EFFECTIVENESS OF FOREIGN AIDS IN DEVELOPING ECONOMIES: IMPLICATION FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

This study investigated the nexus between foreign aid and sustainable development in Nigeria over a period of 33years (i.e 1990-2022). It uses secondary source of data. The data such as net official development assistance, external borrowing, exchange rate, control of corruption, and human development index (proxy of sustainable development) were employed in the study. The data were collated from World Development Indicator, 2023. The techniques such as descriptive statistics, correlation analysis, Autoregressive Distributed Lag (ARDL) and diagnostic test were conducted to analyze the data. In the short run, it was discovered that net official development assistance, external borrowings and corruption inversely related with sustainable development. However, exchange rate positively interacts with sustainable development. Furthermore, net official development assistance has no significant impact on sustainable development while others are statistical significant. Based on the f-statistic results, short run interactions exist among the variables of study. In the long run, there exist of no relationship among the variables as reported by ARDL bound test. It was therefore concluded that only net official development assistances cannot lead to the proclaimed sustainable development in Nigeria in the both short run and long run except with the inclusion of other economic ingredients. The study recommended that government should complement foreign aids with an increased spending towards improving human capital development and domestic investments. In turn, it will enhance the economic performance, thereby leading to the attainment of sustainable development in Nigeria.

Keywords: *Foreign aid, Corruption, External Borrowing, ARDL, Exchange Rate*

Introduction

The significance of foreign aid in African economies has been the major source of concern to various scholars, economists and researchers. It has been argued that Africa has received about one trillion US dollars in the past years (Moyo, 2009). Yet, most African nations are under-developed indicating that the aid is ineffective. Foreign aid is categorized into; economic aid, social aid, and "other aid". Social aid is in form of human capital; economic aid deals with physical capital, while other aid includes food and emergency aid (Akramov, 2012). The motive of these forms of aid are distinguished from each other; while social and economic aids are long-term in nature, other components of aid are in the short-term (Saibu & Obioesio, 2017).

Morrissey (2001) posits that investment in physical and human capital upsurges the ability to import capital goods and aid is connected with technology needed to boost capital and promotes endogenous technical capacity. The benefit of aid was documented in the Millennium Development Goals (MDGs) initiatives. In 1970, the goal 0.7% foreign aid was predicted by the United Nations as a target for various countries. Thus, each advanced country is expected to increase its ODA assistance to about 148 countries by end 2015. However, this goal was not attained due to the inability of these countries to meet the target (Yiew & Lau, 2018). The failure of this goal coupled with other objectives necessitates the introduction of 17 Sustainable Development Goals (SDGs) by the United Nations in 2015.

The SDGs further pronounce the relevance of foreign aid to developing economies like Nigeria. It was argued by the United Nations (2015) that foreign aid assists in the reduction of poverty threshold as the world poverty declined

from 1,926 in 1990 to 836 in 2015. It was employed to enroll about 91% of the children into primary education and also jack up literacy rate from 83% to 91% in 1990 and 2015 respectively (Yiew & Lau, 2018).

Earlier, foreign aid was reported as an important and effective tool of improving economy and the standard of living in some countries such as Botswana in 1960s, Indonesia in 1970s, Ghana in 1980s and Uganda 1990s among others (Rahman, 2008). However, the inflows of aid into Africa to promote growth and development in developing countries are considered inadequate. This is because most African nations are subsisting to economic and social constraints.

Despite the fact that Nigeria has continued to gain from different foreign assistances such as social, economic and humanitarian aids, the socio-economic development has remained dismal and most Nigerians live in poverty and unemployment (Duru, Okafor, Eze & Ebenyi, 2020). Meanwhile, the developing countries have sufficient and economical natural and human resources which serves as a "pulling" factor for increasing investment and aids. However, most of these countries are characterized by poor transportation, basic services, vocational centers and technical training.

High level of corruption has also been argued as the hinder factor for achieving growth and development of recipient countries, especially when aid is been used in an inefficient manners for the country. Several literatures have pointed out the negative influence of corruption on growth. For instance, as argued by Alesina and Weder (2002), developing nations with highly corrupt regimes receive an improved aid than its counterpart with low corruption rating. Although aid does not lead to corruption, some specific forms of aid (especially technical assistances) worsen administrative quality and law abiding of the country (Tavares 2003).

Corruption affects public goods, decline growth and investments, reduces income from taxes and contributes to inflation surge in the country. Consequently, small businesses try to avoid taxes, and thereby resulting to low income to the government. Corruption does not only damage growth but also self improvement because corrupted countries relying heavily on global aid. Increase in corruption as suggested by Mauro, (1995) will leads to reduction in growth and investment by 0.5 and 5 % respectively.

Hence, the effectiveness of foreign aid has been a focal point of discourse for several years. Whether foreign aid positively or negatively influences the economy of the recipient countries remain unclear. Some studies such as Saibu and Obioesio (2017), Alemu and Lee (2015), and Asteriou (2009) found positive interaction between aid and growth of a country especially the developing ones while Isiaka and Makinde (2020), Ahmed (2014) and Tan (2006) found inverse connection between aid and growth. Meanwhile, most of these studies were centered on economic growth and not sustainable development, which is the goal of this research. Those who focused on economic development employed different method of analysis ranging from regression analysis, cointegration technique, and two stage least square among others (Adamu, Zasha & Umar, 2022; Saibu & Obioesio, 2017). Hence, this research intends to employ Autoregressive Distributed Lag (ARDL) and expand the scope of the previous studies to assess foreign aid and sustainable development in Nigeria.

Brief Literature on Foreign Aid and Sustainable Development

It is essential to note that Nigeria has the mandate to receive foreign aid across the globe. However, most of the foreign aids are not directly paid into the Nigeria's federation account. It is the donors who decide on what they are capable of doing for a country without considering the desire of the needing nations (Okpanachi, 2011). This has affected the expected benefit from foreign aid. Foreign aid is a global payment which could be in form of grant or loan transfer from one country to the other. These forms of payment can either be multilateral, bilateral or an assistance from non-governmental organizations (Todaro & Smith, 2009).

While bilateral aid involves a two-way stream which flows from one government to government, multilateral aid is granted by a coalition of organizations to a country. Burnside and Dollar (2000) excludes concessional loans and described aid as a grant element. This is because aid is used to complement domestic finance (such as savings), thereby increasing the volume of capital and investment in the country.

In an attempt to achieve the sustainable growth and development of a country, six different forms of capital are very essential. These include human, natural and physical resources, public and institutional capital as well as knowledge and infrastructure (Sachs, 2006). Foreign aid enhances the development process of the developing countries since aid can generate improved human capital, and increase in household revenue income. Oftentimes, household aid comes in form of food, while private sector aids are used to support small enterprises, though most commonly aid goes to the budget of the government in order to finance public projects and investments. Thus, developing countries especially the poor ones need a "big push", (i.e. assistance from already developed countries). Sachs (2006) also explains that aid to productive sectors will bring about growth of other sectors of the economy. This postulation was derived from the "poverty trap theory".

Mensah (2019) supported the arguments by pointing out the three important areas to be developed. This includes economic, socio-cultural and environmental sustainability as emphasized by the United Nations in 2015. As part of the seventeen goals of SDGs is the poverty reduction. This is the main reason for attracting foreign aid from the developed nations to developing ones. Hence, to measure economic development, GDP per capita is usually employed as the major indicator until the critics argued against its usage. Consequently, the UNDP introduces Human Development Index (HDI) in 1990 to provide an analysis of socio-economic development in developed and developing economies. Since then, HDI has been globally accepted as a good measure of development.

The link between foreign aid and economic development has been explained by the "two-gap" theory. The first gap entails the correlation between investments needed to achieve growth and the availability of local savings. The second gap exists between exchange rates and the imports needed for productivity (Todaro & Smith, 2009). The theory suggests that grants and loans improve local savings through exchange blockages or by minimizing savings. Thus, savings gap and foreign exchange gap are autonomous; which means recipient countries can only apply one of the two gaps.

Hence, effective aid played an important role in the political regimes thus, the dictator can use foreign aid to their advantage either through government spending /or by sponsoring or financing their supporters. Burnside and Dollar (2000) pointed out that aid is inefficient because it is not related with shocks and the consumption of the government. They also highlighted the benefit of good governance on aid effectiveness and it was concluded that good governed countries may likely receive efficient aid. Similarly, Adamu, Zasha and Umar (2022) used historical method of analysis to corroborate that foreign aid has not contributed to the development of Nigeria.

The research conducted on the role of foreign aid in the growth of 95 developing economies by Yiew and Lau (2018) revealed that foreign aid positively contributes to economic growth. Most importantly, direct investment and population are the major determinants of gross domestic product of each country. Saibu and Obioesio (2017) proved in their study that foreign aid is like a catalyst for achieving growth of a country. Alemu and Lee (2015) also used GMM to assess the impact of foreign aid on the growth of 20 middle income and 19 low-income African countries for a period of 15years. They found positive influence of aid on the growth of low income countries but the results proved otherwise for middle income countries. The results show that middle- income African countries improve their economy through the income from natural resources and direct investment. Ahmed (2014) conducted cross-section regression analysis and it was established that global aid has insignificant effect on growth process of Sub Saharan African countries. However, the finding indicated that education and direct investment have positive impact on growth for the period under study.

Methodology

Theoretical Framework and Models

This study employed secondary source of data. The data source was used in accordance with the work of Isiaka and Makinde (2020) and Saibu and Obioesio (2017). The data such as human development index (proxy of sustainable development), net official development assistance, external borrowing, exchange rate, and control of corruption were utilized in this study. It covers a period of 33years (1990-2022). Human development index was used because it has been accepted globally as the true measure of development (Al-Hilani, 2012). The data were culled from World Development Indicator (WDI). The data were analyzed using Autoregressive Distributed Lag (ARDL) techniques. The adaptability of ARDL even if variables are not integrated of the same order makes the techniques a suitable

analytical method. It also considers small sample size and provides empirical results for an individual country policy implications (Nadeem, Jiao, Nawaz, & Younis, 2020)

This study is modeled after the work of Sowemimo and Iyoha (2018) and also uses Solow Growth Model as its theoretical foundation. The theory explains the growth of an economy through the interrelationship between three forces which include technology, labour, and capital. This implies that a short-term equilibrium arises during production process due to the connection between capital and labour coupled with the changes in technology to achieve economic growth of a nation. The model is specified as:

$$Y = F(K, AL) \quad (1)$$

Here Y represents gross domestic product, K implies capital, A is the technology and L is the labour. The study substitute gross domestic product, capital, labour and technology with human development index, net official development assistance, external borrowing, exchange rate and control of corruption. The study focuses only on the aforementioned variables because some of the previous studies have included different variables in their model ranging foreign direct investment, government spending, and trade openness (Isiaka & Makinde, 2020; Saibu and Obioesio, 2017). However, there are scanty of studies capturing corruption and borrowing in their model. Hence, the model is given as:

$$HDI = f(NODA, EXB, EXC, CO) \quad (2)$$

$$\text{HDI} = \beta_0 + \beta_1 NODA + \beta_2 EXB + \beta_3 EXC + \beta_4 CO + \mu \quad (3)$$

The model is further written in ARDL form:

$$\Delta HDI_{it} = a_0 + \sum_{t=1}^{p1} a_1 \Delta HDI_{it-1} + \sum_{t=1}^{p2} a_2 \Delta NODA_{it-1} + \sum_{t=1}^{p3} a_3 \Delta EXB_{it-1} + \sum_{t=1}^{p4} a_4 \Delta EXC_{it-1} + \sum_{t=1}^{p5} a_5 \Delta CO_{it-1} + \beta_1 HDI_{it-1} + \beta_2 NODA_{it-1} + \beta_3 EXB_{it-1} + \beta_4 EXC_{it-1} + \beta_5 CO_{it-1} + \lambda \text{ECM}_{it-1} + \mu_1 \quad (4)$$

Where, HDI implies Human Development Index; NODA represents Net Official Development Assistance Received (% of GNI); EXB implies External Debt Stocks (% of GNI); EXC is the Official Foreign Exchange Rate; CO means Control of Corruption (percentage rank); β_0 denotes Constant term; α_1-α_5 implies short-run coefficient; β_1- β_5 is the long-run coefficient; and μ is the Error term

Presentation of Empirical Results

Table1: Descriptive Statistics of Variables

	HDI	NODA	EXB	EXC	CO
Mean	0.482276	0.784536	34.28888	146.5512	10.99225
Median	0.482000	0.508904	17.87779	129.2224	12.10366
Maximum	0.541000	4.890344	120.8353	425.9792	18.93204
Minimum	0.350000	0.239965	4.950816	8.038285	0.529101
Std. Dev.	0.045629	0.965775	31.68281	116.6380	4.396663
Skewness	-0.759334	3.509777	0.984062	0.841832	-0.663425
Kurtosis	3.634640	14.23476	3.185946	2.938160	3.061936
Jarque-Bera	3.273523	241.3043	5.373624	3.903008	1.764369
Probability	0.194609	0.000000	0.068098	0.142060	0.413878

Source: Author's Computation and Eviews

Table2: Correlation Analysis

	NODA	EXB	EXC	CO
NODA	1.000000	-0.216447	-0.029776	0.108097
EXB	-0.216447	1.000000	-0.411103	-0.617454
EXC	-0.029776	-0.411103	1.000000	0.412227
CO	0.108097	-0.617454	0.412227	1.000000

Source: Author's Computation and Eviews

Table3: ADF Unit Root Test

Var	t-statistic	Pvalue	Order of Integration
HDI	-10.3945	0.0000***	I(0)
NODA	-4.1388	0.0030***	I(0)
EXB	-5.6643	0.0001***	I(1)
EXC	-4.3155	0.0093***	I(1)
CO	-4.3418	0.0035***	I(1)

(*)Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1%

Source: Author's Computation and Eviews

Table4: Lag Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-207.8471	NA	1206.821	21.28471	21.53365	21.33331
1	-113.2354	132.4564*	1.257788*	14.32354*	15.81714*	14.61511*

Source: Author's Computation and Eviews

Table5: ARDL Short Run and Long Run Results

Var	**Coeff**	**Std Error**	**Prob**
HDI(-1)	0.644865	0.117862	0.0000
NODA	-0.001540	0.001429	0.2963
EXB	-0.001072	0.000128	0.0000
EXC	0.000103	0.000031	0.0043
CO	-0.001914	0.000440	0.0004
C	0.197682	0.054639	0.0021
R^2	0.97		
Adj R^2	0.97		
F-Stats	144.11		0.000000
Bound: F-Stats	0.419		
5% Lower	2.86		
Upper	4.01		
LM Test	0.36	Heterosked	0.37

Source: Author's Computation and Eviews

Discussions

Table1 presents the characteristics of the variables of study. The mean and median of the data series indicate high level of consistency as it was found in the results. As expected the mean and medium of Nigeria's exchange rate shows the highest value, followed by the external borrowings. This is indication of the continuous depreciation of naira exchange rate and increasing volume of external debts in Nigeria over the years. The standard deviation which measures the degree of fluctuation shows a high value for exchange rate. It is not surprising because the instability in exchange rate is the center of discussion among the economists and scholars in the current economic condition. A change in economic policy affects all economic activities, thereby depreciating naira exchange rate and increasing the purchasing power of the people. Further, all the variables of study are moderately skewed except net official development assistance. In addition, all the series are normally distributed except net official development assistance as reported by Jarque-Bera results.

Table2 shows the results of correlation analysis. This statistics assess the extent of collinearity among the variables under review. Among the regressors, only the external borrowing and control of corruption shows a negative and moderate correlation with each other. Thus, it can deduced that the model is freed of multicollinearity problem.

In an attempt to ensure proper utilization of analytical technique, all the data were subjected to a unit root test using ADF method. As shown in the **table 4.3**, human development index and net development assistance are stationary at I(0) while external borrowing, control of corruption and exchange rate are stationary at I(1) considering 1% level of significance Thus, the model is suitable for ARDL approach and also freed of spurious results.

Table 4 presents the statistics for lag selection criteria which was carried out to determine the suitable lag for both predictors and dependent variable. Using AIC criteria, it was discovered that lag 1 is more suitable for the technique.

Table5 presents the coefficient of HDI proxy of sustainable development and the explanatory variables. The coefficients of net official development assistance, external borrowing and corruption show a negative interaction with human development index. This implies that as each of these variables increases by one unit, development of Nigerian economy will decline by 0.0015, 0.001 and 0.002 respectively. However, the exchange rate has positive relationship with human development index in the short run. That is, as exchange rate appreciates by 1%, Nigerian economy will develop by 0.01%. Among all the explanatory variables, only net official development assistance has no significant impact on sustainable development of Nigeria. These results agreed with the findings of Saibu and Obioesio (2017) and Ahmed (2014), Isiaka and Makinde (2020). Similarly, the ARDL bound test also confirmed nonexistence of long run relationship between the predicting variable and the predictors as the *f-stats* result of 0.49 lies below lower bound value of 2.86. The study also conducted diagnostic test using LM test and Heteroskedaisity test. It was observed that the there is absence of autocorrelation and also freed of heteroskedaisity problem.

Conclusion and Recommendations

The outcome of the analysis shows that net official development assistance, external borrowings and corruption inversely related with Nigerian sustainable development while exchange rate positively interacts with dependent variable. Similarly, net official development assistance has no significant impact on sustainable development while others are statistical significant. Furthermore, ARDL bound test reported nonexistence of long run interactions among the variables. It was therefore concluded that only net official development assistance cannot lead to the proclaimed sustainable development in Nigeria in the both short run and long run without except with the inclusion of other economic ingredients. As a result, the study recommends as follows:

i. Following the negative and insignificant impact of net official development assistance on human development index, the study suggests that government should complement foreign aids with an increased

spending towards improving human capital development and domestic investment. In turn, it will enhance the economic performance, thereby leading to the attainment of sustainable development in Nigeria.

ii. Sequel to the negative impact of external borrowing on human development index, the study recommends that Nigerian government should minimize the extent of borrowings to finance deficit budget as the accumulation of debt servicing would not allow the citizens to benefit from the true impact of debts on the economy as pointed out by economic theories.

iii. Nigerian government should double their efforts in fighting corruption and improve the quality of the institution due to its influence on grants and loans for the country.

iv. A country with a goal of achieving sustainable development must maintain a stable exchange rate as this will increase the purchasing power and improve the standard of living of the citizens.

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