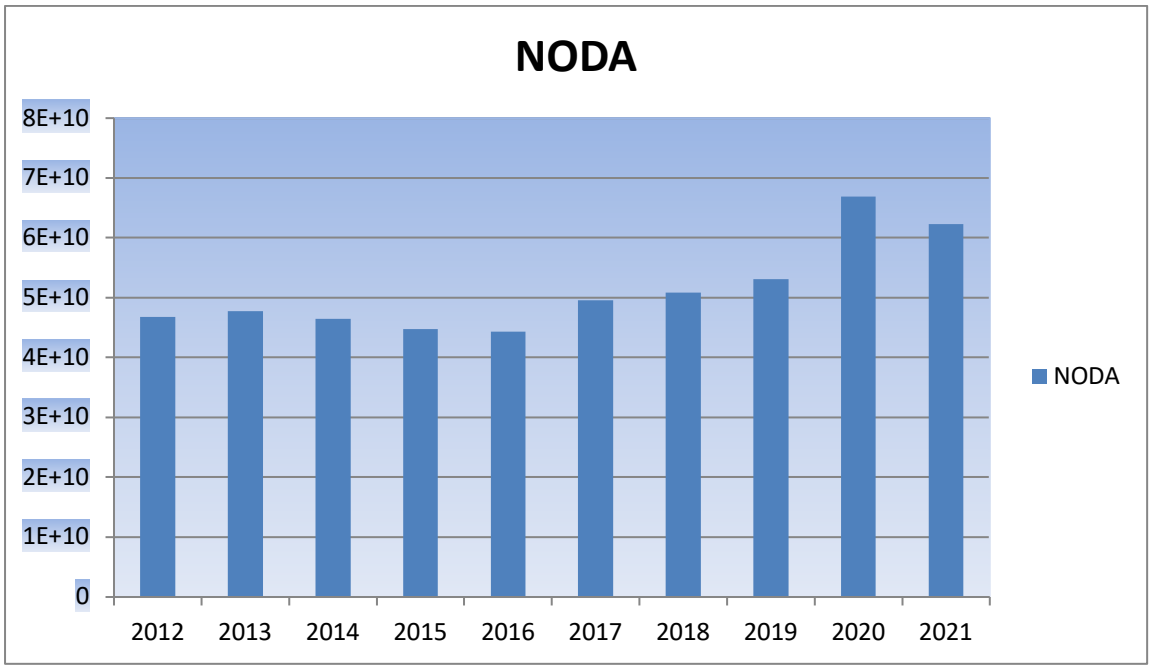


Figure 3: Aid Donors countries to SSA

4.2. Trends of Aid Flow to Sub Saharan African countries

SSA has been a major recipient of foreign aid since 2012. One such measure commonly used is the flow of official development assistance (ODA) in constant US dollar. If this measure is taken as the measure of aid, aid to the region rose steadily from 2012. The patterns of ODA received by SSA countries fluctuates depending on, to a large extent, the economic, political and social circumstances that the countries are going through.

The amount of aid (Official Development aid) flow to sub–Saharan Africa countries from the period of 2012- 2021 is a worth of $512 billion which is relatively very high from other continents as of south Asia, Europe and central Asia which has received us dollar 148 billion and 91 billion amount of aid on the same period.



Source: own compilation

Figure 4: The trend of aid flow to SSA countries

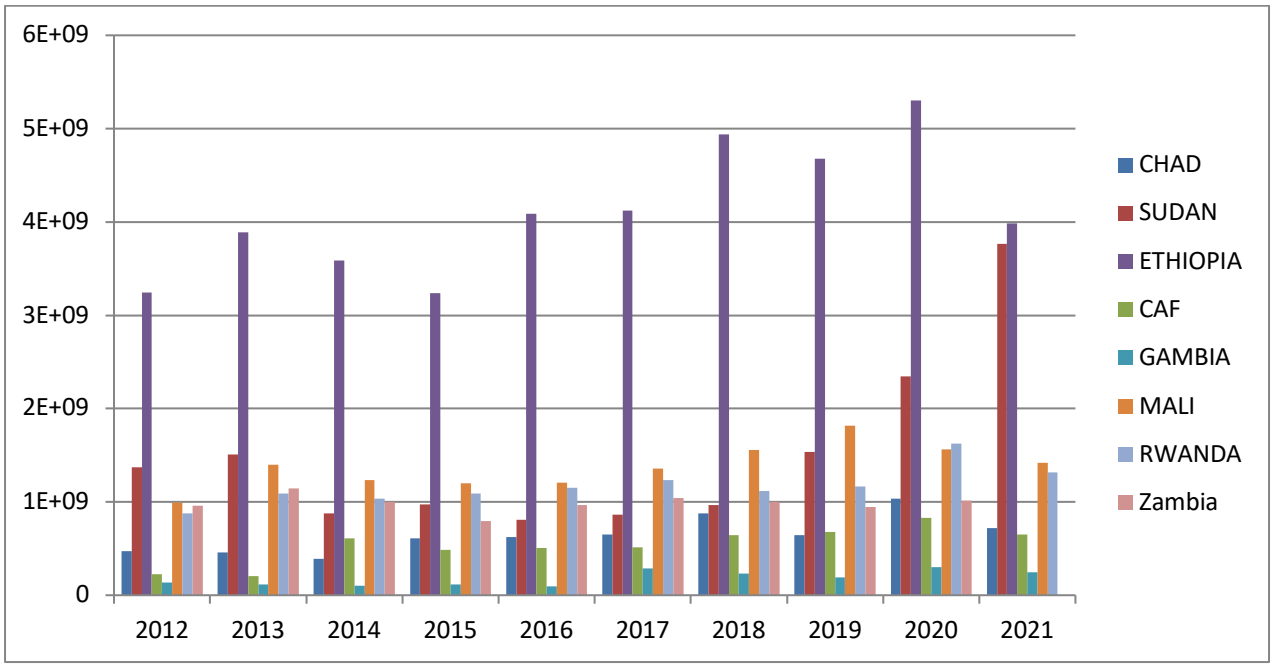
The trends of aid flow to Sub-Saharan Africa countries have varied over time. In recent years, aid to the region has generally increased, but the type of aid and the sources of funding have changed. As the above graph indicated the flow of aid is increased by 2% in 2013 as compared to 2012, despite this progress, aid to sub–Saharan Africa fell in 2014, 2015, 2016 by 2%, 3% and 1% as it is compared to the previous year as some DAC members backtracked on a commitment to reverse past declines in flows to the poorest countries. According to Organization for Economic Co-operation and Development (OECD), the total official development assistance (ODA) to Sub-Saharan Africa in 2020 was $66.8 billion, an increasing of 20.6% in real terms compared to 2019. The increase is in part due to DAC members' support of an inclusive global recovery in light of the pandemic and in part due to an increase in bilateral sovereign lending by some loan-giving members. Most donors had adopted their ODA budgets for 2020 by the time the pandemic hit, and were able to maintain their planned ODA commitments. In addition, some were able to rapidly mobilize additional funding to support developing countries face exceptional circumstances.

One trend is the increasing share of aid coming from non-DAC (Development Assistance Committee) donors, such as China, India, and Gulf countries. These donors have different priorities and approaches to aid, often focusing on infrastructure and resource extraction projects.

This has led to concerns about debt sustainability and the impact of aid on the recipient countries' development goals. Another trend is the shift towards more targeted and results-oriented aid, such as supporting specific sectors like health, education, and governance. This is in contrast to the more general budget support that was common in the past.

4.2.1. Trends of aid to Low-income Sub-Saharan African Countries

Over the past two decades, there has been an overall increase in the flow of development aid to low-income sub-Saharan African countries. Among the low-income sub-Saharan African countries, Ethiopia is one of the highest recipients of ODA with a percentage of 8% of total ODA allocation to Sub-Saharan African countries. Sudan and Mali are also high recipients of ODA next to Ethiopia with a percentage of 2.93% and 2.68% respectively.

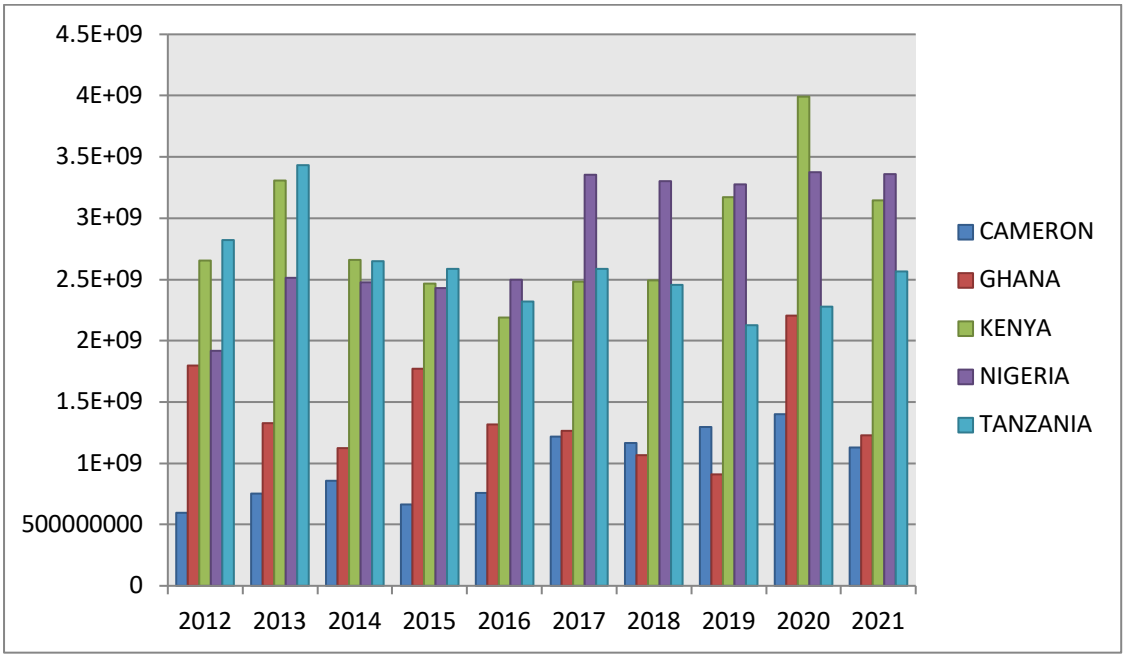


Source: own compilation

Figure 5: Aid to Low-Income Sub-Saharan African Countries: Trends

4.2.2. Trends of aid to lower middle income Sub-Saharan African Countries

According to statistics from the World Bank, 17 Sub-Saharan African countries, or 35.4% of SSA countries, are classified as lower middle-income countries. Of the countries included in this research, Kenya receives the highest official development assistance (ODA), making about 6% of the overall aid provided to SSA countries. Kenya and Nigeria each receive around the same amount.

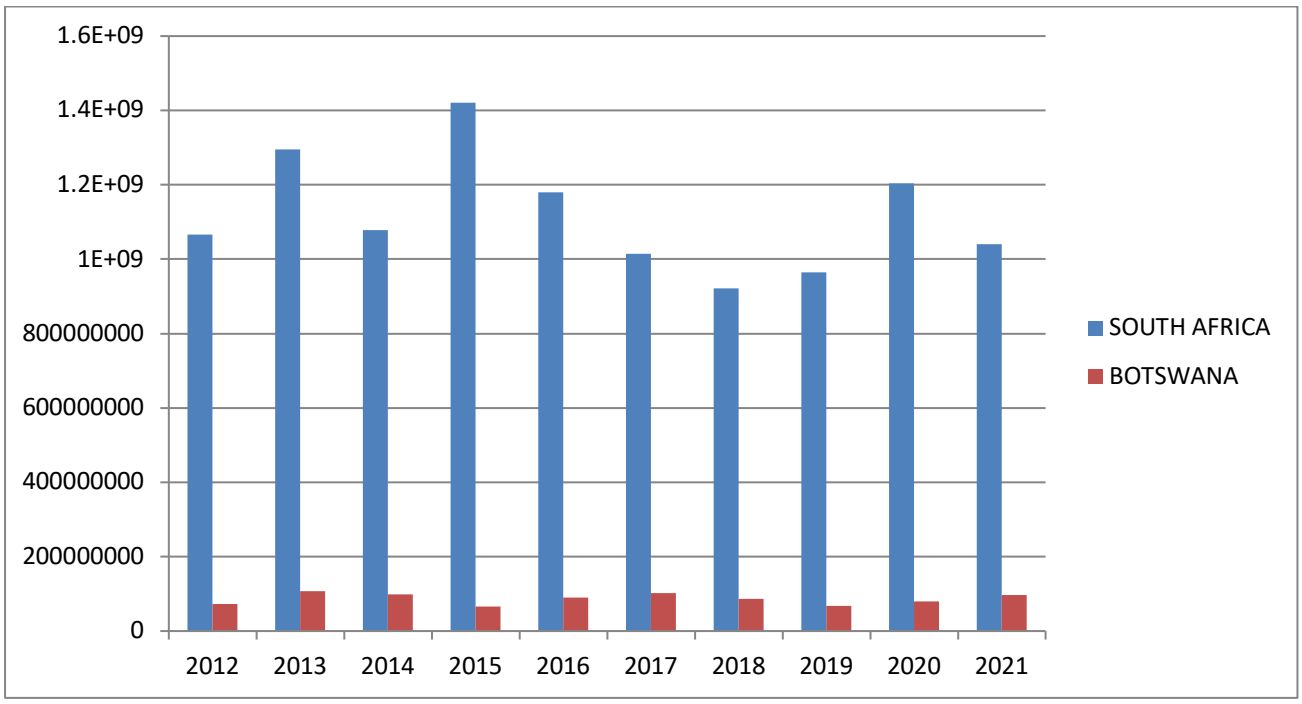


Source: own compilation

Figure 6: Aid to Lower Middle-Income Sub-Saharan African Countries: Trends

4.2.3. Trends of aid to upper middle income Sub-Saharan African Countries

South Africa has received the most aid out of the sub-Saharan African nations deemed to have upper-middle incomes, accounting for 2.18% of all aid given to those nations. Botswana, meanwhile, only got 0.17 percent of the overall funding.



Source: own compilation

Figure 7: Aid to upper middle-Income Sub-Saharan African Countries: Trends

Table 4: Foreign Aid and Political Stability of disaggregated Sub- Saharan African countries

Recipient Country	***Percentage of received aid (SSA)***	***Average Political Stability and absence of terrorism (S.E)***	***Average Political stability and absence of terrorism (estimates)***
Chad	1.26%	0.233524	-1.26748
Sudan	2.93%	0.227169	-2.04174
Central Africa republic	1.04%	0.237273	-2.10683
Ethiopia	8%	0.219691	-1.55196
Gambia	0.35%	0.228461	-0.01177
Mali	2.68%	0.223866	-1.94567

Rwanda	2.28%	0.232937	-0.01802
Zambia	1.94%	0.221481	0.159572
South Africa	2.18%	0.215412	-0.2293
Botswana	0.17%	0.220901	1.036396
Cameron	1.92%	0.219691	-1.11981
Ghana	2.73%	0.219691	0.037295
Kenya	5.57%	0.219691	-1.18816
Nigeria	5.56%	0.219691	-1.97349
Tanzania	5.61%	0.219691	-0.39745

Table 4, shows the average aid received by SSA during a ten-year period as well as their relative political stability status and average. Throughout the duration of the research, there is a significant range in the assistance ratio.

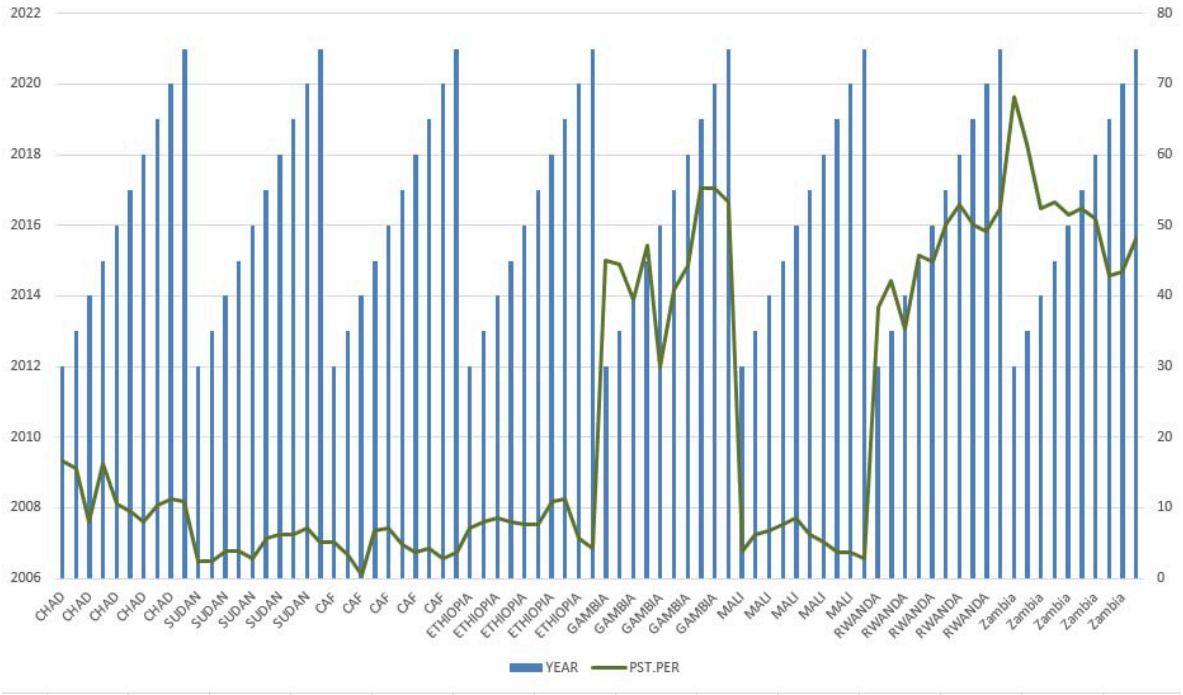


Figure 8 political stability trends of low income SSA countries

Source: world governance indicator

The graph shows Chad, Sudan, CAF, and Mali have stability concern with active terrorism. During the period of 2012-2021 Chad has faced security challenges, including internal conflicts and the presence of terrorist groups such as Boko Haram and affiliates of the Islamic State (IS). Terrorism activities have been reported in the country during this period. Sudan has experienced political instability during this period, including the overthrow of longtime President Omar al-Bashir. There have been instances of violence and conflicts, including terrorism-related activities in certain areas. Central Africa Republic and Mali was also faces stability challenges including a civil war and ongoing conflicts.

Ethiopia has experienced a mix of political stability and instabilities during the period. However, the country has faced internal conflicts and regional tensions, particularly in tigray and other areas. In contrast, Gambia, Rwanda and Zambia have experienced relative stability in terms of political stability and security.

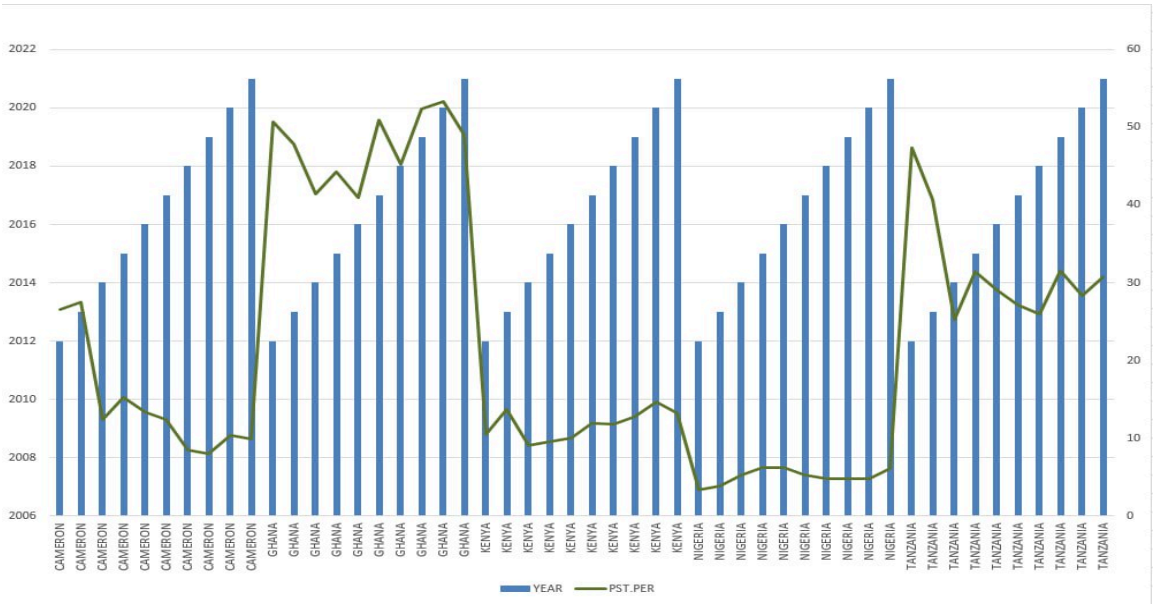


Figure 9 Political stability trends of Lower middle Income SSA Countries

Source: world governance indicator

As it shown in the graph, Ghana and Tanzania has been known for its political stability relative to other SSA countries. In contrast, Cameron, Kenya, Nigeria has faced political instability challenges,

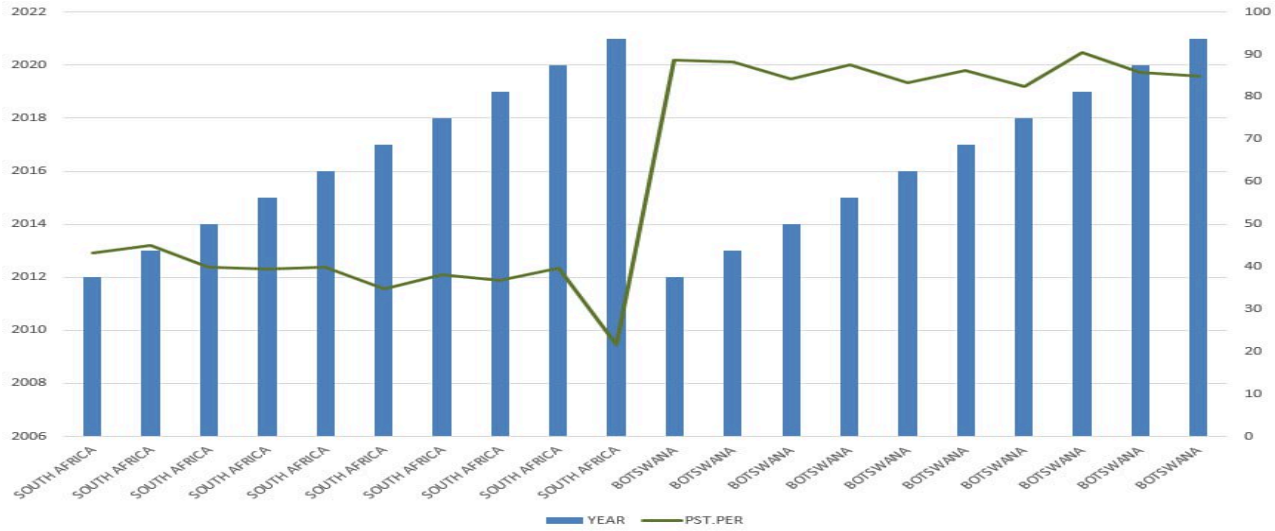


Figure 10 Political stability trends of Upper Income SSA Countries

Source: world governance indicator

South Africa has had a relatively stable political environment during the specified period. While the country has faced some challenges, such as social unrest and protests, it has maintained a democratic system and peaceful transitions of power. Botswana is known for its political stability in the region. The country has a long-standing tradition of democratic governance and has enjoyed peaceful transitions of power since its independence. Botswana has not faced significant terrorism threats or widespread violence during the specified period. However, it's important to note that no country is entirely immune to sporadic acts of violence or isolated incidents.

Both South Africa and Botswana have demonstrated a higher level of political stability and a relatively lower presence of terrorism/violence compared to some other countries in Sub-Saharan Africa during the period of 2012-2021. However, it's worth considering that political dynamics can evolve, and the situation may change over time.

Table 5 Sample descriptive statistics

Variables	Mean	Std. Dev.	Min.	Max.
Net ODA	20.72542	1.04676	17.99817	22.39186
Political stability	27.49937	24.16202	.4761905	90.56604

Inflation	11.63811	33.87817	-1.799647	382.816
Trade openness	51.54623	23.38046	.7568756	125.783
Total population	16.90877	1.237376	14.53871	19.17868
Unemployment	7.828607	7.015749	1	28.77
GDP per capita	7.932497	.8398837	6.467345	9.699175

Source: World Development Indicators (WDI) and World Governance Indicators (WGI)

In Table 5, the average flow of ODA in the disaggregated SSA during the sample period is 20.73 with standard deviation of 1.04. The average stability percentile is 27.49% with large standard errors of 24.16. One important thing observed in the table is that in the sample data the mean value of GDP/Capita and unemployment is low with value of 7.93 and 7.82 respectively.

4.3. Correlation analysis

This section of the study presents the result of Pearson correlation analysis of explained and explanatory variables in the model, since the correlation analysis shows only the degree of association. Pearson's correlation coefficients are used to determine the strength of the relationship between dependent and independent variables. The Pearson correlation scale ranges from -1 to +1, any value greater than zero indicates a positive direct relationship between the two variables, which implies that every increase in the independent variable led to the increase dependent variable whereas, any value less than zero indicates a negative relationship between the two variables, that means that every increase in the independent variable could led to the decrease in dependent variable. Generally, when the value of the coefficient is zero, then there is no correlation between two observed variables. The coefficient value of +1.0 indicates that the correlation is complete and positive, while the coefficient -1.0 indicates that the correlation is complete and negative.

Table 6: Correlation analysis

Variable	**ODA**	**PST**	**GPC**	**INF**	**TOP**	**TPOP**	**UEMP**
ODA	1000						
PST	-0.0667	1000					
GPC	-0.1653	-0.2483	1000				
INF	0.1713	0.1064	-0.0657	1000			
TOP	-0.5545	-0.0588	0.1121	-0.3237	1000		
TPOP	0.6138	-0.1535	0.0396	0.0764	-0.4854	1000	
UEMP	-0.3483	-0.0292	0.6901	0.2182	0.0759	-0.1276	1000

Source: Stata own compilation

Based on the above table, the correlation test shows ODA has positive relationship with inflation and total population. Total population has strongly association (0.61) to ODA whereas inflation has moderate positive association with Official development assistance. On the other hand, ODA is negatively related with political stability, GDP per capita, trade openness, and unemployment.

4.4. Unit root test

Research on panel unit roots and tests for stationarity is one of the frontiers in contemporary panel data econometrics, The distinction between stationary and non-stationary panel data can reflect, explicitly or implicitly, the economic or financial characteristics and attributes of the data, for example, if the current state or value of a variable is derived through accumulation of all previous increases (decreases as negative increases) in its value, then this variable is almost certainly non-stationary, If a variable is a relative measure , which has nothing to do with history, then it is more likely to be stationary, though non stationary cannot be ruled out when there is non-trivial change in the rate (acceleration or deceleration).

Often in an empirical study, different panel unit root tests are used to investigate whether the variables are stationary or not, Panel unit root tests provide an overall aggregate statistic to examine whether there exists a unit root in the pooled cross-section time series data and to judge the time series property of the data accordingly. This on the one hand, can avoid obtaining contradictory results in individual time series to which no satisfactory explanations can be offered.

On the other hand, good asymptotic properties can be reached with relatively small samples in individual time series, which are otherwise too small to be estimated effectively. In the procedure developed by Levin and Lin (1992,1993), when the disturbances are independent identical distribution (i.d), the unit root t-statistic converges to the normal distribution; when fixed effects or serial correlation is specified for the disturbances, straightforward transformation of the t-statistic converges to the normal distribution too. Therefore, their unit root t-statistic converges to the normal distribution under venous assumptions about disturbances. Due to the presence of unit root, the convergence is achieved more quickly as the number of time periods grows than as the number of individuals grows. It is claimed that the

panel framework provides remarkable improvements in statistical power compared to performing a separate unit root for each individual time series.

Variables must be stationery, which is constant mean, variance and covariance, in order to have non spurious results. One course of non-stationarity is existence of unit root. Unit roots are non-stationary autoregressive (AR) or autoregressive moving average (ARMA) time serious which may include an intercept or a trend.

Unit root test is made using Levin-Lin-Chu (LLC) test. This test has a null hypothesis that all panels contain unit root with an alternative stating the series is stationery. The Levin-Lin-Chu test covers all asymptotic assumptions about panel in the data set and the period each panel covers including dataset with few panels and many time periods. This test works with the assumption of balanced panel data set. Adjusted t statistic will be reported in order to avoid bias.

Table 7: Unit root test

In Levels **LLC**		
Variables	**Stat**	**Prob.**
ODA	-8.7122	0.0000*
Political stability	-12.3217	0.0000*
GDP/Capita	-8.3793	0.0002*
Inflation	-11.2098	0.0000*
Top	-18.9151	0.000*
Lntpop	-5.6616	0.0001*
Uemp	-9.5602	0.000*

N.B. *Significance at 5%

Depending on the LLC test result presented, reject the null hypothesis of all panels contain unit root, so they all are stationery. From the table it can be concluded that all variables are Stationery at significance level of 5%. Besides, all variables are stationery included ODA, Political stability, GDP/Capita, Trade openness, total population, inflation and unemployment is Stationery at level.

4.5. Hausman tests

The Hausman tests are tests for econometric model misspecification based on a comparison of two different estimation model parameters. The Hausman test takes correct model specification and both estimators are consistent for the true parameters of the model under the null hypothesis. Correct specification of the model ensures that the size of the test can be controlled asymptotically and it gives it power. When the model is correctly specified the compared estimators are close to each other but if it's Mis-specified they would be far apart. This study uses random and fixed effect estimation coefficients for the comparison of parameters. Both the random and fixed effect models are consistent under correct specification and regressors are independent of individual specific effects.

The random effect estimation is efficient under the assumption of individual specific effect and the difference between the random and fixed effect estimators will be small. The random effect model also acknowledges the cross-section heterogeneity but differs from the fixed effect models in that it assumes that these effects are generated by specific distribution. Therefore, this model assumes cross-section differences but do not explicitly model each effect. The loss in degrees of freedom, as is the case in the fixed effects models, is subsequently avoided. Once again, the Wald Chi2 test for random effects (Greene, 2000) clearly rejects the null of no cross-section heterogeneity in favor of the random effects specification. If the assumption is failed to meet and the model is correctly specified, the fixed effect estimator remains consistent but the random effect estimator would be inconsistent. This extends the gap between the estimators. The null hypothesis we use for the Hausman test is random effect model is appropriate. From the result shown in the Appendix 4 the

Probability chi-square is greater than 0.05, so we fail to reject the null hypothesis and the random effect estimation model is appropriate.

4.5.1. Hausman Specification test

According to Hausman test result p-value is greater than 5 percent (Prob>chi square = 0.2148) so, the random effect model was appropriate and the researcher concluded that the random effects estimator was the more efficient model against fixed effect model. Thus, the regression analysis was done by using random effect model.

Table 8: Hausman Test

Variables	Coefficient			Sqrt (diag(V_b- V_B I) S.E.
	(b) fixed	(B) random	(b-B) Difference	
Political stability	2.097189	4.080197	-1.983008	.7415968
GDP/Capita	-.027808	-.0840833	.0562753	.0918538
Total population	1.561242	.8451746	.7160671	.3005999
Trade(%of GDP)	0.0059445	.0045862	.0029647	.0011068
Inflation	.0030278	.003267	-.0002392	.0000964
Unemployment	-.0066702	-.0173793	.0107091	.0135448

Chi2(6) =8.33

Prob > chi2= 0.2148

4.6. Regression Analysis

The regression analysis examines the effect of political instability on foreign aid as an independent variable and dependent variables. Regression is actually a statistical technique that predicts the value of a dependent variable based on one or more independent variables. A panel data regression model would be estimated in different ways depending on the assumptions made about the intercept, regression coefficients, and error term. Accordingly, the fixed effects model and the random effects model were widely used models in panel data analysis. The researcher used to select appropriate model by using Hausman test; random effects model was selected and the most appropriate in the variation of the dependent variable (NODA) through the variation of the independent variables. However, due to the below mentioned reason Mundlak Model is used along this paper.

We will first briefly discuss the general results derived from fixed effect and CRE estimation before looking deeper into the core results of interest, namely the estimated effects of Political instability on official development assistance (ODA). When panel data is available, the fixed effect (FE) and random effect models are commonly used. However, this method has its drawbacks. FE is used in Empirical research, particularly when controlling for omitted variable bias, but it has drawbacks. It assumes the error is fixed, which is unlikely due to socioeconomic dynamics, and it does not account for the effect of time-invariant factors. On the other hand, the

random effect model may suffer from an endogeneity problem caused by unobserved heterogeneity correlated with explanatory variables (Wooldridge, 2002). To avoid these issues, the Mundlak-chamberlain approach, which is a compromise between the fixed effect (FE) and random effect (RE), was developed and used in this study. Tables 9, show the three-stage estimation of FE, RE and CRE side by side. The results show that the random effect and CRE model estimation results are consistent with the sign and significance levels. However, under the CRE model, the mean of time-variant variables are statistically insignificant, indicating that there is no a correlation between unobserved heterogeneity and observed variables, it indicates that the random effect and Mundlak results are consistent. As a result, the following subsection will discuss the estimated results of CRE estimation.

Table 9: Regression Result

VARIABLES	(fe) lODA	(re) lODA	(Mundalk) lODA
PSTSE	2.0972	4.0802***	3.5696**
	(1.5822)	(1.3977)	(1.4718)
lGPC	-0.0278	-0.0841	0.0290
	(0.1439)	(0.1107)	(0.1440)
INF	0.0030***	0.0033***	0.0033***
	(0.0007)	(0.0007)	(0.0007)
TOP	0.0076***	0.0046**	0.0060**
	(0.0025)	(0.0022)	(0.0024)
lTPOP	1.5612***	0.8452***	0.9228***
	(0.3147)	(0.0931)	(0.1546)
UEMP	-0.0067	-0.0174	-0.0074
	(0.0198)	(0.0144)	(0.0201)
mean__PSTSE			43.3823
			(42.2887)
mean__lGPC			0.0597
			(0.3874)
mean__INF			-0.0058
			(0.0085)
mean__TOP			-0.0051
			(0.0085)
mean__UEMP			-0.0179
			(0.0369)
Constant	-6.2946	6.0494***	-5.9159
	(5.1099)	(1.7275)	(13.5794)
Observations	150	150	150
R-squared	0.8019	0.8438	0.859
Number of Country1	15	15	15

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The above table presents the findings from the regression results on the effect of political stability on the flow of foreign aid to SSA countries. The regression result of the model is as follow:

NODA = -5.9159+ 3.5696PSTSE + 0.0033INF + 0.9228TPOP + 0.0060TOP –0.0290GPC-0.0074UEMP

The flow of aid to SSA countries was explained by model variables with R- square of 85%. This indicates 85% of variation in NODA was explained by explanatory variables of the model. The factors that influence the flow of ODA were identified as political stability, GDP/Capita, Inflation, total population, trade openness and unemployment. Based on above regression result political stability, Inflation, total population and trade openness were positively associated with NODA to SSA countries. Unemployment and GDP/Capita were statistically insignificant and shows negative effect on the flow of net official development aid.

The major findings of this study for hypotheses test were discussed as follows;

Political stability

According to the regression result there is a positive relation between political stability and NODA with net coefficient of 3.5696 and statistically significant at 5% (p value 0.0153) indicated that one unit increase in political stability holding other factors constant is associated with an approximate 3 times of the flow of net official development aid to SSA countries. This implies that if stability in SSA countries increases by one unit the allocation of aid would be increased more than double percent to the region.

This study was in line with previous studies tried to explain the effect of political stability on the allocation of ODA. Alesina & Dollar, (2000) was found Stable political systems are perceived to provide a conducive environment for aid utilization, implementation of development projects, and achieving positive outcomes. Donors are more likely to prioritize countries with stable governance structures, rule of law, and transparent institutions, as they believe aid will have a higher impact in such contexts Political stability is also linked to aid flow to Sub-Saharan Africa. Djankov et al., (2003) political instability can hinder aid flow by creating uncertainty, administrative challenges, and disruptions in project implementation. Political stability, along with good governance practices, is considered essential for maximizing the impact of aid interventions. This result revealed that political instability of SSA countries has a negative effect

on the flow of official development aid to SSA countries. So that, this research concluded the stability of SSA countries is significantly affect the ODA flow to SSA countries.

This result is consistent with the donors' interest theory. According to this notion, nations with stable political environments are more likely to get help than unstable nations. Additionally, the conditionality hypothesis claims that countries that give help are irritated by having to subside unstable nations and that the amount of aid given may decrease. As a result, assistance flows may be influenced by variables outside of political unrest, such as strategic objectives, economic concerns, or humanitarian considerations.

Inflation

Inflation, which is used to capture economic instability of SSA countries, affects the flow of net official development aid to SSA significantly at even 1% (P value 0.0000) and has a positive relationship with the flow of aid. The regression result shows a net coefficient of inflation of 0.0033, which indicates that, a one-unit increase in inflation results in a 0.33% increase in the flow of net official development aid to SSA countries. This result may indicate, inflation can increase the urgency and need for ODA, particularly in countries where inflationary pressures exacerbate poverty, and other development challenges. In such cases, donors may prioritize providing aid to alleviate the adverse effect of inflation and support stability. Adu, Kofi A., et al. (2017), and Brzoska (2011) examined the effect of inflation on official development aid, and their finding suggests that inflation can negatively affect the flow of aid, which is contrary to this paper's finding. The impact of inflation on diminishing the real value of ODA is beyond this study scope.

Trade Openness

Trade openness shows the degree to which a country engages in international trade and measures trade as a percent of GDP. The regression results show there is a positive relationship between TOP and net official development assistance to sub-Saharan African countries. Trade openness affects the flow of aid to SSA countries significantly (p-value 0.0145) with a coefficient of 0.006, which indicates that with a one-unit increase in international trade (trade% of GDP), there is a 0.6% increase in net official development assistance flow to SSA countries.

The result is consistent with a previous study by Alesina and Burnside (2000), which found a significant positive impact of the openness variable on aid allocation to developing countries. On the contrary, Schiff, M., Collier, P., and Dollar, D. (2002) found the insignificance of trade

openness in the allocation of aid and argued that donors are not rewarding or penalizing the recipients based on their merits or demerits.

Reciprocity theory suggests that trade openness can create interdependencies between countries, leading to increased cooperation and support. According to this theory when SSA countries open up their markets to trade, it can foster closer economic ties with donor countries. In return, donor countries may be more inclined to provide ODA to support the development efforts of SSA countries as a form of reciprocal exchange. This theory implies that trade openness can serve as a mechanism for building trust and fostering mutually beneficial relationships, thereby increasing the flow of aid.

Political economy theory also suggests, trade openness may influence the allocation of ODA based on strategic or political interests. Donor countries may prioritize aid to countries with whom they have strong trade relations or countries that serve their geopolitical or security interests. The theory suggests that trade openness may affect the distribution of ODA rather than the overall levels. Donor countries may focus their aid efforts on countries that align with their trade and political objectives, potentially neglecting other countries in need. The intention of donor's country behind the flow of ODA due to trade openness is beyond the scope of this study.

Population

The population indicates the count of individuals living in disaggregated Sub-Saharan African countries which is measured in a logarithmic value of the total population lived in individual countries. The total population shows a positive association with a coefficient of 0.923 implyingthat a one percent increase in the population causes a 0.92% increase in the flow of ODA to SSA countries. There are studies in line with this finding, Ozge Yilmaz, (2015); Bunside and Dollar (2000) find a positive relationship between the total populations of aid-receiving countries with the flow of aid. According to the study countries with large populations receive more aid due to their greater needs. Also, the study suggests that aid is often concentrated in countries with larger populations.

Contrary, Robert A. Zimmerman (2007) found a negative relationship between population and the flow of aid but the research was not specifically to SSA countries. Population under both models is significantly negative indicating that small countries receive more aid. Neumayer (2003) argued that the small population bias exists because donors might think that there would be a greater impact of aid allocation in small countries. The relationship between population and

the flow of aid to Sub-Saharan African (SSA) countries is a complex issue that has been the subject of various theories and perspectives. While there are differing viewpoints, market potential theory and human capital theory are the two theories that highlight the potential positive effects of population on aid flow: market potential theory suggests that a large population in SSA countries can create a significant market potential, which attracts more aid. The Human capital theory also suggests a positive relationship between population and aid flow in the sense that aid can be provided to support education, health care and thus making the recipient country more attractive for aid flows.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusion

This objective of this study is to assess how recipient nations' political instability affects the flow of official development assistance (ODA) to sub-Saharan Africa (SSA), while also demonstrating the trend of ODA flow to SSA. An extensive review of the literature on the distribution of assistance has shown that the political stability of the sub-Saharan African nations has a favorable impact on the distribution of ODA by the donors. This in turn demonstrates how political instability in SSA nations has a detrimental impact on the flow of official development assistance to SSA nations.

The paper hypothesizes that political stabilities have a positive and significant effect on aid allocation. This is supported by the panel regression-based evidence. Political stability shows a positive and significant effect on the allocation of aid to SSA countries. Also, of the six independent variables used to capture political, economic and socio-economic variables, four exerted a significant impact on aid allocation. Out of the significant variables, political stability also shows a positive and significant effect on the allocation of aid to SSA countries. The evidence suggests that aid and political stability are positively related at the five percent significance level, that political stability has a strong influence on the allocation of aid to SSA. These results help to clarify why so much aid has done so little good in SSA political stability? This is beyond the scope of this study and the effect of aid on political stability specifically in SSA countries is good candidates for future research.

While the insignificant negative coefficient of GDP/Capita and unemployment indicates that, the rise in GDP/Capita and unemployment rate with a declining aid flow. GDP/capita indicates the overall economic performance of SSA countries per person. It is often used as indicator of a countries standard of living and economic well- being. Thus, the result shows negative and insignificant effect of GDP/Capita on the allocation of aid. This implies that, the allocation of ODA would be lower towards high economic performance SSA Countries even if it is has no significant effect and the variation in ODA allocation to SSA cannot be explained by GDP/Capita alone. Unemployment is also an indicator for socio economic condition of aid receiving countries. At the same time the insignificance and negative sign of the socio-economic indicator condition on aid disbursement in the two models of the paper also triggers another question of Donors interest on the allocation of aid and implies donors' ignorance towards

recipients' need. However little empirical evidence is available in the literature to refute or back this claim so more careful research into the problem is needed further research is also needed to find out if Donor countries has an altruistic motive on the allocation of aid to SSA countries.

This analysis demonstrates that the distribution of official development aid is significantly and favorably impacted by trade openness, inflation, and the overall population of SSA countries. This implies that the allocation of aid to the region is influenced by the SSA countries' desire to trade, their economic instability as shown by the inflation index, and their population.

In a conclusion, it is believed that official development aid to SSA countries serves economic and political function. These two domains are inseparable and mutually dependent. The general belief is that stable countries receive more aid and this aid fosters development in the recipient country. However, SSA countries governments create dependency by viewing aid as continuous, permanent and reliable, and in the process neglecting proper planning in the event that aid is cut. Developed countries governments are also to blame; for while pretending to help SSA countries by the enormous flow of aid, they reinforce the idea that aid can be permanent. In such a scenario SSA countries will remain caught in the circle of dependency.

5.2. Recommendations

A policy recommendation of this paper is that the pursuit of political stability in SSA is not only a worthy objective in itself, but also because stability promotes growth and augments the growth-promoting power of aid which in a way that SSA counties reduces the dependency on aid. Monitoring and evaluation will help in assess how political stability contributes to the self-reliance of SSA region. There should be feedback that is given by the recipient countries on the efforts made in ensuring that their stability.

Development cooperation policies with aid donor's country should be implemented strictly in SSA countries. Sub- Saharan African countries including Ethiopia has development cooperation plans which to be achieved in some years, however strict policies are not still implemented on how countries should cooperate with donor's country.

Sub Saharan Africa is a resource rich continent and therefore should find ways of utilizing the available resources to inspire stability and economic growth. Sub Saharan Africa should invest in new technologies and improving the infrastructure; it is highly recommended for sub–

Saharan Africa to improve infrastructure, as this can lead to self-sustenance rather than waiting the huge amount of aid they receive due to this reason.

SSA nation's government should focus on local ownership of development process by local entrepreneurship and innovation. SSA countries government should give attention for domestic resource mobilization, investment and trade used as drivers of development and political stability of the countries.

The macroeconomic policy should gear towards stable and sustainable macroeconomic policy environment. This will also result in stimulating domestic saving and encouraging private investment by allocating the required finance. To maintain stable macroeconomic policy, the government should develop instruments of both prudent fiscal and monetary policy to control the level of instabilities in every aspect.

New policies and incentives can be put together to show progress on how aid to be converted into trade. SSA export should not be promoted to take an advantage of the development aid rather it should be in a way towards in a self-reliant economy and political stability.

Capabilities of the citizens of the continent need to be created so that they become creators of wealth and creators of enterprise; so that they can live from their own activities. Thorough and complete policy and decent economic and political management matter more than foreign aid for developing countries. Stable and strong institutions avoid aid from becoming a curse. There should be more assistance in improving governance before financial assistance because without a strong government, the financial assistance will not fulfill its desired goal

References

Aime, F., Meyer, C. J., & Humphrey, S. E. (2010). Legitimacy of team rewards: Analyzing Legitimacy as a condition for the effectiveness of team incentive designs. *Journal of Business Research*, *63*(1), 60-66.

Alesina, Alberto, and Beatrice.W.(2002). Do Corrupt Governments Recive Less Foreign Aid? *American Economic Review 92(4):1126-1137.*

Alesina, A., & Dollar, D. (2000). Who Gives Foreign Aid to Whom and Why? *Journal of Economic Growth*, *5*(1), 33–63. http://www.jstor.org/stable/40216022

Alesina, A. (1999). 10 Too Large and Too Small Governments. In *Economic policy and Equity* (p. 216). International Monetary Fund.

Asiedu, E. (2006). "Foreign direct investment in Africa: The role of natural resources, market size, government policy, institutions and political instability." The World Economy, Volume. 29(1), PP: 63-77.

Azam, J.P., & Laffont, J.J. (2003). Contracting for Aid. *Journal of Development Economics Volume* 70(1): PP 25-58.

Arellano,C., Ales. B., Timothy. L., & Leslie. L. (2009). The Dynamic Implication of Foreign Aid and Variability. *Journal of Development Economics* Volum 88 Issue 1, 87-102.

Bacha, E. L. (1990). A three-gap model of foreign transfers and the GDP growth rate in Developing countries. *Journal of Development economics*, *32*(2), 279-296.

Baltagi, B. H., & Kao, C. (2001). Nonstationary panels, cointegration in panels and dynamic Panels: A survey. In *Nonstationary panels, panel cointegration, and dynamic Panels* (Vol. 15, pp. 7-51). Emerald Group Publishing Limited.

Barro, R. J. (1991). Economic growth in a cross section of countries. *The quarterly journal of Economics*, *106*(2), 407-443.

Bermeo, S. (2017). Aid Allocation and Targeted Development in an Increasingly Connected World. International Organization Volume 71(4), 735-766. DOI: 10.1017/S0020818317000315.

Betzold, C., & Weiler, F. (2018). *Development aid and adaptation to climate change in developing countries*. Springer.

Berthélemy, J. C. (2006). Bilateral donors' interest vs. recipients' development motives in aid Allocation: do all donors behave the same?. *Review of Development Economics*, *10*(2), 179-194.

Blanton, S. L., & Blanton, R. G. (2007). What attracts foreign investors? An examination of

Human rights and foreign direct investment. *The Journal of Politics*, *69*(1), 143-155.

Boutton A, Carter DB (2012) Terrorism and foreign aid allocation. Working Paper. http://www.princeton.edu/d̃bcarter/David_B._Carter/Research_files/aid_terror20.pdf

Brautigam, D., and Knack, S. (2004). Foreign Aid, Institutions, and Governance in Sub-Saharan Africa Economic Development and Cultural Change, 52, 255-285. http://dx.doi.org/10.1086/380592

Brautigam. D. (2000). Aid Dependence and Governance.

Bruce B. de M. and Alastair S. (2009). A Political Economy of Aid. International Organization Volume 63 Issue2, PP: 309-3 DOl: https://doi.org/10.1017/S0020818309090109

Bulir.A., & Hamann. A. (2007). Volatility of Development Aid. An Update IMF Econ Rev 54 727-739. https://doi.org/10.1057/palgrave.imfsp.9450023

Burnside, C. Dollar, D. (2004). Aid, Policies, and Growth: Revisiting the Evidence. Policy Research Working Paper No. 3251. http://hdl.handle.net/10986/14784.

Cardoso, F. H., & Faletto, E. (1979). *Dependency and development in Latin America*. University of California Press.

Carlsson, J., Van de Walle, N., Somolekae, G., & Van de Walle, N. (Eds.). (1997). *Foreign Aid In Africa: Learning from country experiences*. Nordic Africa Institute.

Chao, J. (2015). How Does Foreign Aid affect Political Stability. *University of California, Berkeley. Unpublished thesis*.

Chong, A., & Gradstein, M. (2011). Is the world flat? Country-and firm-level determinants of law compliance. *The Journal of Law, Economics, & Organization*, *27*(2), 272-300.

Claessens, S. (2009). *The financial crisis and financial nationalism*. May.

Clist.P.(2011). 25 Years of Aid Allocation Practice: Whither Selectivity? World Development Volume 39(10), PP: 1724-1734.

Carey, S. C. (2007). European aid: human rights versus bureaucratic inertia? *Journal of Peace Research*, *44*(4), 447-464.

Deborah.A.B. & Stephen. K. (2004). Foreign Aid, Institutions and Governance in Sub Saharan Africa . Economic Development and Cultural Change Volume 52N

Dollar, D. & Levin, V., (2006). The Increasing Selectivity of Foreign Aid, 1984-2003. World Development Volume. 34(12), PP: 2034-2046.

Dowling, J. M., & Hiemenz, U. (1985). Biases in the allocation of foreign aid: some new evidence. *World Development*, *13*(4), 535-541.

Dreher, A., & Fuchs, A. (2015). Rogue aid? An empirical analysis of China's aid Allocation. *Canadian Journal of Economics/Revue canadienne d'économique*, *48*(3) 988-1023.

Easterly.W. (2003). Can Foreign Aid Buy Growth? *Journal of Economic Perspectives*, 17 (3): 23-48.DOI: 10.1257/089533003769204344

Easterly. W. (2006). Reliving the 1950s: The Big Push, Poverty Traps, & Takeoffs In Economic Development. *Journal of Economic Growth Volume* 11 Issue 4, 289-318.

Fielding, D. (1997). Modelling the determinants of government expenditure in sub-Saharan Africa. *Journal of African Economies*, *6*(3), 377-390.

Gallagher, M. (1994). Government spending in Africa: a retrospective of the 1980s. *Journal of African Economies*, *3*(1), 62-92.

Greene, W. (2003). Econometric Analysis, Prentice Hall, Upper Saddle River.

Gounder, R. (1994). Australia's Aid Motives to Near Neighbours: Southeast Asia and the South Pacific. ASEAN Economic Bulletin, 316-328.

Gujarati, N., & Porter, C. (2009). *Basic econometrics*. New-York: McGraw-Hill.

Hoeffler, A., & Outram, V. (2008). Need, merit or self-interest – what determines the allocation?

Of aid? (Author's Original).

Hoffler, A..,and Outram,V. (2011). Need, Merit or self – interest – what Determines the Allocation Of Aid? Review of Development Economics Volume 15, Issue 2, PP: 237-

250

Isenman, P. (1976). Biases in aid allocations against poorer and larger countries. *World Development* 4(8), PP: 631-641.

Kersting, E. K., & Kilby, C. (2016). With a little help from my friends: Global electioneering and World Bank lending. *Journal of Development Economics*, *121*, 153-165.

Killick.T., and Mick.F. (2007). the Macroeconomics of Doubling Aid to Africa and the Centrality of the Supply Side. Development Policy Review Volume 25, Issue 2, PP: 167-192.

Krugman, P. (1991). Increasing returns and economic geography. *Journal of political Economy*, *99*(3), 483-499.

Lumsdaine, D. H. (1993). *Moral vision in international politics: the foreign aid regime, 1949-1989*. Princeton University Press.

Lundsgaarde, E., Breunig, C., & Prakash, A. (2010). Instrumental philanthropy: Trade and the Allocation of foreign aid. *Canadian Journal of Political Science/Revue canadienne de*

Science politique, *43*(3), 733-761.

Mahjabeen. M.(2015). Does Political Instability In Developing Countries Attract More Foreign

Aid? *International Journal of Economics and Finance* Volume 8 no 1 URL: http://dx.doi.org/10.5539/ijef.v7n12p208

Maizels, A., & Nissanke, M. K. (1984). Motivations for aid to developing countries. *World Development*, *12*(9), 879-900.

McGillivray,M. and Feeny,S.(2008). Aid and Growth In Fragile State.

McGillivray, M., & White, H. (1993). Explanatory studies of aid allocation among developing Countries: A critical survey. *ISS Working Paper Series/General Series*, *148*, 1-86.

Menard.A.R., and Weill.L.(2016). Understanding the Link between Aid and Corruption: A Causality Analysis. Economic Systems Volume 40Issue 2, PP: 260-272. https://doi.org/10.1016/j.ecosys.2016.01.001

Miller, D. C. (2014). Explaining global patterns of international aid for linked biodiversity conservation and development. *World Development*, *59*, 341-359.

Murphy, K. M., Shleifer, A., & Vishny, R. (1989). Income distribution, market size, and Industrialization. *The Quarterly Journal of Economics*, *104*(3), 537-564.

Matsuyama, K. (1992). Agricultural productivity, comparative advantage, and economic Growth. *Journal of economic theory*, *58*(2), 317-334.

Morrison.K.(2007) Natural Resources, Aid and democratization: A Best Case Scenario. Journal of Economics Volume 131 PP: 365-386

Moss, T. J., Pettersson Gelander, G., & Van de Walle, N. (2006). An aid-institutions paradox? A Review essay on aid dependency and state building in sub-Saharan Africa. *Center For Global Development working paper*, (74), 11-05

Nielsen, R. A., Findley, M. G., Davis, Z. S., Candland, T., & Nielson, D. L. (2011). Foreign aid shocks as a cause of violent armed conflict. *American Journal of Political Science*, *55*(2), 219-232.

Nyoni, T., & Bonga, W. G. (2016). An empirical investigation of factors affecting construction Sector labor productivity in Zimbabwe. *International Journal of Business and Management Invention (IJBMI)*, *5*(8), 68-79.

Radelet, S. (2006). A Primer on Foreign Aid. Center for Global Development Working Paper No.92.SSRN: https://ssrn.com/abstract=983122. http://dx.doi.org/10.2139/ssrn.983122.

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of political economy*, *94*(5), 1002-1037.

Rosenstein-Rodan, P. N. (1943). Problems of industrialisation of eastern and south-eastern Europe. *The economic journal*, *53*(210-211), 202-211.

Sahn, D. E. (1992). Public expenditures in sub-Saharan Africa during a period of economic

Reforms. *World Development*, *20*(5), 673-693.

Sharma, S. (1997). Changing pattern of external resource flows. *Social Scientist*, 48-63.

Schudel, C. J. W. (2008). Corruption and bilateral aid: A dyadic approach. *Journal of Conflict Resolution*, *52*(4), 507-526.

Szent-Iványi, B. (2012). Aid allocation of the emerging Central and Eastern European donors. *Journal of international relations and development*, *15*, 65-89.

Tada, H., Okada, H., Yoshida, S., Shimojima, M., Nomura, A., Tsuda, T., ... & Kawashiri, M. A.

(2020). Hokuriku-plus familial hypercholesterolaemia registry study: rationale and Study design. *BMJ open*, *10*(9), e038623.

Trumbull, W. N., & Wall, H. J. (1994). Estimating aid-allocation criteria with panel data. *The Economic Journal*, *104*(425), 876-882.

Venieris, Y. P., & Gupta, D. K. (1986). Income distribution and sociopolitical instability as Determinants of savings: a cross-sectional model. *Journal of Political Economy*, *94*(4),

873-883.

Vreeland.J & Drehar. A (2014). The Political Economy Of United Nations Security Council Money and Influence. DO - 10.1017/CBO9781139027755.

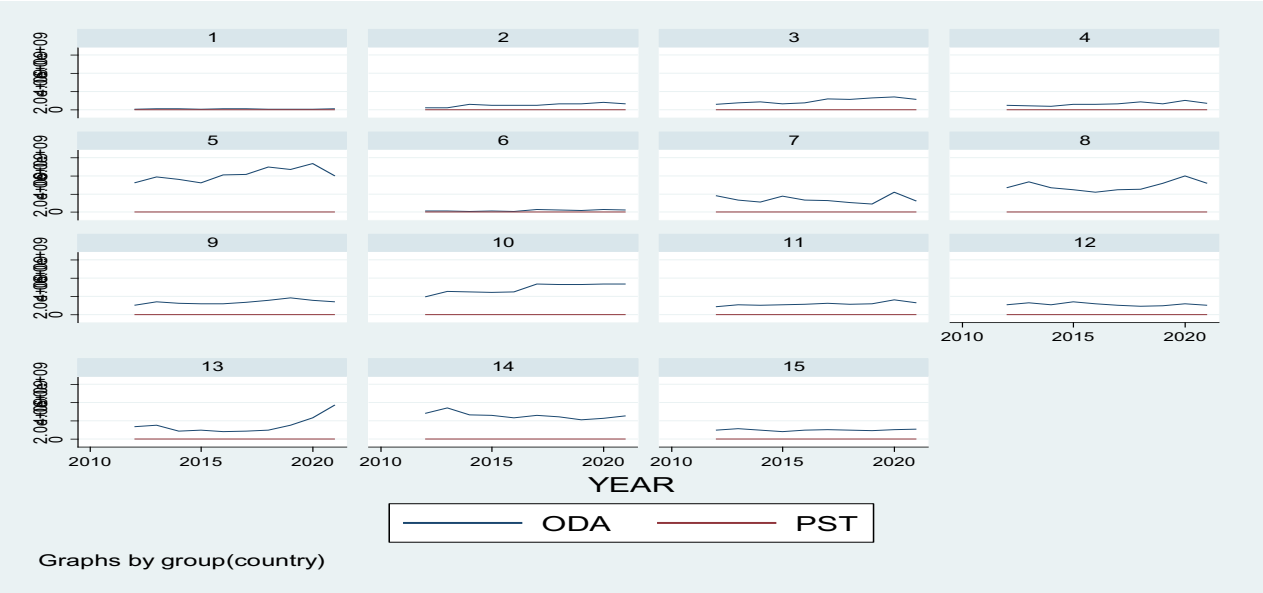
Wagner, D. (2003). Aid and trade an empirical study. *Journal of the Japanese and international Economies*, *17*(2), 153-173.

Younas, J. (2008). Motivation for bilateral aid allocation: Altruism or trade benefits. *European Journal of political economy*, *24*(3), 661-674.

Zanger, S. C. (2000). Good governance and European aid: the impact of political Conditionality. *European Union Politics*, *1*(3), 293-317.

Appendices

Appendix 1: trends of ODA and political stability



Appendix 2.

```
. xtreg lnoda pstse lngpc inf top lntpop uemp, fe

Fixed-effects (within) regression               Number of obs      =       150
Group variable: country1                        Number of groups   =        15

R-sq:  within  = 0.3742                         Obs per group: min =        10
       between = 0.8374                                        avg =      10.0
       overall = 0.8019                                        max =        10

                                                F(6,129)           =     12.86
corr(u_i, Xb)  = -0.9106                        Prob > F           =    0.0000

------------------------------------------------------------------------------
       lnoda |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       pstse |    2.097189   1.582217     1.33   0.187    -1.033267    5.227645
       lngpc |   -.027808   .1438819    -0.19   0.847    -.3124817    .2568658
         inf |    .0030278   .0006904     4.39   0.000     .0016619    .0043937
         top |    .0075508   .0025004     3.02   0.003     .0026038    .0124979
      lntpop |    1.561242   .3147012     4.96   0.000     .9385977    2.183886
        uemp |   -.0066702   .0197994    -0.34   0.737    -.0458437    .0325034
       _cons |   -6.294567   5.109897    -1.23   0.220    -16.40462     3.81549
-------------+----------------------------------------------------------------
     sigma_u |  1.0387655
     sigma_e |  .22478431
         rho |  .95526762   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(14, 129) =    22.94                 Prob > F = 0.0000
```

Appendix 3

```
Random-effects GLS regression                   Number of obs      =       150
Group variable: country1                        Number of groups   =        15

R-sq:  within  = 0.3457                         Obs per group: min =        10
       between = 0.8782                                        avg =      10.0
       overall = 0.8438                                        max =        10

Random effects u_i ~ Gaussian                   Wald chi2(6)       =    140.96
corr(u_i, X)       = 0 (assumed)                Prob > chi2        =    0.0000
```

lnoda	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pstse	4.080197	1.397657	2.92	0.004	1.340839	6.819555
lngpc	-.0840833	.1107469	-0.76	0.448	-.3011432	.1329766
inf	.003267	.0006836	4.78	0.000	.0019271	.0046068
top	.0045862	.0022421	2.05	0.041	.0001918	.0089805
lntpop	.8451746	.093148	9.07	0.000	.6626078	1.027741
uemp	-.0173793	.0144414	-1.20	0.229	-.0456839	.0109253
_cons	6.04944	1.727525	3.50	0.000	2.663553	9.435327
sigma_u	.42148806					
sigma_e	.22478431					
rho	.77856101	(fraction of variance due to u_i)				

Appendix 4

	Coefficients (b) fe	Coefficients (B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
pstse	2.097189	4.080197	-1.983008	.7415968
lngpc	-.027808	-.0840833	.0562753	.0918538
inf	.0030278	.003267	-.0002392	.0000964
top	.0075508	.0045862	.0029647	.0011068
lntpop	1.561242	.8451746	.7160671	.3005999
uemp	-.0066702	-.0173793	.0107091	.0135448

```
                b = consistent under Ho and Ha; obtained from xtreg
     B = inconsistent under Ha, efficient under Ho; obtained from xtreg

  Test:  Ho:  difference in coefficients not systematic

              chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                      =        8.33
            Prob>chi2 =      0.2148
            (V_b-V_B is not positive definite)
```

Appendix 5

Variable	RE	Mundlak
pstse	4.080	3.570
	1.398	1.472
	2.92	2.43
	0.0035	0.0153
lngpc	-0.084	0.029
	0.111	0.144
	-0.76	0.20
	0.4477	0.8403
inf	0.003	0.003
	0.001	0.001
	4.78	4.74
	0.0000	0.0000
top	0.005	0.006
	0.002	0.002
	2.05	2.45
	0.0408	0.0145
lntpop	0.845	0.923
	0.093	0.155
	9.07	5.97
	0.0000	0.0000
uemp	-0.017	-0.007
	0.014	0.020
	-1.20	-0.37
	0.2288	0.7137
mean__pstse		43.382
		42.289
		1.03
		0.3050
mean__lngpc		0.060
		0.387
		0.15
		0.8775
mean__inf		-0.006
		0.008
		-0.69
		0.4912
mean__top		-0.005
		0.009
		-0.60
		0.5502
mean__uemp		-0.018
		0.037
		-0.48
		0.6284
_cons	6.049	-5.916
	1.728	13.579
	3.50	-0.44
	0.0005	0.6631
N	150	150
N_g	15.000	15.000
g_min	10.000	10.000
g_avg	10.000	10.000
g_max	10.000	10.000
rho	0.779	0.779
rmse	0.227	0.228
chi2	140.961	142.891
p	0.000	0.000
df_m	6.000	11.000
sigma	0.478	0.478
sigma_u	0.421	0.421
sigma_e	0.225	0.225
r2_w	0.346	0.357
r2_o	0.844	0.859
r2_b	0.878	0.894

legend: b/se/t/p

.

Appendix 6

```
pwcorr lnoda pstse lngpc inf top tpop  uemp
```

	lnoda	pstse	lngpc	inf	top	tpop	uemp
lnoda	1.0000						
pstse	-0.0667	1.0000					
lngpc	-0.1653	-0.2483	1.0000				
inf	0.1713	0.1064	0.0657	1.0000			
top	-0.5545	-0.0588	0.1121	-0.3237	1.0000		
tpop	0.6138	-0.1535	0.0396	0.0764	-0.4854	1.0000	
uemp	-0.3483	-0.0292	0.6901	0.2182	0.0759	-0.1276	1.0000

Appendix 7

```
Levin-Lin-Chu unit-root test for lnoda
------------------------------------------------------------------------------
Ho: Panels contain unit roots                   Number of panels  =     15
Ha: Panels are stationary                       Number of periods =     10

AR parameter: Common                            Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t         -8.7122
 Adjusted t*          -5.9173        0.0000
------------------------------------------------------------------------------
```

Appendix 8

```
Levin-Lin-Chu unit-root test for pstse
------------------------------------------------------------------------------
Ho: Panels contain unit roots                   Number of panels  =     15
Ha: Panels are stationary                       Number of periods =     10

AR parameter: Common                            Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t        -34.2499
 Adjusted t*         -30.5567        0.0000
------------------------------------------------------------------------------
```

Appendix 9

```
Levin-Lin-Chu unit-root test for lngpc
------------------------------------------------------------------------------
Ho: Panels contain unit roots                   Number of panels  =     15
Ha: Panels are stationary                       Number of periods =     10

AR parameter: Common                            Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t         -8.3793
 Adjusted t*          -3.5383        0.0002
------------------------------------------------------------------------------
```

Appendix 10

```
Levin-Lin-Chu unit-root test for inf
------------------------------------
Ho: Panels contain unit roots               Number of panels  =     15
Ha: Panels are stationary                   Number of periods =     10

AR parameter: Common                        Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t       -11.2098
 Adjusted t*         -5.1576        0.0000
------------------------------------------------------------------------------
```

.

Appendix 11

```
Levin-Lin-Chu unit-root test for top
------------------------------------
Ho: Panels contain unit roots               Number of panels  =     15
Ha: Panels are stationary                   Number of periods =     10

AR parameter: Common                        Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t       -18.9151
 Adjusted t*        -16.0427        0.0000
------------------------------------------------------------------------------
```

.

| *Appendix 12*

```
Levin-Lin-Chu unit-root test for lntpop
---------------------------------------
Ho: Panels contain unit roots               Number of panels  =     15
Ha: Panels are stationary                   Number of periods =     10

AR parameter: Common                        Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t        -5.6616
 Adjusted t*         -3.8847        0.0001
------------------------------------------------------------------------------
```

Appendix 13

```
Levin-Lin-Chu unit-root test for uemp
-------------------------------------

Ho: Panels contain unit roots               Number of panels  =     15
Ha: Panels are stationary                   Number of periods =     10

AR parameter: Common                        Asymptotics: N/T -> 0
Panel means:  Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 Unadjusted t         -9.5602
 Adjusted t*          -5.4651        0.0000
------------------------------------------------------------------------------
```

.