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Foreign Aid and Economic Growth: Empirical Evidence from Nigeria

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Abstract

This study explored the relationship between foreign aid and economic growth in Nigeria from 1984 to 2017. The Autoregressive Distributed Lag Bounds method to cointegration was employed for this study. The results revealed that foreign aid did not contribute to economic growth in Nigeria. Also, the macroeconomic policy environment did not contribute to economic growth in both the short-run and long-run. Furthermore, the results revealed that the impact of foreign aid on economic growth in Nigeria was contingent on the quality of the macroeconomic policy environment. Hence, the claim that the effectiveness of aid is dependent on the q policy environment was valid for Nigeria. The study, therefore, recommends that the policymakers of the government should put in place a sound macroeconomic policy environment that is stable to stimulate domestic saving and ensure the effective utilization of foreign aid. Besides, there is a need for the diversification of the economy through viable alternatives such as agriculture, industrialization and trade to lessen heavy reliance on foreign aid as a major means of stimulating economic growth. Furthermore, the Economic and Financial Crimes Commission and Independent Corrupt Practices and other Related Offences Commission, established to fight corruption should be effective in their job and convince development partners and other aid donors that it is no longer business as usual for those that divert public resources including foreign aid funds for personal gains and the government should provide incentives to private investors and good enabling environment for the thriving of private businesses.

Keywords: Foreign aid, Economic growth, Cointegration, ARDL, Macroeconomic policy environment, Developing countries, Nigeria.
JEL Classification: E2; E62; O11; O40.

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Ethical: This study follows all ethical practices during writing.

Contents

Contribution of this paper to the literature:
This study revealed that the effectiveness of foreign aid on economic growth in Nigeria was contingent on the quality of macroeconomic policy environment. Furthermore, it shows that a policy environment that is good is a sine qua non for aid effectiveness.

1. Introduction

Foreign aid or Official Development Assistance (ODA) is believed to be a critical foreign capital for the acceleration of economic growth and development. Ramesh (1998) stated that foreign aid is principally a creation of the era of post-World War II. It originated from the Marshall Plan that served as a platform for post-war reconstruction of Europe through an inflow of financial capital. Evidence from early literature revealed that foreign aid is a propelling force for economic growth through physical capital accumulation in recipient countries (Trinh, 2014). Furthermore, to confirm this, Collodel (2011) stated that "the provision of foreign aid inflows acts as a catalyst to stimulate economic growth and development in recipient countries" (p.4). Foreign aid helps in reducing the saving-investment gap and export-import gap (Chenery & Bruno, 1962).

Also, it helps in filling the technological gap in many developing countries to boost the productivity of capital and stimulate indigenous technical change. Furthermore, the exponents of ODA are of the view that foreign aid is a necessary and sufficient condition for the promotion of the process of development of under-developed and developing economies as it supplements domestic resources and complements domestic savings (Sahoo, 2016). Also, managerial skills, capacity for import of capital goods, research ideas, capital for investment, organizational capability and access to market results from it. The failure of economic growth focused foreign aid to alleviate poverty, reduce unemployment, develop infrastructure, facilitate natural resources exploitation and enhance the development of countries that suffered devastating consequences of colonization, particularly in developing countries has caught my interest and initiated contentious debates among the policymakers, academia, media, development economists, political circles, researchers of international organizations and international development partners, leading to the production of an extensive wealth of literature with diverged ideologies on this controversial issue.

The issue of foreign aid has become imperative, especially in developing countries given the recently adopted Sustainable Development Goals (SDGs) by the international community whose major goal is the realization of 17 cardinal objectives in the world by the year 2030. Trinh (2014) noted that the insufficiency of domestic capital needed for the promotion of economic growth in developing countries is a generally shared opinion. Hence, in some developing countries of the world, inadequate domestic savings and foreign exchange have been the main militating factor to the accomplishment of overarching global development targets of the United Nations as entrenched in the SDGs, particularly the objectives of building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation and ending poverty in all its forms everywhere by 2030 (United Nations, 2015b).

Given that most developing countries lack the capacity and financial wherewithal to finance development programmes for the realization of the 17 fundamental objectives of SDG, reliance on foreign aid in a supportive capacity as one of the important sources of finance becomes undeniable. Hence, as was stated by Pacifique (2017) "the success of the SDG agenda will depend on the effectiveness of foreign aid in promoting Africa's development" (p.15). In the opinion of Lancaster (1999) "aid is a double-edged sword" implying that it can boost progress in the right economic and political environment. However, aid will be squandered in the absence of a good enabling environment. The significance of foreign aid was recognized by the Monterrey (2002) as: "ODA plays an important role by complementing other sources of financing required for development, especially for those developing countries where private direct investors are reluctant to invest with the fear of low profit" (p.14).

Despite the numerous economic, social and humanitarian aids routed through capital flows, technical and relief assistance, most people in Nigeria live in conditions of deprivation, high unemployment and absolute poverty. However, underdevelopment is rife. There is budgetary constraints, a high degree of indebtedness, high repayment and servicing costs of external debts and poor economic performance (Bakare, 2011). For instance, an investigation of Nigeria's external debt profile from June 2015 by the International Centre for Investigative Reporting (ICIR) revealed that President Muhammad Buhari's administration inherited a national foreign debt of $10.3 billion in June 2015 from President Goodluck Jonathan's administration (Abolade, 2019). However, the country's loan afterwards rose to $11.3 billion by 30th June 2016. This corresponds to a 9.2 per cent rise in the country's national debt. Not later than June 2017, it increased from $11.3 billion to $15.0 billion corresponding to a total of 33.6 per cent rise compared to the 2016 figures (Abolade, 2019).

Moving to 2018, the external debt skyrocketed to $22.1 billion from $15.0 billion. This represented a 46.8 per cent rise in foreign debt. The external debt of the debatably largest economy in Africa rose to $27.2 billion by the close of the 2019 2nd quarter. This amounted to 23.0 per cent rise in the year. Hence, the country's foreign debt cumulated by 163.2 per cent between June 30, 2015, and June 30, 2019, covering the first four- year tenure of Buhari's Administration (Abolade, 2019). As economic growth waned regardless of massive flows of aid, foreign aid had bound her into a debt trap. Amid this critical empirical evidence, Nigeria had been a recipient of considerable donor aid that increased further with the Boko Haram conflict.

There is insufficient evidence of efficient aid performance in Nigeria. Empirical evidence revealed that decades of foreign aid have done little in transforming the destiny of Nigeria that is currently experiencing a low rate of economic growth. No wonder, Karras (2006) discovered that the economic growth of the majority of aid-recipient countries in Sub Saharan African countries had been delayed by corruption. This had prompted submissions from some policy analysts that there is more to the Nigerian problem than just directing aids to her as the likelihood of turning things around through this avenue is very remote. The numerous macroeconomic policy reforms undertaken mainly at the request of the donor community had not changed the narrative either. It is uncertain whether they have helped in boosting the impacts of foreign aid on economic growth.
Bakare (2011) expressed this opinion about this situation:

Taking Nigeria as a case to study; the impact of foreign aid has not been so much felt. Despite being one of the first ten African countries to receive structural adjustment funding from the World Bank, later the Enhanced Structural Adjustment Facility (ESAF) loan from the International Monetary Fund (IMF) and debt relief from Paris club, Nigeria has experienced major standoffs with the donor community, which have sometimes led to aid freezes. The disbursement of foreign aid funds has frequently been short-lived as the donors often find themselves dissatisfied with the way the government implements aid conditionality funding. (p.25)

Irrespective of this paradoxical development, sufficient research had not investigated the effectiveness of aid in Nigeria. In general, the nexus between aid and economic growth remains unsettled and deserves further study. Against this backdrop, the research question that comes to mind is: does foreign aid contribute to the economic growth of Nigeria? The major objective of this study is to examine the impact of foreign aid on economic growth in Nigeria. Amid this literature dearth, this paper contributes to the aid-growth empirics at the country level by exploring the impact of foreign aid on economic growth in Nigeria. The remainder of the paper is structured as follows: literature review and theoretical framework will be the focus of the next section. Section three will dwell on the methodology. Section four will is devoted to data presentation, analysis and discussion of empirical findings while the focal point of the last section will be conclusion and policy recommendations.

2. Literature Review and Theoretical Framework

2.1. Empirical Literature

There have been several theoretical and empirical investigations on the relationship between foreign aid and economic growth at cross-country and country-specific level. A revision of these empirical studies from the perspective of developed countries of Europe and North America, developing economies of Asia, Latin America, the Caribbean's, and Africa are unmasked. Ekanayake and Chatrna (2010) studied the connection between foreign aid and economic growth for a group of 85 developing countries including Asia, Latin America, Africa, and the Caribbean using annual data from 1980-2007. Utilizing the Panel Least Squares Estimation method, the proposition that foreign aid can stimulate economic growth in developing countries was investigated employing panel data series for foreign aid while accounting for regional variations in Asian, Latin American, African and the Caribbean economies besides the changes in levels of income. The findings of this study revealed that foreign aid had mixed outcomes on economic growth in developing countries.

Besides, Salisu and Ogwumike (2010) utilized the Ordinary Least Square (OLS) and Two-Stage Least Square (2SLS) methodologies to study the role of the macroeconomic policy environment in the relationship between foreign aid and economic growth for 20 countries of Sub-Saharan African for the period of 1970-2001. The findings showed that a sound macroeconomic environment is necessary for the efficient impact of foreign aid on sustainable economic growth. Also, the results revealed that the macroeconomic policy environment is a fundamental factor in economic growth.

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.

Furthermore, Bakare (2011) used the Vector Autoregressive (VAR) model to investigate empirically the link between foreign aid and economic growth in Nigeria. The results showed a negative relationship between foreign aid and economic growth in Nigeria. In the same vein, Odusanya, Logile, and Akanni (2011) examined the impact of foreign aid and public expenditure on economic growth in Nigeria. The results revealed that foreign aid and public expenditure exerted a positive impact on economic growth in Nigeria. However, foreign aid had a significant impact on economic growth.

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. The values of the modernizations of foreign aid shocks to shocks in macroeconomic variables unveiled that it breeds contradictions that alter budget deficits, generate doubts that diminish current account balances and transfer negative shocks with strong limiting impacts on economic growth. It was discovered that the negative effects of foreign aid lower the country's tendencies to economic growth and that macroeconomic approaches are incompatible and deficient of the willpower to efficiently exploit the benefits of foreign aid.

Similarly, Kargbo (2012) investigated the impact of foreign aid on economic growth in Sierra Leone from 1970 to 2007 utilizing a triangulation of methodologies comprising the ARDL bounds test method and the Johansen maximum likelihood methodology to cointegration. The findings revealed that foreign aid had a positive and significant impact on fostering economic growth in Sierra Leone. This result was established to be robust across methodologies and specifications. Although aid may have been linked with the expansion of economic growth in Sierra Leone, its influence in the time of war was discovered to be either weak or non-existent. Additionally, aid in the pre-war time was discovered to be slightly more valuable than aid in the post-war time. The last findings indicate that the effect of aid may vary with time.

On the same subject and using annual data throughout 1970 to 2011, Olkeba (2013) assessed the causal relationships among aid, domestic resources and economic growth in developing countries with emphasis on Ethiopia within an ARDL framework. The results revealed that aid and domestic savings exerted a positive relationship with economic growth in the long-run. The domestic resource mobilization exerted a higher positive

effect on economic growth than aid. However, when the level of investment was controlled, aid had a negative and insignificant relationship with economic growth. Furthermore, the existence of absorptive capacity constraints connected with expending huge aid money was validated by this result. Besides, aid and domestic saving exerted a negative and positive relationship with economic growth respectively in the short-run. However, the impact of domestic saving on growth was statistically insignificant.

In a related study, Ojiambo (2013) utilized the ARDL estimation method to investigate the impacts of foreign aid predictability on investment and economic growth in Kenya for 1966-2010. Particularly, the impact of foreign aid on investment and economic growth; the impact of macroeconomic policy environment on foreign aid, investment and economic growth; the impact of aid unpredictability on investment and economic growth were investigated in the study. The results revealed that there was a long-run relationship between the variables. Also, the findings showed that foreign aid had a positive impact on economic growth and public investment in Kenya. 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" (p.xiv).

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 a similar study, Trinh (2014) examined the nexus between foreign aid and economic growth in Vietnam throughout the 1960-1990 by employing the Autoregressive Distributed Lag (ARDL) estimation technique. The empirical results showed that foreign aid had a positive and significant impact on economic growth in Vietnam. Furthermore, additional evidence of the favourable effects of aid was confirmed through the outcomes of growth accounting exercise and the examination of central channels through which aid had contributed to outcomes of development. These channels are human capital accumulation, infrastructure and macroeconomic management. However, problems associated with aid such as rent-seeking behaviour, absorptive capacity constraints and high volatility and unpredictability of the inflow could pose a problem on the recipient's administration and in succession, weaken the effectiveness of aid.

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.

Likewise, Chamlagai (2015) used ARDL to investigate the relationships among remittance, foreign aid, foreign direct investment (FDI) and economic growth in Nepal for the period of 1970-2014. The results revealed that remittances and labour are vital for driving economic growth in the short-run and long-run. Also, the findings showed that aid, investment and FDI do not have any significant impact on economic growth in the short and Long-run periods. Using the Ordinary Least Square (OLS) methodology, Manwa (2015) studied the relationship between foreign aid and economic growth in Malawi employing data from 1960-2012. The findings suggested that aid exerted a negative and significant impact on economic growth. Besides, the study revealed that the effectiveness of aid is conditional on states having strong political will, sound policies and governance structures that are supportive.

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.

Equally, Sahoo (2016) employed Johansen-Juselius multivariate cointegration test, Granger-causality test and Vector Error Correction Mechanism (VECM) test to investigate the long-run causal link between foreign aid and economic development in three key South Asian economies of India, Sri Lanka and Pakistan over the periods of 1970-1971 to 2013-2014. The effect of aid volatility on the economic growth of the aforementioned developing countries was investigated as well. The study resolved that foreign aid is unquestionably considered as a vital determinant of economic development in all the three Asian countries of India, Pakistan and Sri Lanka. The major results of the study underscored that foreign aid had played an important impact on the economic development of

India, Pakistan and Sri Lanka. However, the empirical results established that volatility of aid had revealed a significant negative impact on the economic growth of Pakistan and Sri Lanka.

In the same way, Abera (2017) employed the ARDL method to cointegration to investigate the short-run and long-run nexus between foreign capital inflows and economic growth in Ethiopia for the period 1981–2014. Precisely, the real Gross Domestic Product (GDP) per capita was expressed as a function of foreign aid, FDI and other foreign capital inflows (remittances and external debt) and examined. The results showed that foreign aid flow had a negative impact on economic growth in both the long-run and short-run. Likewise, the FDI flow exerted a negative impact on economic growth in the long-run. However, other foreign capital inflows had an insignificant impact on real GDP per capita in both the long-run and short-run. Besides, FDI exerted an insignificant impact on real GDP per capita in the short-run. Furthermore, the results of the causality test showed that there was a uni-directional relationship from foreign aid to real GDP per capita and bi-directional relationship between FDI and real GDP per capita. However, there was no causal link between other foreign capital inflows and real GDP per capita in Ethiopia.

This review had revealed that a large number of scholarly studies had focused on the nexus between foreign aid and economic growth in developing countries. However, few of the studies had investigated the impact of aid in the African continent, particularly, Nigeria. Hence, more studies on aid effectiveness in Africa in general and Nigeria, in particular, are necessary and timely. Furthermore, the review showed that the empirical literature on foreign aid and economic growth had yielded mixed and ambiguous results. Hence, the empirical evidence had remained in disagreement. Some studies (Chenery & Bruno, 1962; Chenery & Strout, 1966; Dowling & Hiemenz, 1983; Gounder, 2001, 2003; Hadjimichael, Dhaneswar, Martin, Roger, & Ucer, 1995; Hansen & Tarp, 2000b; Hossain, 2014; Kargbo, 2012; Karras, 2006; Khadka, 1997; Levy, 1988; Mosley, 1980; Mosley, Hudson, & Horrell, 1987; Olkeba, 2013; Over, 1975; Papanek, 1973; Paudyal, 1996; Rana & Dowling, 1988; Rana, 1987; Rosenstein-Rodan, 1961; Stoneman, 1975; Tadesse, 2011; Trinh, 2014; Whitaker, 2006) revealed that foreign aid affects economic growth positively.

However, other studies have found that foreign aid results in economic growth but only under certain conditions (Bearce & Tirone, 2008; Burnside & Dollar, 1997; Guillaumont & Chauvet, 2001; Herzer & Morrissey, 2011b; Islam, 2003; Killick, 1991; Morrissey, 2001; Ojiambo & Ocharo, 2016; Ramesh, 1998; Salisu & Ogwumike, 2010; Singh, 1985; Snyder, 1993; World Bank, 1998). Hence, the possibility of foreign aid leading to economic growth is conditional on factors such as the environment, governance, policy and macroeconomic policy environment among others. Nevertheless, some other studies have argued that aid catalyzes economic growth unconditionally (Arndt, Jones, & Tarp, 2009; Clemens, Radelet, Rikhil, & Bazzi, 2012; Dalgaard & Hansen, 2001; Dalgaard, Hansen, & Tarp, 2002; Durbarry, Gemmell, & Greenaway, 1998; Easterly, Levine, & Roodman, 2003; Hansen & Tarp, 2001; Juselius, Moller, & Tarp, 2014).

Several studies (Boakye, 2008; Gong & Heng-fu, 2001; Griffin & Enos, 1970; Javid & Qayyum, 2011; Narayan Khadka, 1996; Knack, 2000; Malik, 2008; Mosley et al., 1987; Newlyn, 1973; Papanek, 1972; Svensson, 2000) argued that foreign aid affects economic growth negatively. The last part of these empirical studies (Ekanayake & Chatrna, 2010; Girma, 2015; Moreira, 2005; Mosley, 1987; Paudyal, 1996) documented the indecisiveness of the effect of foreign aid on economic growth. This result is not surprising because major economic development theorists' (Arrow, 1962; Domar, 1947; Harrod, 1939; Lucas, 1988; Romer, 1986; Solow, 1956) and economic theories had been consistent in emphasizing the critical role of capital in driving growth. However, the empirical evidence had remained contentious. Besides, Moreira (2005) observed that the influence of foreign aid on the economic growth of developing economies may be positive, negative, or even non-existent, in statistical terms.

At the same time, some scholars seem to accept that a plethora of literature on this topic is based on cross-section studies with several shortcomings. Therefore, the fact that studies investigating the impact of aid on economic growth in Nigeria were sparse was one of the reasons that informed this study. Again, the fact that these studies have failed to reach a general agreement was another reason. The most current study on aid-economic growth nexus in Nigeria was executed by Agbontaen and Iyoha (2012) for the period 1970 to 2009 using the VAR model. This study is different from their study based on the fact that it extended the time of study by nine years from 1970 to 2018 and hence updates the research. Furthermore, we used the ARDL model to investigate the long-run and short-run dynamics of foreign aid-economic growth nexus in Nigeria. Bakare (2011) used the VAR model as the main methodology of analysis to examine the aid-growth nexus in Nigeria. In this study, the ARDL model that can address the issue of endogeneity between foreign aid and economic growth was employed.

Also, although, there is an avalanche of literature on the nexus between aid and economic growth, the calls to look at it beyond cross-section studies had increased because of the shortcomings that characterize it Manwa (2015). To confirm this, Manwa (2015) noted that most researches investigating aid-growth connection used cross-country or panel-data techniques lumping countries together despite their differences. Newlyn (1977) accurately confirmed that cross-country functions that are approximated employing data from several countries depict a functional relationship that can just be indicative of the specific country's behaviour. Hence, the deployment of a cross-section data would only permit some general observations on aid flows effectiveness to Nigeria to be made by us.

Thus, it is against this background that we decided to use time series analysis to include a case study for Nigeria from 1984-2017 because it reveals the exact behaviour of the country through an estimation of the functional relationship inside the period included in the annual observations. Yin (2014) stated that a case-study is advantageous when contrasted with generic studies because it diminishes problems of overgeneralization biases. Tadesse (2011) had earlier observed that the majority of the aid-growth research was overshadowed by regression analysis that is cross country-based. However, country-specific investigations are quite a few. Famous economists as White (1992) had long acknowledged the suitability of country-specific studies above cross-country studies. Hence, the issue of the effectiveness of aid remains a question for analysis of specific countries and specific periods. Again, to the best of our knowledge, this is one of the few studies that used time-series data to examine the possible causal nexus between foreign aid and economic growth for Nigeria. This study intends to fill these literature gaps.

2.2. Theoretical Framework

A superfluity of methods and theories had thrived in the academic and political boundaries to account for the effectiveness of aid. This includes the Classical Realism, Modernization Theory, Dependency Theory, McKinnon's Foreign Exchange Constraint Model, Constructivism, Fei and Paauw's Self-help Model, Geopolitics Theory, Chenery and Strout Model, Globalism, Harrod-Domar Model, Idealism, Solow Growth Model, Endogenous Growth Models, Big Push Model, Imperialism and Balanced Growth Model and Unbalanced Growth Model. These theories had sought to accomplish a scientific clarification of the disagreements on all sides of the effectiveness of aid. The two-gap model of Chenery and Strout (1966) and the endogenous growth models would complement one another in establishing the theoretical base for this study. The two models would offer a strong theoretical boost for investigating the foreign aid-economic growth nexus in Nigeria.

Tadesse (2011) stated that "the Harrod-Domar growth model is the first and most well-known of the gap models" (p.6). However, the original Harrod-Domar theory was extended in the two-gap model of Chenery. and Strout (1966) in the sixties. The main contention of the two-gap model popularized by Chenery and Strout (1966) was to explain the function of foreign aid in the growth process of a recipient nation. Therefore, the two-gap model was meant to investigate the means through which a poor, sluggish economy can metamorphose into a developed economy experiencing a sustained rate of economic growth (Chenery & Strout, 1966). The theoretical support for giving foreign aid for economic growth is presented by the model. Chenery and Strout (1966) maintained that foreign aid complements the scarce internal resources by filling the savings-investment gap, the export-import gap and assists in enhancing the capital-absorptive capacity of the aid receiving nation as well.

The first gap comprises of the relationship between the quantity of investment necessary to reach a specific rate of economic growth and available internal savings, while the second gap is between rates of foreign exchange and import prerequisites for a fixed level of production (Todaro & Smith, 2009). These gaps are regarded as either a savings-gap or as a foreign exchange (or trade) gap. Sahoo (2016) asserted that capital was considered as a critical element for higher economic growth by all the economic theories and growth models. Some remarkable features of the majority of the developing countries are low saving and low investment. Hence, they are regarded as low saving and low investment economies. In this perspective, the process of economic growth is accelerated by foreign aid through limited domestic saving and investment supplementation. Hence, the inflows of foreign aid are required to fill the existing gap (savings gap or foreign exchange gap), to enable economies to grow more speedily than their domestic resources would otherwise permit.

However, the absence of these inflows would result in most economies facing slower economic growth and the inefficient utilization of domestic resources. The two-gap model had received some criticisms from some authors bordering on its assumptions. The theory assumed that investment was the solitary factor through which economic growth can be increased. However, education, research and development are other factors of economic growth (Harms & Lutz, 2004). Furthermore, the model presumed that the recipient nation invests all aid. Foreign aid is fungible just like other types of capital flows. It can be utilized for any objective, and therefore, cannot be presumed to be dedicated to investment completely. They were of the view that the recipient nation will dedicate a segment of the aid money for investment and some portion for government consumption expenditures.

Furthermore, Harms and Lutz (2004) also recognized that "in reality, aid availability is an incentive for corrupt administrations to intentionally lower their domestic investment efforts so that they get a continuous stream of aid money from donors" (p.8). Besides, it was called a 'dead model' by Easterly (1999). Despite these condemnations, Devarajan, Dollar, and Holmgren (2001) in defence of the two-gap model stated that "it is a transparent and flexible framework for examining, for a large number of countries, the aid requirements of achieving the poverty goal" (p.17). The two-gap model had lingered as the leading theoretical idea employed for comprehending the nexus between foreign aid and economic growth in nearly all of the World Bank's research surveys on foreign aid and economic growth. Also, Ahmed (2014) and Tadesse (2011) observed that the two-gap model had been used for a long time as the standard model for the explanation of aid. It was utilized by policy-makers extensively.

On the other hand, the endogenous growth models were developed by Romer (1986); Lucas (1988); Romer. (1990); Grossman and Helpman (1991a) and Barro and Sala-i-Martin (1995). Human capital accumulation was ascertained endogenously by Lucas (1988) to support economic growth. Technological progress was established endogenously by Romer (1990) as a vehicle for driving economic growth. This model was developed as a response to the drawbacks of the neoclassical economic growth model of Solow-Swan. Solow (1956) argued that contrary to the neoclassical growth model, the endogenous growth theories made it clear that long-run economic growth originates from internal factors (innovation, knowledge and investment in human capital) inside an economic system, especially, those factors that generate technological knowledge.

Countries would gain from developing their human capital and investing in research and development (R&D). Economies of scale can be fostered through this process. Besides, the endogenous growth models expanded the neoclassical economic growth models through the introduction of technological progress in the economic growth model. The core difference between neoclassical and endogenous growth models is that technological advancements were assumed to be exogenous to an economic system by neoclassical growth model whereas it was challenged by the endogenous growth models that provided conduits through which technological progress may result primarily in the shape of domestic innovations (Artelaris, Arvanitidis, & Petrakos, 2006). In the contention of this model, endogenous factors promote the long-run rate of economic growth of an economy instead of the exogenous factors as expounded in the neoclassical growth theories (Sahoo, 2016).

Furthermore, the endogenous growth model investigated production functions that depict increasing returns as a result of specialization and investment in knowledge capital. In developing economies, funds for investment needed to invest in human capital, R&D and innovations are not adequate. The investment requirements of these economies can only be accomplished partly by their internal capital. As was observed by Morrissey (2001) they count on Official Development Assistance (ODA) to boost their internal capital because it generates research ideas, technical knowledge, managerial skills and foreign assistance at a lower rate of interest. In the opinion of Morrissey and Nelson (1998) the economic factors in the endogenous growth model such as physical and human

capital accumulation and technology that resulted in productivity growth can offer a satisfactory explanation to the East Asian countries miracle, hence, the decision to use it as a complementary theory.

3. Methodology

3.1. Data

Bhattarai (2005) argued that data obtained from national sources is significantly different from those that originated from international sources such as the International Monetary Fund (IMF) and United Nations Development Programme (UNDP). This is especially challenging in the situation of data on foreign aid. There is a common belief that data on foreign aid from the Organization for Economic Co-operation and Development (OECD) are more dependable since they are collected straightforwardly from the donors with a better system of recording than Nigeria. Likewise, macroeconomic indicators data and data on socio-economic indicators from the IMF and World Bank respectively are believed to be more consistent. Even though these data are largely gathered from national sources, they are subjected to internal consistency checks by the IMF and the World Bank.

Furthermore, the data from national sources are supplemented with their occasional sectoral surveys/studies Bhattarai (2005). Some of the available data from certain agencies in Nigeria suffer from inconsistencies. Hence, this study employed data principally from international sources each time they are accessible. The study is based on secondary data for the period 1984-2017. The selection of the time was based on the accessibility of appropriate data. The data were extracted from World Bank's (WB), World Development Indicators (WDI) database, African Development Bank's (AfDB's) socio-economic database, United Nation's Conference for Trade and Development (UNCTAD) database, National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN), International Country Risk Guide (ICRG), and Organization for Economic Co-operation and Development (OECD). The data on foreign aid was gotten from the OECD database. The data on Institutional quality based on bureaucratic quality, corruption, government stability and rule of law were drawn from the ICRG database.

The data on aid-policy interaction was constructed. The data on Initial GDP per capita was derived from (WB, WDI) database while the data on private investment was extracted from AfDB socio-economic database. An interaction variable (AID*POLICY) between foreign aid and macroeconomic policy was constructed to know whether foreign aid is conditional on a good policy environment or not. The macroeconomic policy index created by Burnside and Dollar (2000) through an economic growth model was adopted for this study. The economic growth model comprised of budget surplus/deficit, inflation and openness to trade as independent variables, and the parameters of these variables were utilized from the regression model for growth to calculate the macroeconomic policy index.

Property rights were underscored by the institutional quality of governance (INSQ) and the construction was based on inspiration drawn from Knack and Keefer (1995) index of institutional quality construction. Therefore, institutional quality score comprising the index of rule of law, corruption, bureaucratic quality and government stability were obtained from the ICRG database. The indices: rule of law, bureaucratic quality and corruption had a score of 0-6 with higher scores denoting better ratings (i.e. less risk). The last component: government stability was scored 0-12 with higher scores showing better ratings (i.e. less risk). To attain a comparative score of these four indices that constitute the measure of institutional quality of governance, we followed Knack and Keefer (1995) and converted rule of law, bureaucratic quality and corruption to 12-point scales through multiplication by 6/3. After attaining a harmonized scale of 0-12 for all the variables, an average of these four components were later taken to attain a composite score of institutional quality of governance indicated as INSQ. Variable definition, measurement, sources and expected outcomes are depicted in Table 1.

Table-1. Variable definitions, measures, sources and expected outcomes.

Variable	Description and/or proxy	Source	Expected Outcome
Dependent Variable			
GDP per Capita growth rate (RGDPPC)	Gross Domestic Product (GDP) per capita (Constant 2010 US$)	WB, WDI	Dependent Variable
Independent Variables			
Initial GDP per Capita (IGDPPC)	The logarithm of GDP per Capita	WB, WDI	Negative
Foreign aid (AID)	Official Development Assistance (ODA) that comprises every loan with a grant element beyond 25 per cent as a share of GDP	OECD	Positive
Private investment (PRINV)	Gross capital formation less public investment (% of GDP)	AfDB	Positive
Macro policy (POLICY)	Created from inflation rates (monetary policy), trade openness (trade policy) and overall budget surplus/deficit (fiscal policy) indices Policy Index = 1.28 + 6.85 Budget Surplus – 1.4 Inflation + 2.16 Openness	Burnside and Dollar (2000)	Positive
Aid-policy interaction (AID*POLICY)	Created through relating foreign aid (ODA) with the macroeconomic policy Index (POLICY). It was calculated as (Aid*POLICY).	Constructed	Negative
Ethnic fractionalization (ETLF)	Ethnic fractionalization is proxied by linguistic and racial index or Index of ethnolinguistic fractionalization	Drazanova (2019)	Negative
Institutional quality (INSQ)	Denotes the institutional quality of governance, that is based on the bureaucratic quality, government stability, the rule of law and corruption indices	Knack and Keefer (1995)	Positive

3.2. Model Specification

Following Kargbo (2012) with some modifications, the model specification for this study is based on the augmented Solow and endogenous economic growth theories for growth equation. The interaction among capital, labour, technological progress and other main factors of economic growth as generally recommended by the literature on economic growth is exhibited by the empirical model specification for assessing the nexus between foreign aid and economic growth. Thus, in deriving the economic growth function for assessing the aid-growth nexus in Nigeria in Equation 1, we postulate that:

$$Y = f(X, Z) \quad (1)$$

Where:
Y denotes output (a proxy for economic growth).
X is a vector of capital sources.
Z is a vector of other growth-determining variables crucial for technological productivity.

Besides the Harrod-Domar and neoclassical growth models that posited that capital was a critical factor of growth, the significance of physical and human capital and policy for stimulating economic growth was particularly stressed by the endogenous growth theory. Based on this, the general form of the empirical economic growth model for this study has the following form:

$$RGDPPC_t = \alpha + \beta X_t + \gamma Z_t + \mu_t \quad (2)$$

Where:
RGDPPC denotes real GDP per capita growth rate.
μ_t denotes the error term.
t denotes time.

Foreign aid and private investment are components of important sources of capital for economic growth in developing economies.

$$Therefore, X = f(Aid, PRINV) \quad (3)$$

Where:
Aid denotes foreign aid/Official Development Assistance as a share of GDP.
PRINV denotes private investment as a share of GDP.

The assumption here is that besides foreign aid, economic growth can be augmented by PI, an important capital source, comprising of private domestic sources of capital, for instance, domestic credit to the private sector and foreign direct investment (FDI). Capital was portrayed as the most vital solitary factor that impacts internal output in cross-country research on aid effectiveness (Herzer & Morrissey, 2011a). Out of these capita stock, foreign aid, private investment, as well as domestic taxes, were postulated in the production function as important capital elements that determine internal output.

Evidence from the literature showed that there are other determinants of economic growth:

$$Z = f(IGDPPC, POLICY, AID * POLICY, ETLF, INSQ) \quad (4)$$

Where:
IGDPPC denotes initial GDP per Capita.
POLICY represents macroeconomic policy index.
AID*POLICY indicates interaction of aid and policy.
ETLF symbolizes ethnolinguistic fractionalization index.
INSQ signifies the institutional quality.

The macroeconomic policy index accounts for monetary, trade and fiscal policies. Monetary policy is measured by inflation (Burnside & Dollar, 1997, 2000; Fischer, 1993). Trade policy is measured by the accepted standard for calculating trade openness, which is (imports + exports)/GDP (Burnside & Dollar, 1997; Feeny, 2005; Javid & Qayyum, 2011). Fiscal policy is measured by the budget surplus/deficit (Burnside & Dollar, 2000). The economic growth of the economy can be affected by these policy measures.

Hence, substituting Equation 3 and 4 in Equation 2 yields a comprehensive empirical growth model specified as Equation 5.

$$RGDPPC_t = \alpha + \beta(Aid, PI)_t + \gamma(IGDPPC, POLICY, AID * POLICY, ETLF, INSQ)_t + \mu_t \quad (5)$$

Simplifying this yields the empirical model for estimation as:

$$Log(RGDPPC_t) = \propto_0 + \beta_1 AID_t + \beta_2 PRINV_t + \gamma_3 \text{Log}(IGDPPC_t) + \gamma_4 Log(POLICY_t) + \gamma_5 \text{Log}(AID * POLICY_t) + \gamma_6 ETLF_t + \gamma_7 INSQ_t + \mu_t \quad (6)$$

$Where:$

$\propto_0, \beta_1, \beta_2, \gamma_3 \ldots, \gamma_7 = Parameters\ in\ the\ mode$
$RGDPPC_t = Log\ of\ real\ GDP\ per\ capita\ at\ time\ t$
$AID_t = Official\ Development\ Assistance\ as\ a\ share\ of\ GDP\ at\ time\ t$
$PRINV_t = Private\ investment\ as\ a\ percentage\ of\ GDP\ at\ time\ t$
$IGDPPC_t = Log\ of\ GDP\ per\ Capita\ at\ time\ t$
$POLICY_t = Log\ of\ macroeconomic\ policy\ index\ at\ time\ t$
$AID * POLICY_t = Log\ of\ Aid - policy\ interaction\ at\ time\ t$
$ETLF_t = Ethnic\ fractionalization\ index\ at\ time\ t$
$INSQ_t = Institutional\ quality\ of\ governance\ at\ time\ t$
$\mu_t = Error\ term$

Because of highly skewed values, the variables RGDPPC, IGDPPC, POLICY and AID*POLICY were logged. The logarithmic transformation was meant to transform them into a dataset that is more normalized to avoid the problem of heteroscedasticity. The remaining regressors were not expressed in logarithms since their values were not highly skewed. The variables were each indexed by country (i) and period (t). We utilized the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests to check the time-series properties of the data before

the estimation of the growth equation. Diagnostic and stability tests were employed to check the goodness of fit and model adequacy of our specification. The estimation of the economic growth equations was done through the Autoregressive Distributed Lag (ARDL) Bounds test to cointegration suggested first by Pesaran and Shin (1999) and supported by Pesaran, Shin, and Smith (2001).

Since the ARDL method yields results that are reliable in the case of small samples and the order of integration does not affect its application, it is preferable to the Engle-Granger two-step procedure and the Johansen likelihood approaches to cointegration. Because all variables are assumed to be endogenous under the ARDL method, it yields correct and exact estimates of long-run coefficients and valid inference even in the existence of endogenous explanatory variables. Hence, endogeneity and simultaneity is not a problem. Short-run estimators under the ARDL approach was discovered to be super consistent in the case of a small sample (Pesaran & Shin, 1999). This method shows the short-run dynamics besides the estimated long-run coefficients. The computation of the ARDL statistical procedure was done with Version 9 of the E-views econometric software.

Restating Equation 6 into the ARDL model form yields:

$$\begin{aligned}\Delta Log(RGDPPC_t) &= \propto_0 + \sum_{i=1}^{\rho} \propto_{1,i} \Delta RGDPPC_{t-i} + \sum_{i=1}^{\rho} \propto_{2,i} \Delta AID_{t-i} + \sum_{i=1}^{\rho} \propto_3 \Delta PRINV_{t-i} + \sum_{i=1}^{\rho} \propto_4 \Delta \mathrm{Log}(IGDPPC_{t-i}) \\ &+ \sum_{i=1}^{\rho} \propto_5 \Delta Log(POLICY_{t-i}) + \sum_{i=1}^{\rho} \propto_6 \Delta Log(AID * POLICY_{t-i}) + \sum_{i=1}^{\rho} \propto_7 \Delta ETLF_{t-i} \\ &+ \sum_{i=1}^{\rho} \propto_8 \Delta INSQ_{t-i} + \beta_1 Log(RGDPPC_{t-i}) + \beta_2 AID_{t-i} + \beta_3 PRINV_{t-i} + \beta_4 Log(IGDPPC_{t-i}) \\ &+ \beta_5 Log(POLICY_{t-i}) + \beta_6 Log(AID * POLICY_{t-i}) + \beta_7 ETLF_{t-i} + \beta_8 INSQ_{t-i} + \mu_t \quad (7)\end{aligned}$$

Where p denotes the lag length, Δ represents the difference operator, α_0 is the drift, μ_t is the disturbance term, α_1, α_2, α_3, α_4, α_5, α_6, α_7, α_8 are coefficients of short-run dynamics while β_1, β_2, β_3, β_4, β_5, β_6, β_7, β_8 are coefficients of the long-run relationship. Hence, Equation 7 is the base equation for estimating the short-run and long-run relationship among the variables.

Under the bounds testing approach, the existence of a level relationship between RGDPPC and its determinants would be examined. The existence of cointegration among the variables is empirically realized through an F-test. This is merely a test of the hypothesis of no long-run relationship between RGDPPC and its determinants against the existence of long-run relationship among them. The parameters to be tested in Equation 7 are:

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8 = 0$$

(absence of long-run relationship among the variables)

against the parameters:

$$H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6 \neq \beta_7 \neq \beta_8 = 0$$

(presence of long-run relationship among the variables)

The asymptotic critical value bounds of the F-statistic proposed by Pesaran et al. (2001) is used for ascertaining the existence or absence of cointegration among the variables. if the computed F–statistic is less than the lower bounds of the critical values of the F-statistic, the absence of cointegration will be confirmed since we cannot reject the null hypothesis. However, if the computed F–statistic is greater than the upper bounds of the critical values, the alternative hypothesis of cointegration will be accepted among the variables in the model, implying the presence of cointegration between the variables. Furthermore, if the F–statistic falls between these bounds, the test is inconclusive.

If the bounds test revealed the absence of cointegration among the variables, the procedure terminates. Nevertheless, if the presence of cointegration was concluded among the variables in the model, the short-run and long-run parameters, depicting the short-run and long-run impacts of each variable on economic growth respectively can be evaluated. Based on Equation 8 the long-run elasticities can be computed using OLS.

$$\begin{aligned}Log(RGDPPC_t) &= \propto_0 + \sum_{i=1}^{\rho} \propto_{1,i} \Delta Log(RGDPPC_{t-i}) + \sum_{i=1}^{\rho} \propto_{2,i} \Delta AID_{t-i} + \sum_{i=1}^{\rho} \propto_3 \Delta PRINV_{t-i} \\ &+ \sum_{i=1}^{\rho} \propto_4 \Delta \mathrm{Log}(IGDPPC_{t-i}) + \sum_{i=1}^{\rho} \propto_5 \Delta Log(POLICY_{t-i}) + \sum_{i=1}^{\rho} \propto_6 \Delta Log(AID * POLICY_{t-i}) \\ &+ \sum_{i=1}^{\rho} \propto_7 \Delta ETLF_{t-i} + \sum_{i=1}^{\rho} \propto_8 \Delta INSQ_{t-i} + \mu_t \quad (8)\end{aligned}$$

The estimation of short-run elasticities will be the final step. An error correction model associated with the long-run estimates was estimated to find the parameters of short-run dynamics. In this case, causality is established using an error correction model associated with the long-run estimates as described in Equation 9.

$$\Delta Log(RGDPPC_t) = \propto_0 + \sum_{i=1}^{\rho} \propto_{1,i} \Delta Log(RGDPPC_{t-i}) + \sum_{i=1}^{\rho} \propto_{2,i} \Delta AID_{t-i} + \sum_{i=1}^{\rho} \propto_3 \Delta PRINV_{t-i} + \sum_{i=1}^{\rho} \propto_4 \Delta \text{Log}(IGDPPC_{t-i}) + \sum_{i=1}^{\rho} \propto_5 \Delta Log(POLICY_{t-i}) + \sum_{i=1}^{\rho} \propto_6 \Delta Log(AID * POLICY_{t-i}) + \sum_{i=1}^{\rho} \propto_7 \Delta ETLF_{t-i} + \sum_{i=1}^{\rho} \propto_8 \Delta INSQ_{t-i} + \pi ecm_{t-i} + \mu_t \quad (9)$$

Where α_1, α_2, α_3, α_4, α_5, α_6, α_7, α_8 are the parameters of the short-run dynamics, π is the speed of adjustment to long-run equilibrium following a shock to the system and ecm_{t-1} is the error correction term. The parameter π is expected to be negative and significant to confirm the long-run relationship among the variables. The significance of the coefficient of the lagged error correction term and joint significance of the coefficients of the lagged differences of the right-hand side variables using the F–test are the basis for determining causality (Manwa, 2015).

4. Data Presentation, Analysis and Discussion of Results

4.1. Results of Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) Unit Root Tests on Series

Table-2. ADF and PP unit root tests results.

Variable	Augmented Dickey-Fuller (ADF)			Phillips-Perron (PP)		
	Level	First Difference	I(d)	Level	First Difference	I(d)
Log(RGDPPC)	-0.2307	-3.8090***	I (1)	-0.1722	-3.7416***	I (1)
AID	-3.9432***	-	I (0)	-3.1104**	-	I (0)
PRINV	-3.2771**	-	I (0)	-3.2771**	-	I (0)
Log(IGDPPC)	-0.3332	-4.3309***	I (1)	-0.5382	-4.3309***	I (1)
Log(POLICY)	-1.0624	-5.3354***	I (1)	-0.9810	-5.6873***	I (1)
Log(AID*POLICY)	-1.7168	-4.6336***	I (1)	-1.6686	-5.2449***	I (1)
ETLF	-4.3105***	-	I (0)	-5.4869***	-	I (0)
INSQ	-2.6470	-4.8883***	I (1)	-2.6410	-4.9069***	I (1)

Note: *** and ** indicate statistical significance at the 1% and 5% levels of significance, respectively.

The ADF and PP unit root tests results are shown in Table 2. The results revealed that the variables were either I(0) or I(1). The variables (RGDPPC, AID, PRINV, AID*POLICY and ETLF) were integrated at the level I(0) whereas the remainder were integrated at the first difference I(1). The ADF results were validated through the PP unit root test. The non-requirement of a lag length specification for the test regression is one merit that the PP unit root test has over the ADF unit root test. Again, the PP unit root test is robust to overall forms of heteroscedasticity in the disturbance term. The findings depicted that the results of the PP unit root test are a corroboration of those realized utilizing the ADF. Since the variables exhibited a mixture of I(0) and I(1), the application of the ARDL procedure to our economic growth model is justified.

4.2. Results of Diagnostic Tests for ARDL Model

Table-3. Diagnostic results for ARDL model.

Test	Test Statistic	P-value	Null Hypothesis	Conclusion
Breusch-Godfrey Serial Correlation LM Test	1.148881	0.3472	H_o: No serial correlation	Cannot reject H_o
Ramsey RESET test	1.066288	0.3043	H_o: Correctly specified	Cannot reject H_o
Jarque-Bera normality test	1.418451	0.4920	H_o: Normal distribution	Cannot reject H_o
Heteroskedasticity Test: ARCH	1.357049	0.2798	H_o: Homoscedasticity	Cannot reject H_o

The diagnostic tests results for the ARDL model was depicted in Table 3. Going by the diagnostic tests used to certify that the parameter estimates were consistent and capable of being utilized in making economic deductions, Equation 7 was adequate and had a good fit. The Breuch Godfrey Lagrange Multiplier (LM) test was utilized to test for serial correlation. However, autocorrelation was not confirmed in the disturbance of the error term as a result of the probability value of 0.3472 in the growth equation. At this p-value, the null hypothesis of no serial correlation cannot be rejected. In the Ramsey Regression Equation Specification Error Test (RESET) test, the probability value of 0.3043 indicated that the model was correctly specified. This is because the null hypothesis of correctly specified cannot be rejected at the obtained p-value. For the Jarque-Bera normality test, a probability value of 0.4920 showed that the errors were normally distributed. This results in the non-rejection of the null hypothesis of normal distribution. In the ARCH test, a probability value of 0.2798 revealed that the errors were homoscedastic and independent of the explanatory variables. Hence, the null hypothesis of homoscedasticity cannot be rejected at the obtained p-value.

4.3. Results of the Bounds Test for Cointegration

The Bounds tests for the existence of cointegration were depicted in Table 4. Relying on these results, the computed *F*-statistic for the joint test of the coefficients β_1, β_2, β_3, β_4, β_5, β_6, β_7 and β_8 was 8.301465. The critical value bounds were 2.69 and 3.83 at the 95 per cent significance level. The null hypothesis of no cointegration between the variables in the model cannot be accepted since the computed *F*-statistic was above the 95 per cent upper bound I(1) of the critical value band computed by Narayan (2004) and Pesaran et al. (2001).

Table-4. Bounds tests for the existence of cointegration.

Test Statistic	Value	Lag	Significance Level	Bound Critical Values* Lower Bound	Upper Bound
F-statistic	8.301465	2		I(0)	I(1)
			1%	3.31	*4.63*
			5%	2.69	*3.83*
			10%	2.38	*3.45*

Critical value bounds for the F-statistic at 95% confidence level from Pesaran, Shin, and Smith (2001).

The rejection of the null hypothesis shows the existence of a long-run relationship among the variables in our model. The establishment of a long-run relationship among the variables in the model justifies the estimation of the long-run and short-run coefficients of the growth equation through the ARDL cointegration method.

Table-5. Results for estimated long-run coefficients.

Dependent Variable: Log(RGDPPC)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	13.115098	17.164771	0.764071	0.4567
AID	-0.105260	0.013593	-7.743899***	0.0000
PRINV	-0.004906	0.002192	-2.238514**	0.0408
LOG(IGDPPC)	0.221658	0.047254	4.690746***	0.0003
LOG(POLICY)	-0.107099	0.044680	-2.396993**	0.0300
LOG(AID*POLICY)	0.134037	0.015227	8.802456***	0.0000
ETLF	-8.354250	19.942735	-0.418912	0.6812
INSQ	-0.018274	0.011375	-1.606488	0.1290

Note: *** and ** denote significance at 1% and 5% respectively.

4.4. Results of the Long-run Relationship

The long-run estimates of the aid-growth nexus are shown in Table 5. The variable ETLF had the expected sign while the other variables defied theoretical expectation. Most of the variables were significant. This implies that the long-run impact of the variables included in the growth model on economic growth in Nigeria was significant. Shockingly, foreign aid had a negative relationship with the real GDP per capita contrary to expectation. However, it was significant. This implies that a unit increase in foreign aid would lead to a 0.11 per cent decrease in economic growth. One plausible reason for the observed result could be that foreign aids are not channelled into productive investments in Nigeria. Another reason could be the mismanagement and diversion of foreign aid funds by government officials and political appointees. This result is in sharp contrast with the results of Mosley (1980); Singh (1985); Mosley (1980); Snyder (1993); Murthy, Ukpolo, and Mbaku (1994); Gounder (2001); Lioyd, Morrissey, and Osei (2001); Mavrotas (2002); M'Amanja and Morrissey (2005); Karras (2006); Bhattarai (2009);Tarp (2009); Arndt et al. (2009); Salisu and Ogwumike (2010); Tadesse (2011); Kargbo (2012); Olkeba (2013); Ojiambo (2013); Hossain (2014); Trinh (2014); Ojiambo et al. (2015) and Ojiambo and Ocharo (2016).

However, the result concurs with the studies of Mallick and Moore (2008); Boakye (2008); Bakare (2011); Javid and Qayyum (2011); Manwa (2015) and Abera (2017). Hence, the views of displacement theorists, for instance, Griffin (1970) and Griffin and Enos (1970) that foreign aid counteracts economic growth was supported by this finding. Unpredictably, private investment exerted a negative and significant relationship with real GDP per capita contrary to expectation. This implies that a unit increase in private investment would decrease economic growth by 0.005 per cent. This suggests that private investment does not promote economic growth in Nigeria. The plausible reason for this may be the unconducive investment climate that characterizes the private sector of most developing economies. The significance of the private investment variable is an indication that the level of private investment in the economy is adequate. However, to perform optimally and have the desired sign, there is a need for incentives to stimulate the private sector giving room for private investment growth required to steer the economy to the desired level. This result is contrary to the submissions of Bakare (2011); Ellahi and Kiani (2011); Kargbo (2012); Ojiambo (2013) and Ojiambo et al. (2015) but in line with the findings of Sahoo (2016).

Also, the log of initial GDP per capita was included in our specification to capture the hypothesis of conditional convergence between countries. Based on the neoclassical growth model, the postulation is that economies with an initial low per capita GDP would grow faster than economies with a high initial per capita GDP. It had a positive and significant relationship with economic growth. The positive sign implies that countries with high initial GDP per capita would grow faster than those with low initial GDP per capita in the long-run. This result implies that a one-unit increase in initial GDP per capita of aid recipient countries increases GDP per capita growth by 0.22 per cent. This result finds an advocate in Salisu and Ogwumike (2010). However, it disagrees with the findings of Dagne (2014). The log of the macroeconomic policy environment had a negative and statistically significant relationship with economic growth contrary to expectation. This means that a one per cent increase in the macroeconomic policy environment would lead to a 0.11 per cent decrease in economic growth. This result implies that macroeconomic policies were unfavourable to economic growth. The plausible reason for this is that macroeconomic instability was experienced in Nigeria for a larger part of the period of investigation. Hence, the macroeconomic policy in Nigeria had not been supportive of economic growth. This result is in line with the submissions of Ojiambo (2013); Mwanamanga (2015) and Ojiambo et al. (2015) but contrary to the findings of Salisu and Ogwumike (2010) and Linstad (2013).

Furthermore, the joint impact of the environment for macroeconomic policy and foreign aid on real GDP per capita was examined. This was addressed through the addition of an aid-macroeconomic policy environment interaction variable. This interaction term accounts for the likelihood that the impact of foreign aid on economic growth is dependent on the level of quality of policy, which is the core finding of Burnside and Dollar (2000) and Collier and Dollar (2002). The log of the interaction variable for foreign aid and macroeconomic policy environment exerted a positive and statistically significant impact on economic growth. The positive result is

related to the macroeconomic policy environment in Nigeria that makes aid more effective. The result implies that a one per cent increase in foreign aid-macroeconomic policy environment interaction would lead to a 0.13 per cent increase in economic growth. The result simply means that the contribution of foreign aid to economic growth in Nigeria is contingent on the quality of macroeconomic policy environment. Also, it suggests that the expansion of foreign aid in a macroeconomic policy environment that is good and stable affects growth positively. The positive and significant effect of the interactive term shows that aid has a greater impact in a policy environment that is good than in a policy environment that is poor (Burnside & Dollar, 2000). Furthermore, this result is in line with the findings of Burnside and Dollar (1997); Burnside and Dollar (2000); Burnside and Dollar (2004); Collier and Dollar (2002); Salisu and Ogwumike (2010) and Linstad (2013) who asserted that the impact of foreign aid on economic growth is dependent on the policy environment.

Thus, the argument of Burnside and Dollar (1997); Burnside and Dollar (2000); Burnside and Dollar (2004); Collier and Dollar (2002); Salisu and Ogwumike (2010) and Linstad (2013) that aid is effective only in a good policy environment is valid in Nigeria. Hence, this is the probable reason why foreign aid exerted a negative impact on economic growth. Based on the views of these scholars, since the macroeconomic policy had a negative effect on economic growth, foreign aid cannot be effective in Nigeria. However, it disagrees with the submissions of Easterly et al. (2003); Tadesse (2011); Ojiambo (2013); Mwanamanga (2015) and Ojiambo et al. (2015). Ethnic fractionalization exerted a negative relationship with economic growth. This implies that a one-unit increase in ethnic fractionalization would result in 8.4 per cent decrease in economic growth. This finding is in line with our expectations that ethnic conflict has negative impacts on economic growth. Because ethnic conflict generates political instability and civil war in economies, consumption is increased by the government as a measure to mitigate possible conflicts.

However, economic growth is negatively affected by this decision. Also, it implies that the heterogeneous nature of the Nigerian population has the likelihood of exposing her to the ethnic conflict that impacts negatively on economic growth. As was affirmed by Dagne (2014) "this result supports the hypothesis that on average, higher levels of ethnic fractionalization are associated with lower levels of GDP per capita" (p.44). This result finds an advocate in Dagne (2014) and Salisu and Ogwumike (2010). The quality of institutions (otherwise known as property rights) exerted a negative and insignificant relationship with economic growth contrary to expectation. This means that a one-unit increase in institutional quality of governance would result in a 0.02 per cent decrease in economic growth. This result implies that quality institutions do not contribute to economic growth in Nigeria. This result finds an advocate in Dagne (2014) . However, it disagrees with the submissions of Salisu and Ogwumike (2010); Kargbo (2012) and Linstad (2013).

4.5. Results of the Short-run Dynamic Model

Table-6. Results of estimated short-run error correction model.

Dependent Variable: Log(RGDPPC)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(AID)	-0.015352	0.005274	-2.910998***	0.0108
D(AID(-1))	0.023138	0.006393	3.619415***	0.0025
D(PRINV)	-0.003112	0.001214	-2.562994**	0.0216
DLOG(IGDPPC)	0.062703	0.026341	2.380434**	0.0310
DLOG(POLICY)	-0.010853	0.019666	-0.551839	0.5892
DLOG(AID*POLICY)	0.008795	0.009465	0.929206	0.3675
DLOG(AID*POLICY(-1))	-0.017819	0.011062	-1.610840	0.1281
D(ETLF)	19.263317	8.910199	2.161940**	0.0472
D(INSQ)	-0.011593	0.007277	-1.592965	0.1320
ECM_{t-1}	-0.634386	0.106281	-5.968934***	0.0000
ECM = LOG(RGDPPC) + 0.1053*AID + 0.0049*PRINV - 0.2217*LOG(IGDPPC) + 0.1071*LOG(POLICY) - 0.1340*LOG(AID*POLICY) + 8.3543*ETLF + 0.0183*INSQ - 13.1151*C - 0.0010*D				

Note: *** and ** denote significance at 1% and 5% respectively.

The short-run dynamic estimates of the nexus between foreign aid and economic growth are depicted in Table 6. The estimates of the short-run dynamics are to a large extent in agreement with the long-run estimates. Some of the variables had the expected signs and were significant. Change in aid was negative but positive in the first lag. The negative relationship between change in aid and real GDP per capita means that foreign aid does not contribute to economic growth in Nigeria. However, foreign aid of the previous one year exerted a positive and significant relationship with economic growth contrary to the results of the long-run equation. This result implies that foreign aid contributes to economic growth in the short-run in Nigeria. This means that economic growth would increase by 0.02 per cent, should foreign aid be increased by one unit. Change in private investment had a negative and significant impact on real GDP per capita in the short-run. This means that economic growth would decrease by 0.003 per cent, should private investment be increased by one unit. This agrees with the result of the long-run growth equation.

However, change in the log of initial GDP per capita had a positive and significant effect on economic growth as in the long-run equation. The short-run effect of change in the log of macroeconomic policy on economic growth was negative and insignificant. The result means that if the macroeconomic policy is increased by one per cent, economic growth would decrease by 0.01 per cent. Hence, the macroeconomic policy does not contribute to economic growth in the short-run. The change in the log of the aid-policy interaction variable exerted a positive and insignificant relationship with real GDP per capita in the short run. The result implies that if aid-policy interaction variable goes up by one per cent, economic growth would increase by 0.09 per cent. This result further indicates that the effectiveness of foreign aid is not contingent on whether Nigeria has good macroeconomic policy environment or not. Hence, the effect of foreign aid on economic growth is not conditional on the existence of good

macroeconomic policy environment in Nigeria. However, the change in the log of the aid-policy interaction variable exerted a negative and insignificant relationship with economic growth in the first lag.

The result means that if aid-policy interaction variable goes up by one per cent, economic growth would decrease by 0.02 per cent. Again, the finding further implies that the effect of aid on growth in Nigeria is not dependent on the macroeconomic policy environment in the short-run. This is true if the impact of change in foreign aid on economic growth and the impact of the aid-policy interaction term on economic growth at first lag respectively are considered. The aid-policy interaction term was negative and insignificant at a first lag. This finding is in line with the submissions of Lensink and White (2001); Henrik Hansen and Tarp (2001) and others who discovered that aid had a positive and significant impact on economic growth, despite the macroeconomic policy environment. In line with this view, regardless of the negative and insignificant association between macroeconomic policy and economic growth in our findings, foreign aid exerted a positive and significant relationship with economic growth in the short-run. This result is not consistent with the results of the long-run equation.

Also, change in ethnic fractionalization had a positive and significant relationship with economic growth contrary to the result of the long-run equation while the change in institutional quality maintained its negative and insignificant relationship with economic growth as in the long-run growth equation. This finding means that if ethnic fractionalization goes up by one unit, economic growth would increase by 19.3 per cent. This further suggests that ethnic conflict has a positive impact on economic growth in the short-run. The conceivable reason for this is that the political instability and civil war generated by ethnic conflicts in Nigeria could be a motivating factor for the government to increase consumption. Therefore, this measure by the government to mitigate possible conflicts would increase economic growth in the short-run through the multiplier process. The coefficient of the error correction term that measures the speed of adjustment of economic growth to equilibrium is -0.634386 and had the expected negative sign.

Based on the coefficient of ECM_{t-1}, 63% of the previous deviation in economic growth from equilibrium is corrected by it within one year. Granger (1988) opined that the high significance value of the speed of adjustment suggests that a long-run Granger causality runs from the explanatory variables to the explained variable. Also, the presence of a long-run relationship between real GDP per capita and the explanatory variables is further confirmed through the negative sign and high significance of the speed of adjustment to long-run stable equilibrium. De Boef (2000) remarked that in the aid-economic growth nexus estimation, an ECM is of great importance since the change in short-run is required to sustain the long-run relationship.

5. Conclusion and Recommendations

This study examined the short-run and long-run relationship between foreign aid and economic growth in Nigeria from 1984–2017. A key revelation from this study is that foreign aid does not contribute to economic growth in Nigeria in the long-run. However, the short-run results showed that foreign aid contributed to economic growth in Nigeria at the first lag. Another major conclusion from this study is that the impact of foreign aid on Nigeria's economic growth is contingent on the quality of macroeconomic policy environment. Hence, the claim that the effectiveness of aid is dependent on the quality of macroeconomic policy environment is supported by this finding. Also, private investment was not critical to economic growth in Nigeria. Furthermore, the macroeconomic policy environment in Nigeria is unstable and does not support economic growth. The recommendations that can be derived from these findings are as follows: The policymakers of the government should put in place a sound macroeconomic policy environment that is stable to stimulate domestic saving and ensure the effective utilization of foreign aid. The saving-investment gap is expected to be bridged by the domestic saving resulting in the financing of both private and public investments in the long-run. The government should ensure that these policies are adequately implemented.

The Central Bank of Nigeria (CBN) should come up with a monetary policy measure aimed at promoting private investments through access to credit facilities for the private sectors. The government should also provide incentives to private investors and a good enabling environment for the thriving of private businesses. All the obstacles to private investments in Nigeria should be looked into as a matter of urgency by the government. This is premised on the fact that private investment in Nigeria was an issue of worry based on its negative impact on growth both in the short-run and long-run respectively. The negative impact of the institutional quality of governance on economic growth is an indication that quality institutions and good governance matter. Hence, policymakers should ensure that quality institutions are in place and promote measures of good governance. This may ensure that foreign aids are managed prudently. Furthermore, there is a need for the diversification of the economy through viable alternatives such as agriculture, industrialization and trade to lessen heavy reliance on foreign aid as a major means of stimulating economic growth. One way that the utilization of foreign aid can be improved is through the fight on corruption. The Economic and Financial Crimes Commission (EFCC) and Independent Corrupt Practices and other Related Offences Commission (ICPC), established to fight corruption should be effective in their job and convince development partners and other aid donors that it is no longer business as usual for those that divert public resources including foreign aid funds for personal gains.

6. Limitations of the Study

Evidence had shown that working with a large dataset presents a challenge in terms of missing observations. The availability of data on ethnic fractionalization and institutional quality was a challenge. Institutional quality denotes the institutional quality of governance. It was based on the indices of bureaucratic quality, government stability, the rule of law and corruption drawn from the ICRG. The database of the ICRG is considerable. However, it is restricted. Again, data on the specified indices were only available from 1984 upwards. The data on these indices from 1984–2017 were obtained through a link provided by some research scholars. The ethnic fractionalization index was sourced from Drazanova (2019). However, the information it provided was concerning the percentage of major ethnic groups existing in 165 countries yearly from 1945 through 2013. In other words, it was not available from 2014 to 2017. We observed that the index of ethnic fractionalization from 2009-2013 was a

uniform value of 0.85. Also, we discovered that the ethnic fractionalization index for the scope of this study – 1984 to 2017 was either 0.85 or 0.86. Hence, we employed the value of 0.85 from 2014-2017. This is on the assumption that ethnolinguistic fractionalization variable does not change over time (Burnside & Dollar, 1997). Therefore, lack of access to the required data for 2018 and 2019 respectively prevented us from extending the scope of this study beyond 2017.

References

Abera, A. (2017). *The nexus of foreign capital inflows and economic growth in Ethiopia.* Diploma Thesis, Mendel University in Brno, Brno.

Abolade, L. (2019). Nigeria's external debt rises by 163 per cent between 2015 and 2019 international centre for investigative Reporting. Retrieved from: https://www.icirnigeria.org/nigerias-external-debt-rises-by-163-per-cent-between-2015-and-2019/.

Agbontaen, O. O., & Iyoha, M. A. (2012). *Macroeconomic stability and the impact of foreign aid on economic growth in Nigeria. Department of economics and statistics.* Nigeria: University of Benin.

Ahmed, Z. S. (2014). *The effect of foreign aid on economic growth: A cross section study on aid to sub-saharan Africa.* An Unpublished Bachelor of Economics Thesis of the Institution of Social Sciences, Sodertorns University.

Arndt, C., Jones, S., & Tarp, F. (2009). Aid and growth: Have we come full circle. UNU-WIDER discussion Paper No.2009/05. Retrieved from: http://doi.org/10.2202/1948-1837.1121.

Arrow, K. J. (1962). The economic implications of learning by doing. *The Review of Economic Studies, 29*(3), 155-173. Available at: https://doi.org/10.2307/2295952.

Artelaris, P., Arvanitidis, P., & Petrakos, G. (2006). Theoretical and methodological study on dynamic growth regions and factors explaining their growth performance. Papers DYNREG02, Economic and Social Research Institute (ESRI).

Bakare, A. S. (2011). The macroeconomic impact of foreign aid in sub-Sahara Africa: The case of Nigeria. *Business and Management Review, 1*(5), 24 – 32.

Barro, R., & Sala-i-Martin, X. (1995). *Economic growth.* New York: McGrawHill.

Bearce, D. H., & Tirone, D. C. (2008). Foreign aid, recipient growth, and the strategic goals of donor governments. Unpublished manuscript, University of Pittsburgh. Retrieved from: http://www.allacademic.com//meta/p_mla_apa_research_citation/2/0/9/5/5/pages209559/p209559-1.php. [Accessed on 07/10/2019].

Bhattarai, B. P. (2005). *The effectiveness of foreign aid: A case study of Nepal.* An Unpublished PhD in Economics and Finance, School of Economics and Finance, University of Western Sydney, Sydney, Australia.

Bhattarai, B. P. (2009). Foreign aid and growth in Nepal: An empirical analysis. *Journal of Developing Areas, 42*(2), 283–302.

Boakye, P. F. (2008). *Foreign aid and economic growth in Ghana (1970-2005).* An unpublished Masters Dissertation, University of Science and Technology, Kumasi, Ghana.

Burnside, C., & Dollar, D. (1997). Aid, policies and growth. *American Economic Review, 90*(4), 847-868.

Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. *American Economic Review, 90*(4), 847-868.

Burnside, C., & Dollar, D. (2004). Aid, policies and growth: Revisiting the evidence. World Bank Policy Research Working Paper No. 3251. Washington DC: The World Bank.

Chamlagai, D. (2015). *The impact of remittance, foreign aid and FDI on growth: Evidence from the Nepal economy.* An Unpublished Master's of Business Administration of the Institute of Graduate Studies and Research, Eastern Mediterranean University, Gazimagusa, North Cyprus.

Chenery, & Bruno. (1962). Development alternatives in an open economy: The case of Israel. *Economic Journal, 72*(285), 79-103. Available at: https://doi.org/10.2307/2228618.

Chenery., H. B., & Strout, A. M. (1966). Foreign assistance and economic development. *American Economic Review, 56*(4), 679-733.

Clemens, M. A., Radelet, S., Rikhil, R. B., & Bazzi, S. (2012). Counting chickens when they hatch: Timing and the effects of aid on growth. *Economic Journal, 122*(561), 590-617. Available at: https://doi.org/10.1111/j.1468-0297.2011.02482.x.

Collier, P., & Dollar, D. (2002). Aid allocation and poverty reduction. *European Economic Review, 46*(8), 1475-1500. Available at: https://doi.org/10.1016/s0014-2921(01)00187-8.

Collodel, A. G. P. (2011). *Evaluation of the impact of foreign aid on growth and development.* An unpublished Master Thesis of the University of South Africa.

Dagne, S. B. (2014). Impact of development and humanitarian aid on economic growth of developing countries. An Unpublished M.Sc in Development Economics, Department of Social Sciences, Wageningen University and Research Centre. Available at: https//www.edepot.wur.nl/302731.

Dalgaard, C. J., & Hansen, H. (2001). On aid, growth and good policies. *Journal of Development Studies, 37*(6), 17-41. Available at: https://doi.org/10.4324/9781315827834-2.

Dalgaard, C. J., Hansen, H., & Tarp, F. (2002). On the empirics of foreign aid and growth. University of Nottingham, Credit Research Paper 02/08.

De Boef, S. (2000). Modeling equilibrium relationships: Error correction models with strongly autoregressive data. *Political Analysis, 9*(1), 78–94. Available at: https://doi.org/10.1093/oxfordjournals.pan.a004866

Devarajan, S., Dollar, D., & Holmgren, T. (2001). *Aid and reform in Africa.* Washington D.C: World Bank.

Domar, E. (1947). Expansion and employment. *American Economic Review, 3*(1), 343-355.

Dowling, J. M., & Hiemenz, U. (1983). Aid, savings and growth in the Asian Region. *The Developing Economies, 21*(1), 3-13. Available at: https://doi.org/10.1111/j.1746-1049.1983.tb00641.x.

Drazanova, L. (2019). Historical index of ethnic fractionalization dataset. *Havard Dataverse, 1.* Available at: https://doi.org/10.7910/DVN/4JQRCL.

Durbarry, R., Gemmell, N., & Greenaway, D. (1998). New evidence on the impact of foreign aid on economic growth. Credit Research Paper 98/8, University of Nottingham.

Easterly, W. (1999). The ghost of financing gap: Testing the growth model used in the international financial institutions. *Journal of Development Economics, 60*(2), 423-438.

Easterly, W., Levine, R., & Roodman, D. (2003). New data, new doubts: A comment on burnside and dollar's aid, policies and growth. NBER, Working Paper No. 9846.

Ekanayake, E. M., & Chatrna, D. (2010). The effect of foreign aid on economic growth in developing countries. *Journal of International Business and Cultural Studies, 3*(2), 1-13.

Ellahi, N., & Kiani, A. (2011). *Investigating public investment-growth nexus for Pakistan.* Paper presented at the 2011 International Conference on E-business, Management and Economics, IPEDR Vol.25.

Feeny, S. (2005). The impact of foreign aid on economic growth in Papua New Guinea. *Journal of Development Studies, 14*(6), 1092–1117. Available at: https://doi.org/10.1080/00220380500155403.

Fischer, S. (1993). The role of macroeconomic factors in growth. *Journal of Monetary Economics, 32*(3), 485-512. Available at: https://doi.org/10.1016/0304-3932(93)90027-d.

Girma, H. (2015). The impact of foreign aid on economic growth: Empirical evidence from Ethiopia (1974-2011) using ARDL approach. *Journal of Research in Economics and International Finance, 4*(1), 1-12. Available at: https://doi.org/10.14303/jrief.2014.044.

Gong, L., & Heng-fu, Z. (2001). Foreign aid reduces labour supply and capital accumulation. *Review of Development Economics, 5*(1), 105 – 118. Available at: https://doi.org/10.1111/1467-9361.00110.

Gounder, R. (2001). Aid-growth nexus: empirical evidence from Fiji. *Applied Economics, 33*(8), 1009- 1019. Available at: https://doi.org/10.1080/00036840122986.

Gounder, R. (2003). Causality analysis of development assistance and economic growth in Solomon Island. *Pacific Economic Bulletin, 18*(1), 31-40.

Granger, C. W. J. (1988). Some recent developments in a concept of causality. *Journal of Econometrics, 39*(1-2), 199–211. Available at: https://doi.org/10.1016/0304-4076(88)90045-0.
Griffin, K. B., & Enos, J. L. (1970). Foreign assistance: Objectives and consequences. *Economic Development and Cultural Change, 18*(3), 313-327. Available at: https://doi.org/10.1086/450435.
Griffin., K. (1970). Foreign capital, domestic savings and economic development. *Bulletin of the Oxford University Institute of Economics & Statistics, 32*(2), 99-112.
Grossman, G. M., & Helpman, E. (1991a). *Innovation and growth in the global economy*: Cambridge: MIT Press.
Guillaumont, P., & Chauvet, L. (2001). Aid and performance: A reassessment. *Journal of Development Studies, 37*(6), 66-87.
Hadjimichael, M. T., Dhaneswar, G., Martin, M., Roger, N., & Ucer, M. E. (1995). *Sub-Saharan Africa: Growth savings and investment, 1986-1993.Occasional paper 118*. Washington, D.C: International Monetary Fund.
Hansen, H., & Tarp, F. (2000b). Aid effectiveness disputed. *Journal of International Development, 12*(3), 335-398. Available at: https://doi.org/10.1002/(sici)1099-1328(200004)12:3<375::aid-jid657>3.0.co;2-m.
Hansen, H., & Tarp, F. (2001). Aid and growth regressions. *Journal of Development Economics, 64*(2), 547-570.
Harms, P., & Lutz, M. (2004). 'The macroeconomic effects of foreign aid: A survey. University of St. Gallen Economics Discussion Paper No. 2004-11.
Harrod, R. F. (1939). An essay in dynamic theory. *The Economic Journal, 49*(193), 14-33. Available at: https://doi.org/10.2307/2225181.
Herzer, D., & Morrissey, O. (2011a). *Long-run aid effectiveness*. Paper presented at the CSAE Conference 2011, Economic Development in Africa, Oxford, March 20-22, Paper No. 144.
Herzer, D., & Morrissey, O. (2011b). Long-run aid effectiveness. CSAE Conference 2011, Economic development in Africa, Oxford, March 20-22, Paper No. 144. Retrieved from: www.csae.ox.ac.uk/conferences/2011-EDiA/papers/144-Morrissey.pdf. [Accessed on 15/08/2019]
Hossain, B. (2014). The effect of foreign aid on the economic growth of Bangladesh. *Journal of Economics and Development Studies, 2*(2), 93-105.
Islam, M. N. (2003). Political regimes and the effects of foreign aid on economic growth. *Journal of Developing Areas, 37*(1), 35-53.
Javid, M., & Qayyum, A. (2011). *Foreign aid-growth nexus in Pakistan: Role of macroeconomic policies*. Paper presented at the MPRA Paper No. 29498. Munich: MPRA.
Juselius, K., Moller, N. F., & Tarp, F. (2014). *'The long-run impact of foreign aid in 36 African countries: Insights from multivariate times series analysis*. Paper presented at the UNU-WIDER Working Paper 51/2011.
Kargbo, P. M. (2012). *Impact of foreign aid on economic growth in Sierra Leone: Empirical analysis*. Paper presented at the UNU-WIDER Working Paper No. 2012/07.
Karras, G. (2006). Foreign aid and long-run economic growth: Empirical evidence for a panel of developing countries. *Journal of International Development: The Journal of the Development Studies Association, 18*(1), 15-28.
Khadka, N. (1996). A study of the impact of aid on Nepal's Economy. *Economia Internazionale/International Economics, 49*(4), 585-609.
Khadka, N. (1997). *Foreign aid and foreign policy: Major powers and Nepal*. New Delhi: Vikash Publishing House.
Killick, T. (1991). The developmental effectiveness of aid to Africa. Working Paper Series 646, World Bank, Washington, D.C.
Knack, S. (2000). Aid dependence and the quality of governance: A cross-country empirical analysis. World Bank Working Paper 2396. Washington D.C., World Bank.
Knack, S., & Keefer, P. (1995). Institutions and economic performance: Cross-country tests using alternative institutional measures. *Economics & Politics, 7*(3), 207-227. Available at: https://doi.org/10.1111/j.1468-0343.1995.tb00111.x.
Lancaster, C. (1999). Aid effectiveness in Africa: The unfinished agenda. *Journal of African Economies, 8*(4), 487-503. Available at: https://doi.org/10.1093/jae/8.4.487.
Lensink, R., & White, H. (2001). Are there negative returns to aid? *Journal of Development Studies, 37*(6), 42-65.
Levy, V. (1988). Aid and growth in Sub-Saharan Africa: The recent experience. *European Economic Review, 32*(9), 1777-1795.
Linstad, A. M. (2013). *Is aid contributing to poverty reduction? An analysis of the poverty-efficiency of Norwegian aid*. An unpublished M.Sc Economics Thesis of the Department of Economics, University of Bergen.
Lioyd, T., Morrissey, O., & Osei, R. (2001). *Aid, exports and growth in Ghana*. Paper presented at the CREDIT Research Paper 01/01. Nottingham: University of Nottingham.
Lucas, J. R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics, 22*(1), 3-42.
M'Amanja, D., & Morrissey, O. (2005). Foreign aid, investment and economic growth in Kenya: A time series approach. CREDIT Research Paper No. 06/05, University of Nottingham, United Kingdom.
Malik, G. (2008). Foreign aid and economic growth: A cointegration analysis of the six Poorest African countries. *Economic Analysis and Policy, 38*(2), 251-260. Available at: https://doi.org/10.1016/s0313-5926(08)50020-8.
Mallick, S., & Moore, T. (2008). Foreign capital in a growth model. *Review of Development Economics, 12*(1), 143-159. Available at: https://doi.org/10.1111/j.1467-9361.2008.00437.x.
Manwa, F. (2015). *Impact of trade liberalisation on economic growth: The case of the Southern African customs union (SACU) countries*. PhD Thesis, Southern Cross University, Lismore, NSW.
Mavrotas, G. (2002). Aid and growth in India: Some evidence from disaggregated aid data. *South Asia Economic Journal, 3*(1), 19-48. Available at: https://doi.org/10.1177/139156140200300102.
Monterrey, C. (2002). *Monterrey consensus of the international conference on financing for development. United Nations department of economic and social affairs, Monterrey, Mexico*. Monterrey: United Nations Department of Public Information.
Moreira, S. B. (2005). Evaluating the impact of foreign aid on economic growth: A cross-country study. *Journal of Economic Development, 30*(2), 25-48.
Morrissey, O. (2001). Does aid increase growth? *Progress in Development Studies, 1*(1), 37-50. Available at: https://doi.org/10.1191/146499301701571354.
Morrissey, O., & Nelson, D. (1998). East Asian economic performance: Miracle or just a pleasant surprise? *World Economy, 21*(7), 855-879. Available at: https://doi.org/10.1111/1467-9701.00169.
Mosley, P. (1980). Aid, savings and growth revisited. *Oxford Bulletin of Economics and Statistics, 42*(2), 79-95. Available at: https://doi.org/10.1111/j.1468-0084.1980.mp42002002.x.
Mosley, P. (1987). *Overseas aid: Its defence and reform*. Brighton: Wheatsheaf.
Mosley., P., Hudson, J., & Horrell, S. (1987). Aid, the public sector and the market in less developed countries. *Economic Journal, 97*(388), 616-641.
Murthy, V. N., Ukpolo, V., & Mbaku, J. M. (1994). Foreign aid and economic growth in Cameroon: Evidence from cointegration tests. *Applied Economics Letters, 1*(10), 161-163. Available at: https://doi.org/10.1080/1350485943357916.
Mwanamanga, R. (2015). *Does foreign aid promote growth?" Evidence from Malawi*. An Unpublished MSc Economics and Finance for Development Thesis of the School of Social and International Studies, University of Bradford. Retrieved from: https://www.devstud.org.uk/media/2020/06/mwanamanga-msc-dissertation.pdf.
Narayan, P. K. (2004). 'Reformulating critical values for the bounds F-statistics approach to cointegration: An application to the tourism demand model for Fiji. Department of Economics Discussion Papers, Working Paper No. 02/04.
Newlyn, W. T. (1973). The effect of aid and other resource transfers on savings and growth in less developed countries: A comment. *Economic Journal, 83*(331), 863-869.
Newlyn., W. T. (1977). *The financing of economic development*. England: Oxford University Press.
Odusanya, I. A., Logile, A. I., & Akanni, L. O. (2011). Foreign aid, public expenditure and economic growth: The Nigerian case. *Journal of Applied Business Research (JABR), 27*(3), 33-42. Available at: https://doi.org/10.19030/jabr.v27i3.4211.
Ojiambo, E. V. (2013). *Effects of foreign aid predictability on investment and economic growth in Kenya*. An Unpublished PhD Economics Thesis of the School of Economics, Kenyatta University, Kenya.
Ojiambo., E., & Ocharo, K. N. (2016). Foreign capital inflows and economic growth in Kenya. *International Journal of Development and Sustainability 5*(8), 367-413.

Ojiambo., E., Oduor, J., Mburu, T., & Wawire, N. (2015). Aid unpredictability and economic growth in Kenya. Working Paper Series N° 226 African Development Bank, Abidjan, Cote d'Ivoire.

Olkeba, F. D. (2013). *The relative role of foreign aid and domestic resource mobilizations as a strategy to boost economic growth of developing countries: the case of Ethiopia*. An Unpublished Master of Science in International Cooperation Policy of Ritsumeikan Asia Pacific University.

Over, J. A. M. (1975). An example of the simultaneous equations problem: A note on foreign assistance: Objectives and consequences. *Economic Development and Cultural Change, 23*(4), 751-756. Available at: https://doi.org/10.1086/450838.

Pacifique, M. D. (2017). *Aid, economic growth and poverty: Analysis of the stimulating and distorting effects of Official Development Assistance on Sub-Saharan African countries*. An Unpublished PhD Economics Thesis of Universidad de Cantabria.

Papanek, G. F. (1973). Aid, foreign private investment, savings, and growth in less developed countries. *Journal of political Economy, 81*(1), 120-130. Available at: https://doi.org/10.1086/260009.

Papanek., G. F. (1972). The effect of aid and other resource transfers on savings and growth in less developed countries. *Economic Journal, 82*(327), 935–950.

Paudyal, S. R. (1996). *Foreign trade, aid and development in Nepal*. New Delhi: Commonwealth Publishers.

Pesaran, M. H., & Shin, Y. (1999). An autoregressive distributed lag modelling approach to cointegration analysis. In S. Strom, (Ed.), Chapter 11 in Econometrics and Economic Theory in the 20th Century the Ragnar Frisch Centennial Symposium (pp. 371-413). Cambridge: Cambridge University Press.

Pesaran., M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3), 289-326. Available at: https://doi.org/10.1002/jae.616.

Ramesh, D. (1998). *The impact of foreign aid on growth and savings in developing countries*. An Unpublished Ph.D Thesis of the University of Nottingham. Accessed from the University of Nottingham.

Rana, P. B., & Dowling, J. J. M. (1988). The impact of foreign capital on growth: evidences from Asian developing countries. *The Developing Economies, 26*(1), 3-11. Available at: https://doi.org/10.1111/j.1746-1049.1988.tb00119.x.

Rana., P. B. (1987). Foreign capital, exports, savings and growth in the Asian Region. *Savings and Development, 11*(1), 5-27.

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy, 94*(5), 1002-1037. Available at: https://doi.org/10.1086/261420.

Romer., P. M. (1990). Endogenous technological change. *The Journal of Political Economy, 98*(5), S71-S102.

Rosenstein-Rodan, P. N. (1961). International aid for underdeveloped countries. *Review of Economics and Statistics 43*(5), 107-148.

Sahoo, K. (2016). *Foreign aid and economic development: Empirical evidence from select South Asian economies*. An Unpublished PhD in Humanities and Social Sciences of the Department of Humanities and Social Sciences, National Institute of Technology Rourkela, India.

Salisu, A. A., & Ogwumike, F. O. (2010). Aid-Macroeconomic policy environment and growth: Evidence from Sub-Saharan Africa. *Pakistan Journal of Applied Economics, 20*(1-2), 1-12.

Singh, R. D. (1985). State intervention, foreign economic aid, savings and growth in LDCs: Some recent evidence. *Kyklos, 38*(2), 216-232. Available at: https://doi.org/10.1111/j.1467-6435.1985.tb02224.x.

Snyder, D. W. (1993). Donor bias towards small countries: An overlooked factor in the analysis of foreign aid and economic growth. *Applied Economics, 25*(4), 481-488. Available at: https://doi.org/10.1080/00036849300000056.

Solow, R. M. (1956). A contribution to the theory of economic growth. *The quarterly Journal of Economics, 70*(1), 65-94.

Stoneman, C. (1975). Foreign capital and economic growth. *World Development, 3*(1), 11-26.

Svensson, J. (2000). Foreign aid and rent-seeking. *Journal of International Economics, 21*(2), 437-461.

Tadesse, T. (2011). Foreign aid and economic growth in Ethiopia: A cointegration analysis. *The Economic Research Guardian, 1*(2), 88-108.

Tarp, F. (2009). Aid effectiveness. UNU-WIDER Working Paper 2009/05.

Todaro, M. P., & Smith, S. C. (2009). *Economic development* (10th ed.). Harlow: Addison-Wesley.

Trinh, T. (2014). *Foreign aid and economic growth: The impact of aid on determinants of growth - The case of Vietnam*. An Unpublished Master's Thesis in Economics and Business Administration of the School of Business, Aalto University.

United Nations. (2015b). *Transforming our world: The 2030 agenda for sustainable development, A/RES/70/1*. New York: United Nations.

Whitaker, M. T. (2006). *The impact of foreign aid on economic growth*. An Unpublished Bachelor of Arts in Economics Thesis of the Economics Faculty, McAnulty College of Liberal Arts, Duquesne University Pittsburgh, Pennsylvania.

White, H. (1992). The macroeconomic impact of development aid: A critical survey. *The Journal of Development Studies, 28*(2), 163-240.

World Bank. (1998). *Assessing aid: What works, what doesn't and why?* New York: Oxford University Press.

Yin, R. K. (2014). *Case study research: design and methods*. London: Sage Publications Ltd.