Appraising The Relationship Between Foreign Aid On Economic Growth In Nigeria

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ABSTRACT

This paper examines the impact of foreign aid on economic growth and poverty reduction in Nigeria, using the Autoregressive Distributed Lag (ARDL) technique for regression analysis. The study employs time series data from 1986 to 2020 to analyze the long-run and short-run relationship between foreign aid, economic growth in Nigeria. The study adopted the combined theories of economic growth of the Harrod-Domar Model, the Two-Gap Model and the Three-Gap Model in theoretical outlook. The data set is used to test the long-term relationship as well as the short-term relationship. The results show that foreign aid has a positive and significant impact on economic growth and poverty reduction in Nigeria in both the long-run and short run. The study concludes that foreign aid can be an effective tool for promoting economic growth and poverty reduction in Nigeria. The study recommended that in targeting aid towards infrastructure development, foreign aid can be used to fund infrastructure projects like building and upgrading roads, ports, and power plants to create jobs and increase economic activity. It also recommended investing in education and healthcare, foreign aid can be used to support education and healthcare initiatives, to improve the overall health and well-being of the population and increase productivity.

Keywords: *Economic-growth, Foreign aid, Poverty, Nigeria, Population, Three-Gap Model Two-Gap Model*

1.1 Background to the study

One of the major concerns of most economies, especially developing nations, in recent times is poverty issue. The World Bank defined poverty as the income level below which a certain percentage of the population is to live and described it as a person's inability to earn a daily income of less than $2, have access to safe drinking water; a situation of poor health services; high rates of illiteracy and infant mortality (World Bank, 2004). Poverty reduction, or alleviation, therefore, refers to a set of humanitarian and economic measures designed to permanently lift people out of poverty. Foreign aid or official Development assistance, referred

to as the international transfer of capital, goods, or services from a country or international organization for the benefit of the recipient country or its population (Encyclopedia Britannica, 2015) can come in form of economic, military, or emergency humanitarian like aid given as a result of natural disasters.

Aid in the form of official development assistance (ODA) is given basically not only to promote development but also to fight poverty. Developing countries, like Nigeria, desire foreign aid in form of support of investment projects, budget support, debt relief, technical assistance, grants, loans payable at lower interest rate over a longer period, aid or contributions from United Nation institutions, International Monetary Fund (IMF), World Bank (WB) or regional banks to assist them achieve sustainable development in terms of capital development, low mortality rate, sustainable economic growth and poverty reduction (Niyyonkuru, 2016).

Furthermore, Ogwumike (2001) grouped the strategies for poverty reduction in Nigeria into three eras – the pre–SAP era, the SAP era and the democratic era. In the pre-SAP era, the measures that were predominant were the Operation Feed the Nation, the River Basin Development Authorities, the Agricultural Development Programs, the Agricultural Credit Guarantee Scheme, the Rural Electrification Schemeand the Green Revolution. In the SAP era the following poverty reduction measures were introduced; the Directorate for Food, Roads and Rural Infrastructures, the National Directorate of Employment, the Better Life Program, the Peoples‘ Bank, the Community Banks, the Family Support Program and the Family Economic Advancement Program. The democratic era witnessed the introduction of the Poverty Alleviation Program (PAP)designed to provide employment to 200,000 people all over the country. It was also aimed at inculcating and improving better attitudes towards a maintenance culture in highways, urban and rural roads and public buildings. By 2001 PAP was phased out and fused into the newly created National Poverty Eradication Program (NAPEP) which was an integral part of the National Economic Empowerment and Development Strategy (NEEDS).

In the recent time, an attempt to empirically examine the impact of foreign aids on economic growth in Nigeria has generated a lot of arguments and conflicting results in the literature. However, it appears economic growth in Nigeria in recent times appears to be in conflict with the purpose of foreign aid flows. It is against this backdrop that this study aims to analyze the effects of foreign aid on the economic growth and poverty reduction in Nigeria, Hence the focal point of this study is to ascertain the nature of the relationship that exists between foreign aid, Economic Growth in Nigeria.

1.2 Statement of Problem

Boye (2019) consulted a Bound cointegration test and found out that foreign Aid has no impact on poverty reduction in Nigeria. Over the years, Nigeria experienced huge and significant inflows of foreign aid into the economy but still experienced high rates of poverty also high rate of illiteracy, a lack of access to basic needs of life and also lack of access to proper healthcare. One of the objectives of this paper is to study the relationship between foreign aid, poverty and economic growth and to conclude on the reasons why foreign aid has not increased or enhanced the standard of living in Nigeria. If there has been a sustainable increase in the past few years of foreign aid inflow into the country and still has not transformed into an increased standard of living then proper investigation needs to be carried out on why they been such a huge amount of foreign aid into the country but still experiencing poverty and decrease economic growth in the country. The major purpose is to mitigate poverty which, if not checked, exacerbates crime of various dimensions, encourages prostitution, increases frustration and leads to a loss of confidence in the country.

Research Questions

Based on the issues raised above, the following research questions have been generated to guide the study:

i. To what extent has the net bilateral aid flow affected poverty in Nigeria?

ii. What is the effect of net official development assistance and official aid on poverty in Nigeria?

Objective of the study

The broad objective of the study is to examine the impact of disaggregated government expenditure on poverty and inequality in Nigeria. The specific objectives are below;

i. To estimate the impact of net bilateral aid on poverty in Nigeria.

ii. To evaluate the effect of net official development assistance and official aid on Poverty in Nigeria.

Hypotheses of the study

The following hypotheses stated in the null form will be tested in the study;

$H0_1$ Net bilateral aid flows has no significant effect on poverty in Nigeria.

$H0_2$ Net official development assistance and official aid has no significant impact on Poverty in Nigeria.

1.6 Significance of the study

This research work has theoretical and practical Significance. The theoretical Significance is that the study will add to existing knowledge. Practically this study will contribute to the advancement of extended literature on the impact of foreign aid and technical assistance on Economic Growth in Nigeria, thus forming a verifiable source of reference for researchers. Again, it is also expected that the empirical result and recommendation of this work will be useful to policy makers as it will help in adopting the suitable foreign aid policies that will eradicate extreme poverty, and extreme hunger and enhance fast economic development in Nigeria, more so the entire population of Nigeria and Nigerian government will benefit immensely from this research work as it will expose them to the benefit and harmful effect of foreign aids and help Nigeria policy makers on how to make the right policies as to clear their impending debt, makes the right economic policy in determining the effectiveness of foreign aid in Nigeria and invest wisely to attained economic development independently.

Foreign Aid as a Concept

There are diverse definitions of foreign aid, and this has constituted problems in defining foreign aid because not all kinds of non-commercial international financial flows can be conceptually included as foreign aid. The term foreign aid is generally used in the sense of flow of resources from the rich countries to the poor underdeveloped countries At some point, 'all real resource transfer' from developed to underdeveloped or developing countries were included as foreign aid and this raised conceptual problems because it includes certain resource transfer which do not essentially qualify as foreign aid.

Some of the resource transfers that cannot be seen as foreign aids are as follows:

i. Preferential tariffs granted by the developed to the less developed countries amounts to "disguised" resource transfer, but it does not qualify as foreign aid

ii. The flow of foreign private investment based also on non-commercial considerations should not be classified as foreign aid.

The definitions below encompass the criteria we are looking for in a precise definition of foreign aid because it does not take into cognizance Preferential tariffs and Flow of foreign private investment as a tool for defining foreign aid discussed above. Therefore, a more general definition given by Ekiring (2000) conceptualizes foreign aid as an international transfer of capital, goods, or services for the benefit of other nations. Such aid, in her view, is offered in several forms: Capital transfers, in cash or kind, either as grants or loans, technical assistance and training, usually as grants in the form of human resources and technical equipment, and Military assistance in the form of either equipment or training advisors. Therefore, foreign aid includes direct government transfers as well as those promoted by special official action such as government guarantees.

Another definition is in the work of Bakare (2011) and he defined foreign aid as a means of increasing the capital available for investment and the economic growth needed to reduce poverty and raise living standards in sub-Saharan African. He further stressed that it can provide resources for industrialization, enhance efficiency of resource use, increase product diversity and generate employment, (OECD-DAC, 1999). The Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD) views foreign aids as official development assistance; consisting of grants or loans that one government (bilateral) or multilateral organization gives to a developing country to promote economic development and social welfare.

The definition of Official Development Assistance (ODA), as provided by the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD). ODA is calculated as the sum of grants and loans to aid recipients that:

a. Are undertaken by the official sector of the donor country.

b. Have as the main objective the promotion of economic development and welfare in recipient countries.

According to Todaro (1998), the generally accepted and used definition of foreign aid is one that encompasses all official grants and concessional loans, in currency or in kind, that are broadly aimed at transferring resources from developed to less developed nations on development and income redistribution grounds." It have also been defined by economists as all forms of grants and loans at concessional financial terms that are aimed at transferring resources from developed to developing countries on development, poverty and income distribution grounds as opined by (Todaro & Smith, 2011).

Also in the work of Riddell (2007) foreign aids involves all kinds of resources ranging from physical merchandise, skills and technical know-how, to financial grants including gifts, and loans which are given to recipients by donors at concessional rates. According to Mikesal (2011) foreign aid is defined as a transmission of real resources from one country to another that normally won't take place because of the operation of market forces or in absence of specific official action put in place to promote such transfer from the donor country.

Bilateral Aid

Bilateral aid are foreign assistance given directly by one country's government to that of another country's government. It occurs when money flows from a country with a developed economy to a country with a developing economy. Bilateral aid is directed by strategic, political, and humanitarian interests. This is meant to further foster democracy, economic growth, peace, and sustainability of long-term programs.

Humanitarian Aid or Emergency Aid

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

Official Development Assistance

Official development assistance (ODA) is defined as government aid that promotes and specifically targets the economic development and welfare of developing countries. Official Development Assistance (ODA) designates the funding provided by public entities in the most developed countries to improve living conditions in countries with low or intermediate income. Official Development Assistance is the largest form of foreign aid provided by donor governments to low- and middle-income countries like African. This is a type of aid that Nigerians have been receiving over the years.

2.2.2 Economic Growth as a Concept

Economic growth can be defined as the increase in the production possibility frontier (PPF) that results from an increase in the supply of resources and improvement in technology (Adekunle & Alokpa, 2018). To improve economic growth and living standards significantly, developing countries must produce much by initiating and maintaining long-run cumulative processes to build physical and human capital, acquire technology, and nurture institutions that facilitate growth, and the role of foreign aid, as broadly conceived, is to support these long-run cumulative processes (Tarp, 2009). Economic growth as a concept is relative and thus scholars have viewed it from different perspectives. Todaro and Smith (2003) see economic growth as increase in the capacity of an economy to produce goods and services compared from one period to another or a positive change in the level of production of goods and services by a country over a period of time also an increase in living standard, improvement in societal wellbeing.

Jhingan (2007) sees economic growth as the sustained increase in the country’s per capital output or income which is accompanied by the increase in the labour force, consumption, volume of trade. He describes determinants of growth as structural and technological changes. Kindle-Berger (1956) defines economic growth as more output without a change technical and institutional arrangement. This technical and institutional arrangement refers to the arrangement used to produce the increase output.

Okpe (2013) in problems and policies of development explain economic growth as the process whereby per capita income of a country consistently increase over a long period of time. Friedman perceives economic growth as an expansion in the system such as education, agriculture, transportation, institutions without a change in the structure of the social system; economic growth does not entail changes in the system’s structure but expansion. Economists over time have differentiated economic growth from economic development. They argue that economics differ from economic development. Jhingan (2007) puts forward that economic growth is related to sustained increase in the country’s per capita output or income accompanied by labour force, consumption, volume of trade etc. He sees economic development as related qualitative changes in economic activities. To Jhingan, development is concerned with quantitative changes. Roger (2000) explains that economic growth occurs when

there is an outward shift of the production possibility frontier of a nation denoting that there is an increase in the productive capacity of such a nation.

Schumpeter (1934) defines growth as a gradual and steady change in the long run which come about by a gradual increase in the rate of savings and population. In the same vein Marx (1932) contends that economic growth is a process of continuous transformation of a society's social, cultural and political life. By this, it implies that it is economic growth that raises the standard of living. When a nation grows economically, its citizens must be better off at least in some ways, usually in terms of material wellbeing.

Denison (1962) affirmed that economic growth is the increase of real GDP or GDP per capita, an increase of national product that is measured in constant prices. Economic growth is influences by direct factors like for example human resources (increasing the active population, investing in human capital), natural resources (land, underground resources), the increase in capital employed or technological advancements. Economic growth is also influenced by indirect factors such as institutions (financial institutions, private administrations etc.), the size of the aggregate demand, saving rates and investment rates, the efficiency of the financial system, budgetary and fiscal policies, migration of labour and capital and the efficiency of the government. There are four major determinants of economic growth: human resources, natural resources, capital formation and technology, but the importance that researchers had given each determinant was always different. Renowned economists provided, over time, the most basic ingredients which appear in modern theories of economic growth.

2.2.3 Theories of Economic Growth.

There are theories that explain the link between foreign aid and economic growth. Some of them are discussed below.

The Harrod-Domar Model

According to Easterly (1997), the most widely applied model by development economists and aid policy makers to determine the amounts of aid to be allocated to development countries is the Harrod-Domar model. This model is a product of an extension of the Keynesian analysis of the economic growth model by Harrod (1939; 1948) and a similar but independent study by Domar (1946). The main assumptions of the model are that there is an excess supply of labour in the economy, economic growth is constrained only by the availability and productivity of capital, and that the availability of capital (level of investment) is determined by the level of savings (McGillivray, 2006). Although it was not the original intention of the creators of the Harrod-Domar model, development economists used the Harrod-Domar relationship to estimate the savings and investment requirements for specific rates of economic growth (Clunies 2009).

For example, once the capital-output ration was estimated accurately, it would have been possible to predict the growth rate given the current savings rate. Equally well, the savings rate to achieve a targeted growth rate could be estimated. Given the fact that capital-output ratio ( ) was assumed to be constant, the main policy implication was that the higher the savings (investment ratio), the higher the growth rate (Hussain, 2001).

The implications for foreign aid allocation were that, if the savings rate is too low (which has been the case for most developing countries) given the preferred rate of economic growth, then there is a 'financing gap' which needs to be filled to achieve the desired rate of growth6. The total required investment was compared with available domestic savings to determine the investment gap and the level of foreign resources that will be required to fill the finance gap. Foreign aid could be used to ease the savings constraint, increase the level of

available investment, thereby boosting the rate of growth and ultimately poverty reduction (McGillivray 2006).

The model posits that the key to achieving economic growth is physical capital formation (savings/investment), hence, the incremental rate of output is equal to the savings rate divided by the incremental capital-output ratio. The formula is given by:

$$g = s/v$$

where "g" is the incremental rate of output, "s" is the savings rate and "v" is the incremental capital-output ratio. This implies that savings and growth are positively correlated, i.e. they move in the same direction. To further understand this, let us introduce the theory of production in its simplest form, given by the formula:

$$Y=f(K,L)$$

Where "Y" is output, "K" is capital, "L" is labour, and "f" denotes the function operator. The theory of production stipulates that output is a function of capital and labour. LDCs are highly labour intensive but are challenged by the lack of capital. The slow growth of capital is as a result of low savings capacity and high financial exclusion. It is therefore this lack of capital which constrains the growth of output. LDCs are unable meet the amount of savings required to match investment demand, they need to source for external assistance in the form of foreign aid to fill the savings-investment gap. Therefore, according to the harrod-domar model, the main objective of aid is to promote investment by augmenting savings. The new formula is given by:

$$g = (f+s)/v$$

where "f" is foreign aid. The extra savings, in the form of foreign aid, will enable a given economy to achieve a higher growth rate than what their domestic savings would have permitted. Overtime, because of their potentially high savings rate, as assumed by the Keynesian theory, that in LDCs, the marginal propensity to save is greater than the average propensity to save, domestic resources become sufficient, and the need for aid diminishes and eventually disappears (Panjak 2005). Aid would then have fulfilled the aim of transforming the LDC from an aid-led development to a self-sustaining development.

The Two-Gap Model

Most literature consulted for this study recognizes the fact that foreign aid inflow influence development through their effect on investment (Gomanee *et al*. 2002). As indicated by Bulio and Lane (2002), poor nations need adequate assets to fund development and imports capital products just as innovation. The Gap Model advanced by Chenery and Strout (1966) a very long time back is still being used in anticipating the macroeconomic effect of foreign aid. This model has two parts consequently it is likewise regularly alluded to as the Two-Gap Model. The principal segment is the relationship between investment and development, wherein the dimension of development is thought to be subject to the level of investment. The second segment is the relationship between savings, which is expected as a basic factor for investment development, and growth. With this model, experts can decide the fundamental dimension of investment to accomplish an ideal level of economic development. Gaps occur if the investment is below the ideal dimension and these gaps can be attributed as either a saving hole or as a foreign trade (or exchange) hole. In the event that a nation is unfit to fill this gap through imports, exports or production, foreign aid inflows are required with the goal that it can develop more quickly than its domestic assets would some way or another permit. Henceforth an inflow of foreign aid should move a nation's economy upwards.

The Three-Gap Model

One of the most brutal global financial crises to hit the world was that of the 1980s. The crisis of 1980s was offset by the decision of industrialised countries to deflate their economy, as a result, multiple African countries were forced below their PPC curve, leaving them in crippling debt. After this global experience, Bacha (1990) and Taylor 1994) extended the two-gap model to include a third gap called the fiscal gap. The fiscal gap occurs when government expenditure exceeds revenue, causing a budget deficit. LDCs do not have a developed tax system, as a result, generated revenue is inefficient to finance necessary expenditure on investment. According to Delessa (2012), in order to finance this budget deficit, the government may consider borrowing from either the private sector or the central bank. In the former case, low per capita income of the population makes it impossible for domestic savings to fill this gap, while in the latter case, the risk of nominal inflation keeps this option closed. This model therefore recommends foreign aid as a vital option in bridging the fiscal deficit gap.

Empirical Review

Azam et al. (2016) using data covering the period of 1990-2014 and Panel fully modified OLS (FMOLS) method, empirically analyzed the impact of foreign remittances along with some other variables such as foreign aid, debt, human capital, inflation and income on poverty alleviation in 39 countries including the lower middle, upper middle- and high-income countries. The estimates of FMOLS revealed that increase in income did lead to decrease in poverty. Foreign remittances had positive impact on poverty alleviation though statistically significant only for upper middle income countries. The result further revealed that impacts of foreign aid and debt on poverty were positive, indicating that both factors contribute positively to poverty expansion. The results also exhibited no visible evidence that foreign aid has an effective apparatus for poverty mitigation. Policy-makers should therefore devise an appropriate policy to rationalize dependency on foreign aid. Government should also encourage remittances inflows so as to mitigate poverty.

Boye (2019) examined the impact of foreign aid on poverty reduction in Ghana economy from 2008 to 2018. A Bounds Test for cointegration was also employed and the results showed a long-run relationship among the variables. The findings showed that foreign aid does not have an impact on poverty reduction. On the other hand, Fasanya and Onakoya (2012) using error correction model for the period 1970 to 2010 establish a positive and significant relationship between foreign aid and economic growth in Nigeria. Similarly, Zeshan (2014) examined the relative effectiveness of foreign aid. on economic growth in Pakistan using ordinary regression model and cointegration technique. The result shows that there is a positive long run relationship between foreign aid and economic growth in Pakistan but there exist no relationship in the short run.

Ugwuebe (2016) employ a time series approach to investigate the effect of external borrowing and foreign financial aid (ODA) on Nigeria's economic growth for a period of 1980-2013. OLS, among other econometric techniques were employed, and the authors find evidence that in the short run, exchange rate and foreign reserve exhibit positive and significant impact on economic growth in Nigeria, while total grants (ODA) revealed a positive and significant relationship. However, in the long run, external debt was positive and significant while ODA revealed a positive but insignificant result. The authors explain that aid exacts a positive impact on economic growth in Nigeria but is insignificant because aid funds are expended on consumption rather than investment.

In another study, Hossain (2014) studied the impact of foreign aid on the economic growth of Bangladesh for the period of 1980-2012. To investigate the specific impact of aid, eight distinct models that comprised of three for the last three decades (1980-1990, 1991-2001,

2002-2012), four for the four different government era namely, Military government (1982-1990), Bangladesh Awami League (BAL) government (1996-2001, 2009-2012), Bangladesh Nationalist Party (BNP) government (1991-1995, 2002-2006), and the Whole Democratic government phase (1991-2012) and one for the entire period (1980-2012) were evaluated. The results revealed that foreign aid had a positive impact on the economic growth of Bangladesh. However, it exerted a positive and significant impact on two models out of the eight models. Also, as a result of the capacity constraint of Bangladeshi institutions to use foreign aid efficiently, the result showed that aid breeds diminishing returns in Bangladesh.

In another related study, Ojiambo, Oduor, Mburu, and Wawire (2015) used the ARDL method to cointegration to evaluate the mixed impacts of aid on economic growth in a low-income country with diverse aid unpredictability periods and discovers that increased aid unpredictability reduces economic growth in Kenya. Besides, the unpredictability of aid was found to enhance economic growth in an unstable macroeconomic environment suggesting that unpredictability of aid compels weak governments to be more cautious in the management of inadequate uncertain resources at their disposal during episodes of macroeconomic instability. However, no evidence of the diverse effects of aid unpredictability during times of shocks was established.

Levy (1988) examines the relationship between foreign aid and economic growth in low-income countries of SSA using a panel of 28 SSA countries for a period of 1968-1982. The author reports two key findings; First, aid is significantly and positively correlated with investment and economic growth in Africa. Second, fixed capital formation contributed to the growth rate, implying a significant positive rate of return-on-investment projects in SSA.

Edrees (2015) analyzed the impact of government spending, economic growth, trade, foreign aid and foreign direct investment on poverty alleviation in Africa between 1974 and 2013. The result of the GMM estimation technique revealed that foreign direct investment, economic growth, trade and government spending on education and health are positively related to poverty reduction while foreign aid negatively contributed to the poverty reduction in Africa.

There are country studies, cross sectional studies, and panel studies on the same subject but with different findings. For country studies, Stella and Amassoma (2014) examine the foreign-aid growth relationship in Nigeria using ordinary least square and cointegration technique between the periods 1981 to 2012. They report negative and non-significant nexus between foreign aid to Nigeria and gross domestic product. The use of the VAR method by Bakare (2011) also reports the same result.

The long-run influence of foreign aid (ODA) on key macroeconomic in 36 sub-Saharan African countries was of interest to Katarina, Niels and Finn (2012) who applied the cointegrated VAR model. Their finding was generally positive same as Yakama's (2013) use of panel cointegration estimation technique established a long run relationship between aid and growth in West Africa. Specifically, there is a significant and positive effect on investment or real gross domestic product in 27 countries out of the 36 Sub Saharan Africa countries sampled in the study. In seven of the remaining countries, the effect of aid is positive but insignificant while there is significantly negative effect on only two countries – Comoros and Ghana.

Liewet (2012) applied the pooled ordinary least squares, random effect, and fixed effect models to examine the impact of foreign aid on economic growth in East African countries between 1985 and 2010. They found that a negative relationship existed between foreign aid and economic growth. Mbah and Amassoma (2014) used time series data spanning 1981-2012 to investigate the effect of foreign aid on the economic growth of Nigeria. The authors employed various econometric techniques including OLS, they find that export and investment are positively significant while imports and foreign aid are negative and insignificant. This

study concludes that the insignificant relationship between foreign aid and growth in Nigeria may be attributed to corruption and aid fungibility.

Bakare (2011) looks at the macroeconomic impact of foreign aid in Sub-Saharan African (SSA) countries using Nigeria as a case study. The author uses the Vector Autoregressive (VAR) Model to determine the sources of shock to growth in Nigeria and treats foreign aid as an endogenous variable. The findings of this study reveal a negative relationship between aid and output growth, implying that foreign aid tends to do more harm than good, when it concerns Nigeria's economic growth. The author also believes that aid fungibility plays an important role in the effect of foreign aid on the economic growth of SSA countries.

In another related study and utilizing the Vector Autoregression (VAR) model, Agbontaen and Iyoha (2012) examined the effect of foreign aid on economic growth in Nigeria from the standpoint of macroeconomic stability. The VAR model was estimated to pinpoint unexpected shocks in foreign aid and assess their impact on growth bearing in mind macroeconomic challenges in the country. These investigations allowed us to concentrate on investigating the limitations of macroeconomic stability that deters foreign aid from boosting economic growth.

Moreover, Ojiambo and Ocharo (2016) studied the nexus between foreign capital inflows and economic growth in Kenya making an allowance for volatility and the macroeconomic policy environment. The ARDL estimation method was employed for the study. The Granger causality methodology was used to investigate the direction of causality between the variables. The findings revealed a uni-directional causality between FDI and economic growth, foreign aid and labour and FDI and macroeconomic policy environment Furthermore, the results showed that aid had a positive and significant impact on economic growth when the macroeconomic policy environment is taken into account. Remittances were discovered to have a short-run negative impact on economic growth but a positive impact after one year. Also, a negative relationship was established between FDI and economic growth in Kenya perhaps as a result of its volatility and a small level of inflow.

Likewise, Tadesse (2011) employed the multivariate cointegration technique to investigate the impact of foreign aid on economic growth in Ethiopia using a time series data for the period 1970-2009. The findings revealed that foreign aid had a positive and significant impact on economic growth when it was entered alone. However, foreign aid exerted a negative and significant impact on economic growth when it was interacted with policy. The negative result was linked to the policy environment (macroeconomic and infrastructure) in the country that makes aid ineffective contrary to the norm. This implies the deleterious effect of bad policies in limiting the effectiveness of aid. The general impact of foreign aid on economic growth for the period studied was negative as a result of deficiency of good policies. However, the results revealed that the country had no problem of capacity constraint concerning foreign aid flow.

The lagged effects of foreign debt influenced economic growth and public investment positively after one year and negatively afterwards. Furthermore, the findings revealed that private investment influenced economic growth and public investment positively. A complementary association between private investment and public investment was established by the results. The macroeconomic policy environment in Kenya was discovered to be unstable for the study period hence influenced economic growth and public investment negatively. This was regardless of the macroeconomic policy reforms embarked on by the Government of Kenya and the endorsement of such reforms by the development partners. Ojiambo (2013) stated that "foreign aid flows to Kenya were found to be unpredictable and negatively affecting economic growth and public investment despite Kenya and her development partners having committed to working towards predictable foreign aid".

Methodology

Theoretical framework

This study will be based on two theories which are the big push theory developed by Rosenstein-Rodan in 1943 and the two gap model advanced by Chenery and Strout (1966). The big push theory states that investing in "bit by bit" or in piecemeal will not enable an economy to successfully be on the development path. Rather preferably a minimum amount of investment is necessary for enabling an economy to successfully be in the development and growth path. Therefore, any strategy of economic development that relies basically upon the philosophy of economic "gradualism" is bound to be frustrated. What is needed is a "big push" to undo the initial inertia of the stagnant economy. It is only then that a smooth journey of the economy towards higher levels of productivity and income can be ensured. Unless big initial momentum is imparted to the economy, it would fail to achieve a self- generating and cumulative growth.

The Two-Gap Models of development on the other side are contained in the Post-Keynesian growth models as designed by Harrod (1939) and Domar (1946). They tried to identify the preconditions for the economic growth of market economies. These two preconditions are essentially rooted in the Nigerian economy and these are (1)internally: inadequate savings would definitely have adverse effect on investment. The Gap between these two is called saving constraints (SAVING GAP). Closing this gap requires foreign aid flows. (2) Externally: inadequate foreign exchange arising from inability to export vis-à-vis high importation will lead to short fall in foreign exchange. The Gap between this duo is called foreign exchange constraints (TRADE GAP) which can be corrected by foreign aid. The two-gap model of growth has been adopted as a tool to bring the economy to bear on the path of growth and if possible liberate the economy. This foreign exchange gap states that foreign aid fills the gap of required import spending and actual export earnings. It is also assumed that both imports and exports are linearly dependent on income and there is a target rate of income. Even though the saving investment gap would be small, a larger trade gap would undermine productive investment due to limited imports of capital goods needed for investment. It is argued that either the trade gap or the foreign exchange gap is binding in developing countries and foreign aid helps to fill either of the gaps. These gaps will only be filled if incentives to invest are approving. The issue above will require a big push in the form of aids that will in turn jump start economic growth and initiates a virtual circle where by investment will generate income and thus raises the economic return to further investment to reduce poverty in the country.

3.2 Model Specification

This study institutes an econometric model to illustrate the relationship between foreign aid on economic growth and poverty reduction in Nigeria. In analyzing the relationship between the variables by incorporating the Autoregressive distributed lag (ARDL), the following are the linear specifications as adapted from, Okumoko, Omeje, and Udoh, (2018); James, (2021); Ifunanyachukwu, (2019) are shown .

NPISHs = f (NBI,NODA,TCG, GETC,FDI,GFCF,PR) …….. (3.1)

RGDP= f (NBI, NODA,TCG, GETC,FDI,GFCF,PR) ……. (3.2)

Specifying in econometric terms and taking logarithm where large variables are expected, avoiding the problem of extremely large variable coefficient, the model is re-specified as thus;

$LNPISHs = \alpha_0 + \alpha_1 NBI + \alpha_2 NODA + \alpha_3 LTCG + \alpha_4 LGETC + \alpha_5 LFDI + \alpha_6 LGFCF + \alpha_7 LPR + \mu_t$ ------- (3.3)

$LRGDP = \alpha_0 + \alpha_1 NBI + \alpha_2 NODA + \alpha_3 LTCG + \alpha_4 LGETC + \alpha_5 LFDI + \alpha_6 LGFCF + \alpha_7 LPR + \mu_t$----- (3.4) From the foregoing, the Autoregressive Distributed Lag form of the version of the estimated model study can be written as follows;

$D(LNPISHs)_t = \beta 0 + \gamma t + \alpha_0 LNPISHs_{t-1} + \alpha_1 NBI_{t-1} + \alpha_2 NODA_{t-1} + \alpha_3 LTCG_{t-1} + \alpha_4 LGETC_{t-1} + \alpha_5 LFDI_{t-1} + + \alpha_6 LGFCF_{t-1} + \alpha_7 LPR + \sum_{i=0}^{p} \pi i\, D(NBI)_{t-1} + \sum_{i=0}^{q} \pi i\, D(NODA)_{t-1} \sum_{i=0}^{r} \upsilon i\, D(LTCG)_{t-1} + \sum_{i=0}^{s} \tau i\, D(LGETC)_{t-1} + \sum_{i=0}^{u} \rho i\, D(LFDI)_{t-1} + \sum_{i=0}^{v} \rho i\, D(LGFCF)_{t-1} + \sum_{i=0}^{w} \rho i\, D(LPR)_{t-1} + \kappa t$……(3.5)

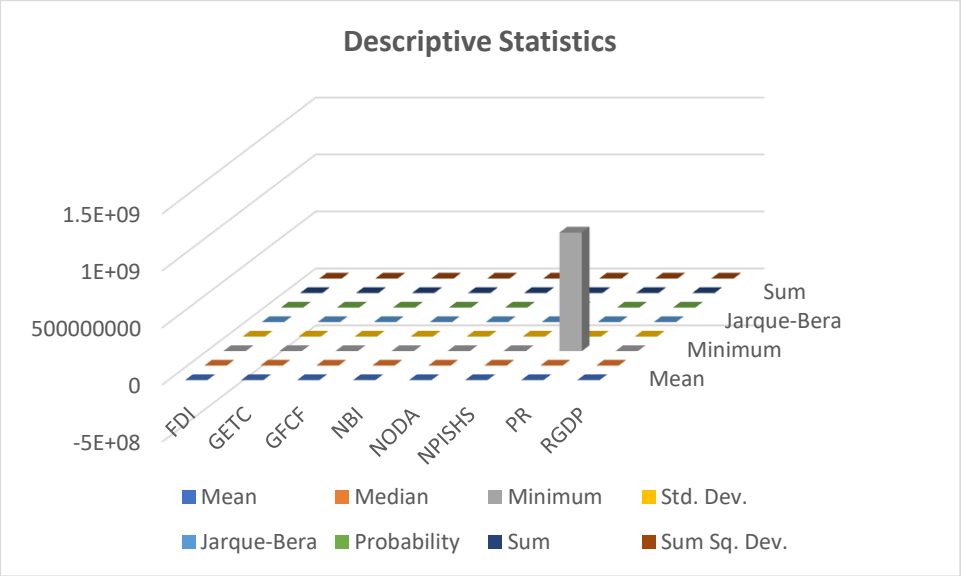
$D(LRGDP)_t = \beta 0 + \gamma t + \alpha_0 LNPISHs_{t-1} + \alpha_1 NBI_{t-1} + \alpha_2 NODA_{t-1} + \alpha_3 LTCG_{t-1} + \alpha_4 LGETC_{t-1} + \alpha_5 LFDI_{t-1} + \alpha_6 LGFCF_{t-1} + \alpha_7 LPR + \sum_{i=0}^{p} \pi i\, D(NBI)_{t-1} + \sum_{i=0}^{q} \pi i\, D(NODA)_{t-1} \sum_{i=0}^{r} \upsilon i\, D(LTCG)_{t-1} + \sum_{i=0}^{s} \tau i\, D(LGETC)_{t-1} + \sum_{i=0}^{u} \rho i\, D(LFDI)_{t-1} + \sum_{i=0}^{v} \rho i\, D(LGFCF)_{t-1} + \sum_{i=0}^{w} \rho i\, D(LPR)_{t-1} \kappa t$……(3.6)

The D is the first difference operator; t is the years 0; p, q, r, s,u,v and w are the maximum lag orders, and κt is the error term.

Descriptive Statistics

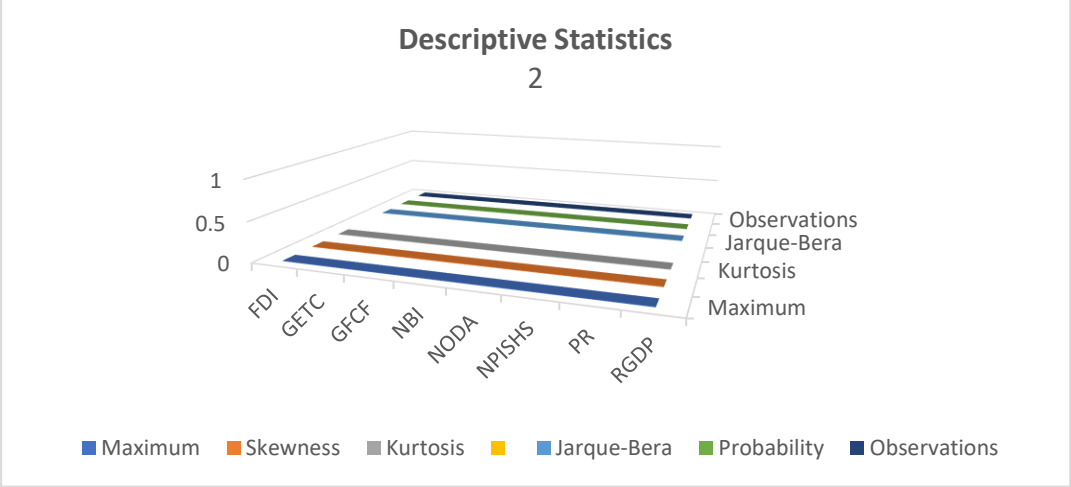
Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries of the variables and the measures. The descriptive statistics of the study are presented below;

Fig 1 Descriptive Statistics (a)



Source: *Author's computation from Eviews 10 output, (2022)*

Fig 2. **Descriptive Statistics** (b)



Source: *Author's computation from Eviews 10 output, (2022)*

Fig 1 & 2 when combined showed descriptive statistics of the variables used in this study. Foreign Direct Investment (FDI) ranged from 0.195183billion dollars to 5.790847billion dollars with an average of 1.659499billion dollars, in the period 1986 to 2020. The standard deviation of the country's Foreign Direct Investment expenditure was 1.251626. The coefficient of variation (standard deviation divided by mean) value was 0.75. The skewness value of 1.67, and kurtosis value of 5.72, indicated that foreign direct investment was skewed to the right and leptokurtic, respectively. The Jarque-Bera value of 27.1 was significant at the 5 percent level. This meant that foreign direct investment was normally distributed. Grants excluding technical co-operation (GETC) ranged from 8730000 to 1.14E+10 billion dollars with an average of 1.06E+09 billion dollars in the period under review. The skewness value of 3.78, and kurtosis value of 18.1 indicated that Grants excluding technical co-operation normally distributed and was skewed to the right with long-right tail and leptokurtic. The Jarque-Bera value of 416.1 was significant at the 5 percent level. This meant that Grants excluding technical co-operation was normally distributed.

Gross fixed capital formation (GFCF) ranged from 1.23E+10 to 1.16E+11 billion dollars with an average of 4.45E+10 billion dollars in the period under review. The skewness value of 0.88, and kurtosis value of 3.05 indicated that Gross fixed capital formation was normally distributed and was skewed to the right with long-right tail and mesokurtic. The Jarque-Bera value of 4.5 was not significant at the 5 percent level. This meant that Gross fixed capital formation was not normally distributed. Net bilateral aid flows (NBI) ranged from 1.10E+10 to 2182001 billion dollars with an average of 1.08E+09 billion dollars in the period under review. The skewness value of 3.73, and kurtosis value of 17.48 indicated that the net bilateral aid flows was normally distributed and was skewed to the right with long-right tail and leptokurtic. The Jarque-Bera value of 385.88 was significant at the 5 percent level. This meant that net bilateral aid flows was normally distributed.

Net official development assistance and official aid (NODA) ranged from 1.14E+10 to 5811999 billion dollars with an average of 1.60E+09 billion dollars in the period under review. The skewness value of 2.73, and kurtosis value of 11.89 indicated that the net official development assistance and official aid was normally distributed and was skewed to the right with long-right tail and mesokurtic. The Jarque-Bera value of 158.47 was significant at the 5 percent level. This meant that net official development assistance and official aid was normally

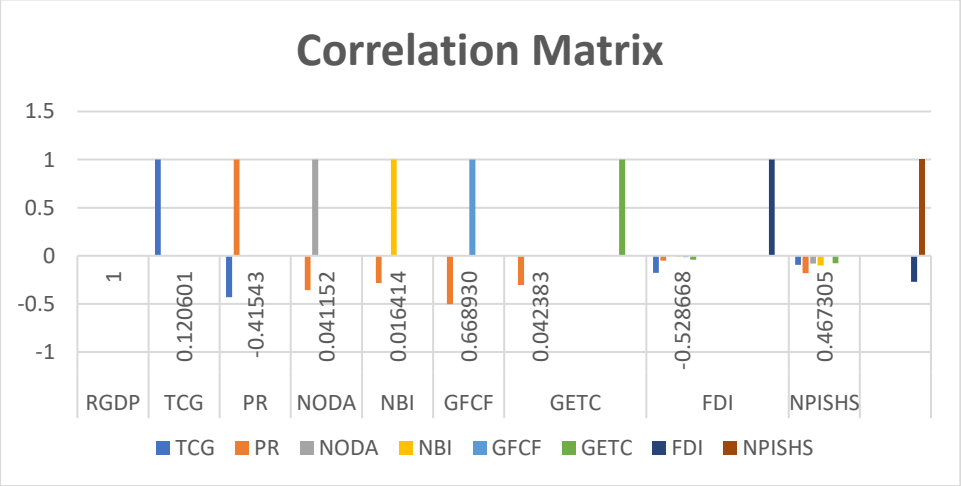
distributed. Household and final consumption per capita (PR) ranged from -18.17534 to 55.43416 billion naira with an average of 2,228936 billion naira in the period under review. The skewness value of 1.58, and kurtosis value of 6.31 indicated that the household and final consumption per capita was normally distributed and was skewed to the right with long-right tail and leptokurtic. The Jarque-Bera value of 30.55 was significant at the 5 percent level. This meant that Household and final consumption per capita was normally distributed.

Personal remittances (PR) ranged from 1.04E+09 to 547300.2 billion naira with an average of 94021021 billion naira in the period under review. The skewness value of 3.62, and kurtosis value of 15.39 indicated that the Personal remittances was normally distributed and was skewed to the right with long-right tail and leptokurtic. The Jarque-Bera value of 300.25 was significant at the 5 percent level. This meant that Personal remittances was normally distributed. Real gross domestic product (RGDP) ranged from -4.457078 to 12.45747 billion dollars with an average of 1.548636 billion dollars in the period under review. The skewness value of 0.50, and kurtosis value of 3.34 indicated that the real gross domestic product was normally distributed and was skewed to the right with long-right tail and leptokurtic. The Jarque-Bera value of 1.606523 was not significant at the 5 percent level. This meant that real gross domestic product was not normally distributed.

4.1.2 Correlation Analyses

Correlation Analysis is a statistical method that is used to establish if there is a relationship between two variables/datasets, and how strong that relationship may be. The Pearson Correlation analysis was used to ascertain the relationship between the variables and is shown in the table below.

Fig. 3 Correlation Matrix



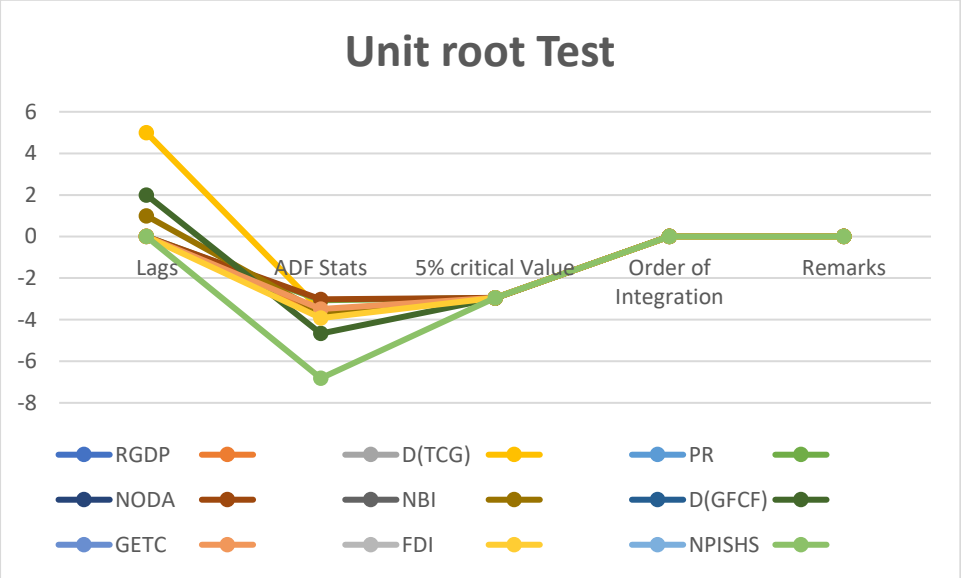
Source: *Author's computation from Eviews 10 output, (2022)*

Fig 3 provided Pearson's correlation matrix of the model. The results showed that the pairwise Pearson's correlation coefficients ranged from -0.01 to 0.90. This indicated that all the pairwise Pearson's correlation coefficients were less than 1. The implication is to expect an absence of multicollinearity among repressors' in the estimated regression model. This supports the assumption of no multicollinearity in the estimated poverty and inequality results.

4.1.3 Unit Root Test

A time series has stationarity if a shift in time does not cause a change in the shape of the distribution; unit roots are one cause for non-stationarity. In the study, the Augmented Dickey Fulley Test (ADF) was used to confirm the presence of unit root in the series. The results are shown below;

Fig. 4 Unit root Test



Source: *Author's computation from Eviews 10 output, (2022)*

Note: "D" denotes the first difference

Fig. 4 displayed the Augmented Dickey-Fuller (ADF) unit root test statistics of the variables at levels. All the variables had ADF test statistical values which are greater in absolute terms, than their corresponding critical values at the 5 percent level. Technical co-operation grants (TCG) and Gross fixed capital formation (GFCF) were stationary after first difference, while the remaining variables were stationary at levels.

4.2 Presentation and Discussion of Empirical Results

4.2.1 ARDL Model

In ARDL modeling, it is first imperative to determine the optimal lag and to find out whether co-integration exists using the bound test approach. In the determination of the optimal lag, the optimal lag length from an auxiliary VAR model was analyzed for this purpose. Bound testing as an extension of ARDL modeling uses F-statistics to test the significance of the lagged levels of the variables in a univariate error correction system when it is unclear if the data-generating process underlying a time series is a trend or first difference stationary. This test is carried out on ARDL estimates to prove that co-integrating relationship exists in the model or not.

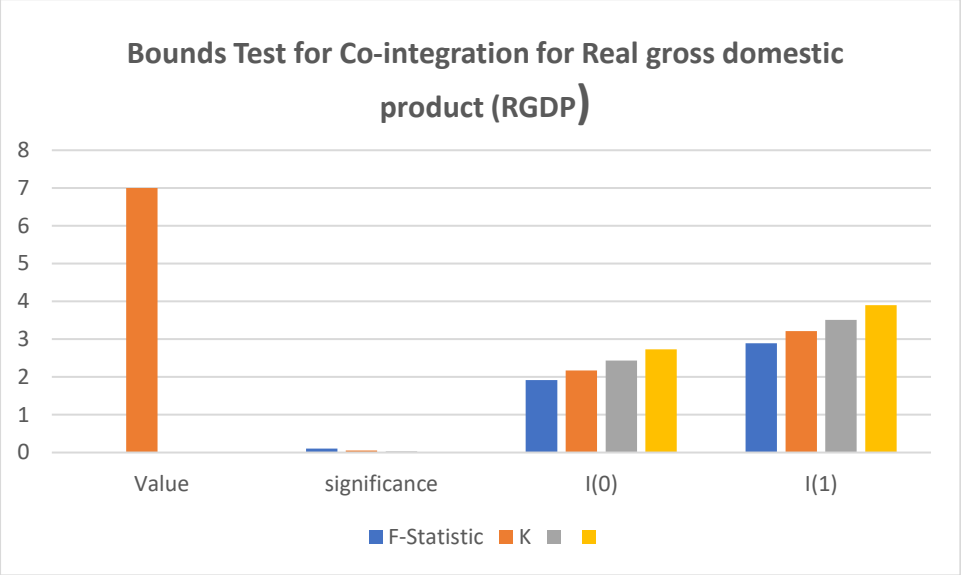
Table 4.2.2.2 Bounds Test for Co-integration for Real gross domestic product (RGDP)

F-Bounds Test		Null Hypothesis: No Level relationship		
Test Statistics	Value	significance	I(0)	I(1)
			Asymptotic: n=1000	
F-Statistic	4.221502	10%	1.92	2.89

K	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9

Source: *Author's computation using Eviews 10, (2022)*

Fig 5. **Bounds Test for Co-integration for Real gross domestic product (RGDP)**



Source: *Author's computation using Eviews 10, (2022)*

From table 4.2.2.2 and Fig 5 above, the F-statistics of 4.22 is higher than the critical values of 2.17 and 3.21 which represent the 5% significance level for the upper and lower bound respectively. Therefore, we reject the null hypothesis of no levels of co-integrating relationship, hence, there is a long-run relationship between the endogenous and the exogenous variables in the model.

4.2.3 Short Run Error Correction Model (ECM)

The standard method of obtaining the short-run dynamics of a model described by an error correction model is the use of the autoregressive lag (ARDL) model. To establish the long-run relationship between the dependent variable and the independent variables in the model. Having established the existence of co-integration based on the results of the bounds test, we proceed to estimate the error correction modeling (ECM). The significance of the ECM in the model is to indicate how disequilibrium in the dependent variable can be adjusted in the short-run. The results of the ECM model are presented in the table below:

Table 4.2.3.2 Short Run Error Correction Regression (ECM) for [D(RGDP)]
Case 2: Restricted Constant and No Trend (ARDL: 1,0,0,1,2,0,1,2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(RGDP(-1))	-0.181398	0.098837	-1.835335	0.0864
D(TCG)	3.76E-08	1.03E-08	3.649266	0.0024
D(TCG(-1))	1.14E-07	1.85E-08	6.176987	0.0000

D(NODA)	6.98E-09	2.34E-09	2.977625	0.0094
D(NODA(-1))	6.36E-09	2.59E-09	2.456409	0.0267
D(GFCF)	4.46E-10	6.47E-11	6.899347	0.0000
D(GFCF(-1))	-3.63E-10	5.67E-11	-6.405578	0.0000
D(GETC)	-1.43E-09	2.19E-09	-0.650537	0.5252
D(GETC(-1))	-7.23E-09	2.54E-09	-2.845031	0.0123
CointEq(-1)	-0.894481	0.117192	-7.632610	0.0000
R-squared	0.814305	Mean dependent var		0.138490
Adjusted R-squared	0.771452	S.D. dependent var		22.90840
S.E. of regression	10.95175	Akaike info criterion		7.810708
Sum squared resid	3118.463	Schwarz criterion		8.128149
Log likelihood	-121.8767	Hannan-Quinn criter.		7.917517
Durbin-Watson stat	2.066942			

Source: *Authors computation using Eviews 10, (2022)*

The estimated result of the model for the Real gross domestic product (RGDP) is presented in Table 4.2.3.2 ARDL (1,0,0.1,2, 0.1,2) process was modest and had a good fit. The coefficient of the error correction term (CointEq(-1)) was negative (-0.894481) and significant at the 1 percent level. This met with apriori expectations and indicated that about 89.5 percent of the deviations of the model from its equilibrium value in the previous period were corrected in the current period. The model, therefore, converges to its equilibrium value over time even though the speed of adjustment is not quite impressive. The R-squared value of 0.837826 showed that about 83.8 percent of the fluctuations in changes in the real gross domestic product (RGDP) were explained by the explanatory variables in the short-run equation. And the adjusted R-squared indicates that about 77.4 percent was explained when adjustment was made for the degree of freedom given by the adjusted R-square. The Durbin-Watson statistic value of 2.50 indicated that there was no threat of autocorrelation among the residual terms of the model.

The estimated coefficient of the one-year lag of the first difference of the real gross domestic product [D (RGDP)] level was negative and insignificant at the 5 percent level. The coefficient value of 0.18 showed that on average, a 1 unit change in the real gross domestic product (RGDP) in the previous year led to a 0.18 decrease in the real gross domestic product (RGDP) in the current year. This indicated a negative and insignificant correlation between previous and current levels of real gross domestic product (RGDP). The current level of inequality gap is therefore is influenced by its previous levels or period lags as shown in the result.

Moreover, Net official development assistance and official aid [D(NODA)] in the first difference had a positive estimated coefficient that was observed to be significant at the 1 percent level. The estimated value of 6.98E-09 showed that on average, a 1 unit increase in Net official development assistance and official aid [D(NODA)] led to a 6.98E-09 unit increase in the real gross domestic product (RGDP) during the period 1986 to 2020. This suggested that a significant and positive relationship was observed between Net official development assistance and official aid [D(NODA)] and the real gross domestic product (RGDP) in the period considered in accordance with the apriori expectation. However, Net official development assistance and official aid [D(NODA)] in the previous year, was observed to have also a positive estimated coefficient that was observed to be significant at the 5 percent level

in accordance with the apriori expectation. The estimated value of 6.36E-09 showed that on average, a 1 unit increase in Net official development assistance and official aid [D(NODA)] led to a 6.36E-09 unit increase in the real gross domestic product (RGDP) during the period under review.

The gross fixed capital formation [D(GFCF)] in its first difference had a positive estimated coefficient that was observed to be significant. The sign expectation of the variable was correctly held. The estimated value of 4.46E-10 indicated that holding all factors constant, a unit increase in population growth rate would translate to a 4.46E-10 unit increase in the real gross domestic product (RGDP) during the period. This showed that a significant and positive relationship was held between the gross fixed capital formation [D(GFCF)] and the real gross domestic product (RGDP) in Nigeria within the period. However, in the previous year, the gross fixed capital formation [D(GFCF)] was observed to have a negative impact on the real gross domestic product (RGDP) of the current year. It had a negative estimated coefficient of -3.63E-10 that was observed to be significant.

Lastly, Grants excluding technical cooperation [D(GETC)] had an estimated negative coefficient that was not significant at the 5 percent level. The coefficient value of -1.43E-09 showed that holding all other factors constant, a unit increase in Grants excluding technical cooperation [D(GETC)] would inform a -1.43E-09 unit decrease in the real gross domestic product (RGDP). It was also observed that Grants excluding technical cooperation [D(GETC)] in the previous year, had a negative estimated coefficient of -7.23E-09 which was observed to be significant at a 5 percent level. -543e2wq a 1

4.2.4 Estimated Coefficient of the Long Run Model

Having analyzed the short-run dynamics of the Error Correction Model, we proceed to estimate the associated long-run model using the ARDL approach. The results are presented below.

Table 4.2.4.2 Long Run Model for Real Gross domestic Product [D(RGDP)]
Case 2: Restricted Constant and No Trend (ARDL: 1,0,0,1,2,0,1,2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TCG	4.46E-10	1.34E-10	3.317507	0.0047
PR	-3.63E-10	1.23E-10	-2.943540	0.0101
NODA	1.29E-08	5.50E-09	2.343265	0.0333
NBI	-6.28E-09	1.19E-08	-0.526619	0.6062
GFCF	-1.187141	0.428060	-2.773305	0.0142
GETC	1.28E-08	1.02E-08	1.257416	0.2278
FDI	-1.327185	0.693577	-1.913537	0.0750
C	4.609576	5.415505	0.851181	0.0481

Source: *Authors computation using Eviews 10, (2022)*

The estimated long run result of the model presented in Table 4.2.3.2. Technical co-operation grants (TCG) had a positively estimated coefficient that was significant at the 5 percent level. The estimated value of 4.46E-10 indicated that holding all factors constant, a unit increase in the Technical co-operation grants (TCG) would translate to a 4.5 unit decrease in the Real Gross domestic Product (RGDP) in the current year during the period. This showed

that a significant and negative relationship was held between Technical co-operation grants (TCG) in the previous year and the Real Gross domestic Product (RGDP) in the current year in Nigeria within the period.

Personal remittances (PR) had a positive coefficient and insignificant at the 5 percent level. The coefficient value of -3.62E-10 implied that ceteris paribus, a unit increase in Personal remittances (PR) led to a 3.62 unit increase in the current Real Gross domestic Product (RGDP). Therefore, an insignificant positive relationship existed between Personal remittances (PR) and the Real Gross domestic Product (RGDP) in Nigeria. The estimated coefficient of net official development assistance and official aid (NODA) had a positive and significant at the 5 percent level of significance. The estimated value of its coefficient implies a 1 unit increase in population growth rate would translate to a 1.29 unit increase in the Real Gross domestic Product (RGDP) of the current year. Overall, it meant that a positive and significant relationship was held between the net official development assistance and official aid (NODA) and the Real Gross domestic Product (RGDP) in Nigeria.

However, Grant excluding technical co-operation (GETC) had a positive coefficient insignificant at the 5 percent level. The coefficient value of 1.28 implied that ceteris paribus, a unit increase in Grant excluding technical co-operation (GETC) led to a 1.28 unit increase in the current poverty level. Therefore, a significant positive relationship existed between Grant excluding technical co-operation (GETC) and the Real Gross domestic Product (RGDP) in Nigeria. Foreign direct investment (FDI) had a negative estimated coefficient that was insignificant at the 5 percent level. The sign expectation of the variable was incorrectly held. The estimated value of -1.32 indicated that holding all factors constant, a unit increase in the Foreign direct investment (FDI) would translate to a 1.32 unit decrease in the Real Gross domestic Product (RGDP) in the current year during the period. This showed that a significant and negative relationship was held between Foreign direct investment (FDI) in the previous year and the Real Gross domestic Product (RGDP) in the current year in Nigeria within the period.

4.3 Post Diagnostic Test

Table 4.3.2 Post estimation Test for real gross domestic product (RGDP)

Test	F Stat	DF	Prob.
Breusch-Godfrey Serial Correlation LM Test	0.567240	(2,13)	0.6419
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.542716	(17,15)	0.8869
Ramsey RESET Test	0.530210	(1, 14)	0.4785

Source: *Authors computation using Eviews 10, (2022)*

Table 4.3.2 contained the diagnostic results of estimation with real gross domestic product (RGDP) as the dependent variable. The result showed that there was no threat of serial correlation in the estimated model since the Breusch-Godfrey Serial Correlation LM Test F-statistic value of 0.567240 was not significant. There was also no heteroskedasticity problem in the estimated as Breusch-Pagan-Godfrey F-statistic value 0.542716 was not significant.

Furthermore, the estimated model was adequately specified judging from Ramsey's RESET F-statistic which was not significant in establishing the stability of the model. The error terms obtained from the model estimation were normally distributed. It follows, therefore, that

all the underlying assumptions of the regression analysis were not violated. Hence, the estimates from the model are reliable for decision-making.

4.4 Test for Hypotheses

The null hypotheses stated earlier in this study were evaluated in this section. The evaluations were based on the results obtained and presented above.

$H0_1$ Net bilateral aid flows has no significant effect on poverty in Nigeria.

The estimated results shows that the impact of Net bilateral aid flows was negative and significant at a 5 percent level in the long-run. The null hypothesis was therefore rejected the nul hypothesis in the long run, thus; Net bilateral aid flowshas a significant impact on poverty in the long run period in Nigeria.

$H0_2$ Net official development assistance and official aid has no significant impact on Poverty in Nigeria.

The estimated results shows that the impact of Net official development assistance and official aid was positive and significant at a 5 percent level in the long-run. The null hypothesis was therefore rejected against the alternative hypothesis in the long-run, thus; Net official development assistance and official aid has a significant impact on real gross domestic product in the long-run period in Nigeria.

4.5 Policy Implications

From the results of the Autoregressive distributed lag model (ARDL), the type of foreign aid that affects economic growth and poverty reduction in Nigeria is Net official development assistance and official aid. It may suggest that policymakers need to deliberately encourage Net official development assistance and official aid to boost economic activities and improve the welfare of the people, especially the poor ones as it would decrease the poverty level. This result could be important for policy recommendation because it could provide insight for the government on which foreign aid funds significantly eradicate poverty and boost economic growth in Nigeria.

Foreign aid can have a positive impact on economic growth and poverty reduction in Nigeria. Aid can provide funding for infrastructure projects, education and training programs, and other initiatives that can increase productivity and promote economic growth. Additionally, foreign aid can be used to support poverty reduction efforts by providing access to basic services such as healthcare and education, and by creating jobs and income-generating opportunities for the poor. However, it's important to note that foreign aid alone is not a solution and that there are potential negative impacts such as dependency on aid, corruption, and lack of aid effectiveness. It should be combined with effective domestic policies and good governance to achieve sustainable development.

5.3 Conclusion and Recommednation

Aid can be used to fund infrastructure projects and support small businesses, which can help to create jobs and stimulate economic activity. Additionally, foreign aid can be used to support education and healthcare initiatives, which can help to improve the overall health and well-being of the population and increase productivity. However, it's also important to note that the effectiveness of foreign aid in promoting economic growth and poverty reduction can be affected by a number of factors, such as the political and economic climate in the country and the efficiency and transparency of government institutions.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Targeting aid towards infrastructure development: Foreign aid can be used to fund infrastructure projects, such as building and upgrading roads, ports, and power plants, which can help to create jobs and increase economic activity.
2. Supporting small and medium-sized enterprises: Foreign aid can be used to provide financial and technical assistance to small and medium-sized enterprises, which can help to create jobs and promote economic growth.
3. Investing in education and healthcare: Foreign aid can be used to support education and healthcare initiatives, which can help to improve the overall health and well-being of the population and increase productivity.

Contribution to Knowledge

The purpose of this research work was to shed more light on how foreign aid impacts economic growth and poverty reduction in Nigeria, this study carefully analyzed variables like Net bilateral aid flows, net official development assistance and official aid, technical cooperation grants, grants excluding technical co-operation, foreign direct investment, personal remittances and gross fixed capital formation. This, has aided the research work to be more robust and highly adequate for policy relevance.

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