The Implication of Foreign Aid on Economic Growth in Nigeria.

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ABSTRACT

The shortage of domestic savings needed for investments and the import requirements necessary for a certain production level and earnings from foreign exchange has made the inflow of foreign aid necessary to drive growth in a developing nation like Nigeria. The objective of this study therefore is to investigate the implication of foreign aid on economic growth in Nigeria for a 40- year time period spanning from 1981 to 2020. Time series data on gross domestic product, official development assistance and technical cooperation grant were sourced from the Central Bank of Nigeria statistical bulletin and the World Development Indicators database. The Unit root test, Co-integration test and Error Correction technique were employed as the main analytical tools in the study. The variables were stationary at first difference, according to the Augmented Dickey Fuller stationarity test. The results of the Johansen co-integration test indicated that the variables have a long-term association. ~~The Augmented Dickey Fuller stationarity test showed that the variables were stationary at first difference. The Johansen co-integration test results confirmed the existence of a longrun relationship among the variables.~~ The ECM result showed that ODA has a positive relationship with economic growth (GDP) in Nigeria. Also, TCG positively impacted economic growth in Nigeria for the period covered by the study. The impact of ODA and TCG were however not statistically significant. Hence, it was concluded that foreign aid did not significantly drive economic growth in Nigeria. Based on the empirical findings of this study, the following recommendations were made; government should ensure that the official development assistance received from international donors is channeled to developmental projects which should be monitored closely to ensure that they are efficiently utilized. Also, the inflow of technical grant should be encouraged to ensure human capital development and sustain growth in Nigeria. Finally, sound policies should be put in place to enable Nigeria transition from being a recipient of foreign aid to being a donor country.

Keywords: Foreign Aid, Official Development Assistance and Technical Cooperation Grant, Economic Growth.

1. INTRODUCTION

According to Todaro and Smith (2011), foreign aid represents all forms of grants and loans at concessional terms which are targeted at transferring resources from developed to less developed ones on developmental and income distribution grounds. It is the transfer of capital packages and other technical/managerial assistance from a country or international organization for the benefit of a recipient country.

Many development economists have viewed foreign aid as an alternative instrument for attaining economic growth. The likes of Lewis (1954), Chennery and Strout, (1966), Iyoha, (2004), Adamu and Ighodaro, 2012 opined that most economies at some stage in their development process, required foreign aid or assistance to drive sustainable development. Bakare (2011) argues that foreign aid and grants increases the available capital for investment and growth by generating employment and increasing citizen participation in development programmes. For countries with inadequate capital, foreign aid can hasten the realization of a stable output growth rate because of the transfer of knowledge.

Studies by Singh (1985), Duc (2006) and Olabode (2013) showed an inverse relationship between foreign aid and growth while those by Snyder (1993), Burnside and Dollar (2000) and Hansen and Trap (2000) showed positive outcomes. On the other hand, the works of Dhakal et al (1996**),** Jensen and Paldam (2003) reported no significant impact of foreign aid on economic growth.

The view that foreign aid has been effective in driving the development process of economies has not been free of controversies. The critiques of this view give examples of countries like Central African Republic, Haiti, Nigeria and Somalia arguing that the inflow of foreign aid has enriched the elite in poor countries, led to unusual dependence on the donors and altered the market forces in the recipient countries (Masci, 2004). Those in favour of the view cite examples of countries of Bolivia, Botswana and Ghana, Indonesia, Uganda and Vietnam South Korea, North Korea, China that have benefited from aid countering the former argument that the challenges associated with foreign aid stems from the donor institutions or countries.

Nigeria as a typical developing nation is faced with low income and high unemployment levels which has led to a saving-investment gap. It is an attempt to bridge this gap that the option of foreign aid is resorted to. Nigeria, as well as other sub-Saharan African nations over the years have received huge volumes of foreign assistance. It is sad to note however that while other aid recipient nations have transitioned to be being donor nations, Nigeria is still far from attaining economic development. This therefore raises a curiosity on how effective foreign aid has been in driving growth in the Nigerian economy. The objective of this study therefore is to investigate the implication of foreign aid on economic growth in Nigeria. Following this introduction is the literature review, methodology, result discussion and conclusion with recommendations.

2. LITERATURE REVIEW

2.1 Theoretical Literature

The standard model that explains the macroeconomic effect of foreign aid is the Two Gap Model. The model, as advanced by Chenery and Strout (1966) argues that less developed countries (LDCs) are usually faced with two gaps in their development process. The first gap is savings-gap which occurs because of the shortage of domestic savings needed for investments to drive growth. The second gap is the foreign trade or exchange gap which originates from the import requirements necessary for a certain level of production and foreign exchange earnings. The presence of these gaps makes the inflow of foreign aid necessary to drive growth in a nation. The ‘two gap model’ gives credence to the investment-limited growth hypothesis based on the

Harrod-Domar growth model with the assumption of a specific amount of investment necessary to increase growth.

2.2 Conceptual Framework

The most common form of foreign aid is official development assistance (ODA), which is basically given to combat poverty and promote growth. ODAs augment the internal assets needed for investment to drive growth in developing countries. The main source of ODA is bilateral grants from a donor country to a recipient one which could come in form of loans through international and non-governmental organizations (NGOs). The assistance is capable of enhancing the business environment for the private-sector also to thrive.

Other classifications of foreign aid are project aid, programme aid and technical co-operation aid. Project aid comprises of funds aimed at augmenting the physical capital infrastructure of the recipient countries. It is aimed at specific projects in sectors like agriculture, education, health, housing, and water supply, transport, power, etc. Riddell, (2007) however noted that small amounts of project aid are channeled to cultural projects, industrial mining and trade. Unlike like project aid, programme aid is not channeled to any particular activity but rather at balance of payments (BOP) support, budget support, financing of capital goods and sector programme assistance. Finally, Technical co-operation aid (also known as Technical assistance), includes the provision of skills in the form of training and scholarship, know-how, specialist personnel, grants for research and guidance. The focal point is usually. Over the years, technical co-operation aid has focused on human capital development as they also provide specialized training to achieve set objectives.

2.3 Empirical Literature

Various empirical works, both within and outside Sub-Saharan Africa exists on the relationship between foreign aid and economic growth. In examining the extent of the impact of foreign aid on economic growth in Nigeria, Bakare (2011) used the Vector Autoregressive Model (VAR) to determine the sources of shock to growth in Nigeria. Their findings showed a negative relationship between foreign aid and output growth implying that foreign aid worsened output growth in Nigeria.

Fasanya & Onakoya (2012) used the neo-classical modeling analytical framework to analyze the impact of foreign aid on economic growth in Nigeria for the period of 1970 to 2010. Findings from their study showed that aid flows had significant impact on economic growth in Nigeria while population growth had no significant effect on aid flows. They therefore recommended that donor governments be aware of the political situations in receiving countries.

Bashir (2013) examined the impact of official development assistance (ODA) and foreign direct investment (FDI) on real growth in Nigeria for the period 1980-2011. Using the Error Correction Method (ECM), the study confirmed a negative impact of ODA on real growth in the country.

Mba and Amassoma (2014) analyzed the effects of foreign aid on the economic growth in Nigeria for the period, 1981-2012 using the Ordinary Least Square method. The result of their study showed that the relationship between foreign aid and economic growth in Nigeria was

negative and non- significant. The study therefore recommended that foreign aid flows be invested into developmental projects that will boost the nations GDP.

Ugwuanyi et al (2017) assessed the impact of official aid on poverty reduction in Nigeria for the period, 1981 to 2014 using the ARDL and the error correction model (ECM) technique. For both the long-run and short-run, official aid had non-significant positive impact on poverty reduction within the study period. The study therefore recommended that foreign aid donors earmark aids for specific needs and also ensure that such aids are channeled to the specified target with the help of appraisals and implementation reports.

A similar study by Ewubare and Okpoi (2018) focused on how funds remitted by migrants affected poverty in Nigeria from 1980 to 2016. Using the ARDL method, the result indicated that in the long run, official development assistance (ODA) and technical cooperation grants reduced poverty incidence in Nigeria. Going by their result, the study recommended the creation of conditions that enhance the inflow of grants to reduce poverty in Nigeria.

A study by Fashina et al (2018), investigated the link between aid and human capital in promoting economic growth of Nigeria using the Vector Error Correction Model (VECM) estimation techniques. The findings from the study suggested that persistent increase in foreign aid flows beyond an optimal point may adversely affect growth thereby confirming the proposition of the Medicine Model.

A study conducted by Ubi and Ebi (2021) on the link between foreign aid and the development process in Nigeria over the period 1980 to 2018, comparing a 5-year average growth rate in foreign aid to that of some selected development indicators showed that periods with very high foreign aid inflows seem to support improvement in most of the development indicators. The study therefore recommended a higher aid inflow for Nigeria especially in the health and education sectors.

3. METHODOLOGY

This study's methodology was based on the ex-post facto research design adopting quantitative techniques of analysis using time series data sourced from Central Bank of Nigeria (CBN) statistical bulletin and the World Development Indicators database from 1981 to 2020. The Unit root test, Co-integration test and Error Correction technique were employed as the main analytical tools in the study.

3.1 Model Specification

This study specified the linear below as:
GDP = f(FOREINGAID)…… ……..…….(1)
To determine the relationship between foreign aid and economic growth, the former would be disaggregated into official development assistance and technical cooperation grant. Simplifying equation 1, we have:
GDP = f(ODA, TCG)…….…… ……..…….(2)
The econometric form of equation 2 is stated thus;

$GDP = \alpha_0 + \alpha_1 ODA + \alpha_2 TCG + e$….....…..(3)

To reduce the scale effect associated with data measurement, equation 3 is transformed to a log-linear form. The log –linear form of equation 3 is therefore stated thus:

$Ln\ GDP = \alpha_0 + \alpha_1 lnODA + \alpha_2 lnTCG + e$…….……..……..……...(4)

Where:

GDP = gross domestic product
ODA = official development assistance
TCG = technical cooperation grant
α_0 = Autonomous components of gross domestic product
α_1&α_2 = the slopes of official development assistance and technical cooperation grant.
Ln = natural logarithm
e = error term

It is expected *a priori* that $\alpha_1>0$, and $\alpha_2>0$.

4 RESULT AND DISCUSSION

Unit Root Test

To check for the presence of a unit root in each of the time series, the stationarity properties of the various variables were checked using the Augmented Dickey Fuller (ADF) test. The findings are shown in Table 1 below. ~~The stationarity properties of the individual variables using the Augmented Dickey Fuller (ADF) test was carried out to check for the existence of unit root in each of the time series. The results are presented in Table 1 below.~~

Table 1: Unit Root Result

VARIABLE	ADF Test	1% Critical Value	5% Critical Value	Order of Integration
GDP	-4.6354	-3.5421	-2.8531	I(1)
ODA	-6.4813	-3.9612	-3.2314	I(1)
TCG	-8.3426	-3.9612	-3.2314	I(1)

Source: *Researchers Computation Using E-Views 10*

The unit root test reported in Table 1 above shows that the variables were differenced once to attain stationarity. The ADF value of each variable was more than the crucial value of 5% in absolute terms. After confirming the stationarity of the variables, the Johansen approach must be used to perform the co-integration test.~~In absolute terms, the ADF value of each of the variable was greater than the critical value at 5%. Having confirmed the stationarity of the variables, it is therefore imperative to conduct the co-integration test using the Johansen procedure.~~

Co-Integration Test

The results of the co-integration test using the Johansen procedure is presented in the table 2 below.

Table 2: Johansen Co-integration Test Results

Hypothesized No. of CE(s)	Eigen value	Trace Statistics	5% critical value	Max-eigen Statistics	5% critical value
None *	0.645125	49.96079	47.85613	27.97173	27.58434
At most 1	0.369893	21.98906	29.79707	12.47039	21.13162
At most 2	0.295790	9.518664	15.49471	9.468309	14.26460

Source: *Researchers Computation Using E-Views 10*

The result of the co-integration in Table 2 was based on both the Trace Statistics and Maximum Eigenvalue. The results indicated one co- integrating equation at 5 percent significance level. This indicates that the variables in the estimated model have a long-run equilibrium connection. The condition for fitting in an error correction model is satisfied by the existence of co-integrating equations.~~This suggests that there is a long run equilibrium relationship amongst the variables in the estimated model. The existence of co-integrating equations satisfies the requirement for fitting in an error correction model.~~

Parsimonious Error Correction Mechanism

The ECM is used to confirm the existence of co-integration among the variables. The results are shown in Table 3 below, and they are based on the general-to-specific rule. ~~To confirm the existence of a co-integration among the variables, the ECM is employed. This is based on the general-to-specific rule and the results are presented on Table 3 below.~~

Table 3: Parsimonious ECM Result

Dependent Variable: D(GDPPC)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.733016	0.278523	-2.631796	0.0175
D(GDP(-1))	0.134915	0.067372	2.002550	0.0614
D(GDP(-2))	0.113680	0.064635	1.758791	0.0966
D(ODA)	0.177857	0.148036	1.201440	0.2452
D(TCG)	0.289490	0.233859	1.237885	0.2326
ECM(-1)	-0.598869	0.174054	-3.440714	0.0029
R^2= 0.64,	R^2 –adjusted = 0.60,	F-stat = 22.31,	F-prob =0.00,	DW=2.4

Source: *Researchers Computation Using E-Views 10*

The result in table 3 shows that the coefficient of ODA was positive in line with theoretical expectation but not statistically significant. The implication of tis is that the inflow of official development assistance did not significantly impact on economic growth during the period under review. This is in line with the submissions of Ubi and Ebi (2021) whose study observed that increases in foreign aid also increased real per capita GDP growth but not significantly.

Technical cooperation grant also had a positive relationship with gdp as expected *apriori* but not statistically significant. This result supports the finding of Ugwuanyi et al (2017), Okpoi and Ewubare (2018) who affirmed that the increase in foreign aid and grants alleviated poverty in the nation. The non-significant impact of foreign aid on economic growth goes a long way in suggesting that the inflow of foreign assistance have been mismanaged due to the high level of corruption in Nigeria.

The R^2 value of 0.64 shows that the model is a good fit implying that about 64 percent of the variations in gross domestic product can be explained by the changes in official development assistance and technical cooperation grant. Also, the overall regression result of the dynamic model was significant at 5 percent level as showed by the F-statistic of about 22.31. The Durbin Watson value of 2.4 shows that the model is free from autocorrelation. The ECM was rightly signed and statistically significant at conventional levels. This implies that the speed of adjustment to long run equilibrium at a speed of about 60 percent.

5. CONCLUSION AND RECOMMENDATIONS

This study focused on the implication of Foreign Aid on Economic Growth in Nigeria capturing a 40 year time period, from 1981 to 2021. This was done against the back ground that the inflow of foreign aid in form of official development assistance (ODA) and technical cooperation grant (TCG) are to drive growth in the economy.

The variables were tested for unit root and they attained stationarity after first difference. The Johansen co-integration test showed that there is a long run association between the variables. The ECM result showed that ODA has a positive relationship with economic growth (GDP) in Nigeria. Also, TCG positively impacted economic growth in Nigeria for the period covered by the study. The impact of ODA and TCG were however not statistically significant. Hence, it was concluded that foreign aid did not significantly drive economic growth in Nigeria. Based on the empirical findings of this study, the following recommendations were made; government should ensure that the official development assistance received from international donors is channeled to developmental projects which should be monitored closely to ensure that they are efficiently utilized. Also, the inflow of technical grant should be encouraged to ensure human capital development and sustain growth in Nigeria. Finally, sound policies should be put in place to enable Nigeria transition from being a recipient of foreign aid to being a donor country.

REFERENCES

Amassoma, D. (2011). External debt, internal debt and economic growth bound in Nigeria using a causality approach. *Current Research Journal of Social Sciences*, 3(4), 320-325.

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.

Bashir, O.K. (2013). Foreign assistance and economic growth in Nigeria: The two gap-gap model framework. *American Journal of Contemporary Research*, 3(10), 153-160.

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

Chenery, H.B., Strout, A.M. (1966). Foreign Assistance and Economic Development. *American Economic Review*, 56(4), 679–733.

Dhakal D.,Upadhyaya K., & Upadhyaya M. (1996). Foreign Aid, Economic Growth Causality, *Rivita Internazionale Di Scienze Economiche Commerciali*. 43, 597-606.

Duc, V.M. (2006). Foreign Aid and Economic Growth in the Developing Countries: A Cross Country Empirical Analysis. Available at: http://cnx.org/content/m13519/latest/

Ewubare, D. & G.E. Okpoi, 2018. International remittances and poverty reduction in Nigeria. *Journal of Applied Economics and Business*, 6(2), 5-24.

Fasanya, I.O. & Onakoya, A.B. (2012). Does foreign aid accelerate economic growth? An empirical analysis for Nigeria. *International Journal of Economics and Financial Issues*, 2(4), 423-431.

Fashina, O. A., Asaleye, A.J., Ogunjobi, J.O., & Lawal, A.I. (2018). Foreign aid, human capital and economic growth nexus: Evidence from Nigeria. *Journal of International Studies, 11*(2), 104-117.

Hansen, H. Tarp, F. (2000), Aid Effectiveness Disputed, *Journal of International Development*, 12(3), 375-398.

Iyoha, M. A. (2004) "Foreign aid and Economic Development in Africa" In Iyoha, M. A. Macroeconomics: Theory and Policy. Benin City: Mindex Publishing.

Jensen, P. & Paldam S. (2003), "Can the New Aid-Growth Models Be Replicated?" Working Paper No.2003-17, Institute for Economics: Aarhus.

Lewis, W.A. (1954). Economic development with unlimited supplies of labour. *The Manchester School*, 22(2), 139-191.

Masci, D. (2004). Global Issues. Washington, DC: CQ Press.

Mbah, S. and Amassoma, D., (2014). The Linkage between Foreign Aid and Economic Growth in Nigeria. *International Journal of Economic Practices and Theories*, 4(6), 1007-1017.

Olabode P. O. (2013): Foreign aid and poverty level in West African countries new evidence using a heterogeneous panel analysis, *Australian Journal of Business and Management Research, 3* (4), 25-38.

Singh, R.D. (1985). State Intervention, Foreign Economic Aid, Savings and Growth in LDCs: Some recent Evidence, *KYKLOS*, 38, 216-232.

Snyder, D.W. (1990), "Foreign Aid and Domestic Savings: A Spurious Correlation?" *Economic Development and Cultural Change*, 39, 175-181.

The World Bank: World Development Indicators (2015). Washington, D.C: The World Bank. http://documents.worldbank.org/curated/en/795941468338533334/World-development-indicators-2015.

Todaro, M. and S. Smith, 2011. Economic development. 11th Edn., Harlow: Addison Wesley.

Ubi, P. & Ebi, B. (2021). Foreign Aid and the Development Process: Some reflections on the Nigerian experience. *European Journal of Scientific Research,* 159(2), 57 – 59.

Ugwuanyi, U.B., H.C. Ezeaku and I.G. Ibe, 2017. The impact of official aid on poverty reduction: Empirical evidence from Nigeria (1981-2014) using the ARDL and bound test approach. *European Journal of Sustainable Development.* 6(2), 111-120.