

Situating the Impact of Official Development Assistance (ODA) on Human Capital Development in Nigeria

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Abstract

Human capital remains one the greatest assets of any nation and as such, successful economies have always focused on enhancing the quality of their human capital stock. Nigeria and developing economies are confronted with human capital development challenges caused by poor and insufficient capital needed to build human capacity. Developing nations till date scramble for International capital to augment their capital needs for various investments including in human capacity. Foreign capital comes in forms of loans, investments, remittances or official development assistance (ODA), which is also called foreign aid or grants. Developing countries have witnessed little or low economic improvements despite having capitalised on different the windows of foreign capital to support their economies. ODA has been debated internationally with questions of whether it leads to the enhancement of the wellbeing of the underdeveloped countries or whether is merely serves as tool for control and dominance by developed economies. This narrative has presented researchers with the task and the interest to conduct various works on the impact of the different forms of international capital including the official development assistance on human capital development (HCD). Various studies on the extant topic came up with either conflicting and or mixed findings. This study therefore aims at exploring further, the impact of official development assistance (ODA) on human capital development. This researcher used Project aid (PAID), Programmed Aid (PRAID), Technical Assistance (TA), Humanitarian Aid (HA) and Food Aid (FA) to proxy ODA. The specific objectives are to explore, determine, assess, examine and ascertain the effect of PAID, PRAID, TA, HA and FA on HCD. The study adopted ex-post facto research design and data were sourced data from the Central Bank of Nigeria Statistical Bulletin and Annual Reports and the World Bank Development Indicators. Sourced data were analyzed using Descriptive Statistics, Augmented Dicker Fuller tests for unit roots and Autoregressive Distributive Lag (ARDL) for the hypothesis. The study found no long run effect of ODA on HCD in Nigeria but found the existence of a positive and significant short run effect of ODA on HCD in Nigeria. Amongst the recommendation is that Government should use of official development assistance for only short term project specific financing since findings from this study shows that there is no long term relationship between official development assistance and human capital development in Nigeria.

Keywords: *Official Development Assistance, International Capital Inflow, Project Aid, Programmed Aid, Technical Assistance, Humanitarian Assistance, Food Aid, Human Capital Development and Economic Development*

Introduction

International capital inflow has been identified as an important vehicle for augmenting the supply of funds for domestic investment (Fosu and Magnus, 2006). The term official development assistance (ODA) also known as foreign aid, is generally used in the sense of flow of non repayable funds from the rich countries to the poor and developed countries. At some point, ‘all real resource transfer’ from developed to underdeveloped or developing countries were included as foreign aid and this raised conceptual problems because it included certain resource transfer which do not essentially qualify as foreign aid. Riddell (2007) also defined foreign aid as comprising all kinds of resources ranging from physical merchandise, skills and technical know-how, financial grants including gifts, and loans which are given to recipients by donors at concessional rates.

Theoretically, the main role of foreign aid in stimulating human capital development is to supplement domestic sources of finance such as savings, thus increasing the amount of investment and capital stock. Morrissey (2001) points out, there are a number of mechanisms through which aid can contribute to human capital development, including: (a) increased investment in physical and human capital; (b) increased capacity to import capital goods or technology; (c) lack of indirect effects that reduce investment or savings rates; and (d) transfer of technology that increases the productivity of capital and promotes endogenous technical change.

There are four strands of literature on the role of foreign aid on human capital development. The first studies claim that foreign capital inflow is necessary and sufficient for human capital development in less developed countries. They assert that there is a positive relationship between aid and human capital development because it not only augments domestic resources, but also supplements domestic savings, assists in closing the foreign exchange gap, creates access to modern technology and managerial skills, and allows easier access to foreign markets, ultimately leading to human capital development (Akanyo, & Ajie, 2015; Kanu, 2015; Obadan, 2011).

Official Development Assistance (ODA) or foreign aid has been an important human capital development factor in human history. According to (Niyonkuru, 2016), ODA provides assistance to countries’ development. These aids may include social infrastructure and economic infrastructure, services’ aid and production sector’s aid. Social infrastructure in this case includes education, water supply and sanitation, all with the aim to improve human development and eventually contribute to long-term sustainable economic growth (Addison & Tarp, 2015). Besides, economic infrastructure aid does improve energy, transport and communications systems in the recipient countries. On the other hand, production sector’s aid is aimed for agriculture, forestry and fishing, industry, mining and construction, trade and tourism. It may also attract FDI flows which further contribute positively to growth. As (Morrissey, 2001) suggests, there can be several positive channels through which ODA impacts economic growth such as “aid increases investment in physical and human capital, aid increases the capacity to import capital goods or technology, aid does not have indirect effects that reduces investments or savings rates, and aid is associated with technology transfers that increase the productivity of capital and promotes endogenous technical change”.

Generally, aid can contribute to development in two ways: it can take a capital starved country to its ultimate steady-state potential growth rate faster and can equally improve a country's steady state growth rate because foreign capital comes with know-how and also encourages better governance or practices (Ugwebe, Okafor & Akarogbe, 2016).

Wide fluctuations have remained a regular feature in the trend of ODA to Nigeria. It is remarkable to observe that aid can be a vital source of financing development although in the case of Nigeria, opinions are divided. Some have argued that Nigeria, given her vast natural and human resources, does not have to rely on ODA as she derives huge revenues from the export of crude petroleum. It is worth observing that there is nothing fundamentally wrong in obtaining ODA provided it is properly managed to derive maximum benefits for growth and development and for the enhancement of peoples' welfare. It has also been asserted that Nigeria's low ODA receipts is due to widespread corruption and looting of national treasury and that if the stolen funds, estimated to be in billions of US dollars, are remitted back to the country, then there will be little or no need for ODA (Adarkwa, 2015).

The importance of foreign aid was specifically recognized in the Millennium Development Goals (MDGs) initiatives blueprint comprising of 8 goals so as to meet the needs of 148 countries. A 0.7% ODA/gross national income (GNI) goal was set by the United Nations back in 1970. With this commitment, each advanced country was supposed to progressively increase its ODA assistance to 148 countries. By 2015; however, this goal was not achieved because majority of these countries did not hit the target of 0.7%. There were accusations that the MDGs were too narrow. In response to the failure of the MDGs, the Sustainable Development Goals (SDGs) also known as Global Goals, was adopted by all United Nations member states in 2015 as a universal call to action to end poverty, protect the planet and ensure all people enjoy peace and prosperity by 2030. The SDGs consists of 17 goals.

According to Fashina (2016), there exists widespread concern among international donors to promote rapid human capital development in developing economies like Nigeria, however, despite these attempts; these developing economies are lagging behind as compared to developed economies. According to the Economic Commission for Africa (ECA) (2010), Nigeria has continued to face a perennial shortage of capital resources to finance investments despite being one of the developing economies that receives large chunk of international capital inflow, but yet the country's growth has been low. It is a natural phenomenon for capital to flow from developed economies to less developed economies.

ODA loses its true essence as a non political tool if it operates within in a political context. According to Hans Morgenthau (1962), the public debate on foreign aid has contributed little to understanding. In the spring of every year, the nations engage in such a debate carried on almost exclusively in terms of amount of money to be spent for purposes of foreign aid rather than of the substantive purposes which a policy of foreign aid is supposed to serve. A case of lack of purpose, intentions and poor application of foreign aid can be adduced leading to corruption and inefficient applications. Therefore the quest for the understanding of the relationship between capital inflows like the ODA and human capital development in Nigeria has remained relevant due to the persistent savings gap, scramble by developing countries for international capital and the conflicting and mixed findings from past studies.

Literature Review

International capital inflows refer to the influx of usable funds into a country from source(s) outside the country for the purpose of investment, trade or business. The transfer of money, goods and services from one nation to the other without expectation of refund can be referred to as ODA. Developing and less developed countries rely on foreign sources to finance their activities due to insufficient domestic savings leading to growing mismatch of their domestic capital stock and actual investment capital needs. This explains the drive and scramble for foreign capital especially by developing countries.

Official Development Assistance (ODA) or aid is generally regarded as a critical of the world's development cooperation effort and represents a flow of money from government in developed countries to developing countries. ODA consists of grants or loans that one government or multilateral organization gives to a developing country to promote economic development and social welfare (Girma, 2015). The Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) define aid as Official Development Assistance (ODA) which qualifies on three criteria:

1. It is to be undertaken by official agencies;
2. It is to have the main objective of promoting economic development and welfare.
3. It has to have a grant element of twenty five percent or more.

According to OEPD practices, about 90% of ODA is represented by grants which are financial support that receiving countries would not have to repay. Much of the rest of ODA consist of "soft" loans with low interest rates and often long repayment period aimed at bring more financial responsibility in the receiving countries.

Project aid (PAID) is dominated by funds channeled to interventions in sectors such as health, education, rural development including agriculture, transport and power, housing, and water supply and sanitation. However, small amounts of project aid are channeled to industrial, mining, trade and cultural projects (Riddell, 2007) as cited in (Conchesta, 2008). Many ODA funded development projects aim at achieving specific outputs by providing resources, skills and systems which the recipient country needs.

Programme aid (PRAID) is defined by OECD as financial contributions not linked to specific activities. Programme aid is divided into two forms, the balance of payments (BOP) support and the budget support. Under the budget support, aid funds are provided to boost aggregate revenue and increase overall spending. Aid funds channeled to ministries of finance are termed as General Budget Support (GBS) while those channeled to particular sectors are termed as Sector Budget Support (SBS). Under the GBS, donors provide funds for implementation of development and poverty alleviating strategies paying attention to the capacity of the recipient governments to use funds efficiently.

Technical Assistance (TA) includes the provision of skills, knowledge know-how and advice. For many decades, technical assistance has also been provided in form of teaching staff mainly in primary and secondary education in developing countries. Furthermore, more specialized

trainers have continually performed skills training functions to meet their needs and to achieve their immediate objectives.

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

Food aid (FA) comprise of programme food aid and humanitarian food aid. Programme food aid may relieve the foreign exchange constraint to import necessary intermediate inputs or by providing fiscal resources through counterpart funds generated by the local sale of programme food aid (Bashir, 2013). These resources can be used by the recipient country to invest in agricultural research and extension and improvement of rural infrastructure in particular. It should however be noted that programme food aid may lead to Dutch disease effects on domestic food producers and thus hurting the food sector's competitiveness in the world markets. Dutch disease is a term used in economics to describe a situation where a supposedly good development ends up being harmful.

Human capital refers to the abilities and skills of human resources of a country, while human capital development refers to the process of acquiring and increasing the number of persons who have the skills, education and experience that are critical for economic growth and development of a country's economy (God'stime & Uchechi, 2014). According to Harbison and Myers (1964), human capital development can be seen as the deliberate and continuous process of acquiring requisite knowledge, skills and experiences that are applied to produce economic value for driving sustainable national development.

Economic development is one of the most frequently used concepts in the world. It refers to the process by which the economic well being and quality of life is improved. Economic development seeks to achieve long-term sustainable development in a nation's standard of living, an increase in the per capita income of every citizen, adjusted for purchasing power parity (Porter, 1998).

Theoretical Review

The standard model used to justify aid was the 'two gap model' of Chenery and Strout (1966). It is a classical Keynesian model of economic growth used in development economics to explain an economy's growth rate in terms of the level of savings and productivity of capital. The two gaps model asserts that developing economies face two gaps in their economies that they have to be filled. In this model the first gap is between the amount of investment necessary for the attainment of certain rate of growth and the available domestic savings (the saving gap). A developing country produces primarily basic goods and would therefore need to import capital

and consumer goods. A developing country is also characterized by low savings and has to involve in heavy investments in productive ventures for sustainable development. The manner or approach developing economies adopt in filling the gaps between its savings and investments become a matter of their decision. Some proponents argue that developing countries need to trade to gain trade surpluses that could then be used to fill the savings gap. However, pursuing trade deals with other countries will obviously expose a country to the second gap of this model which is the trade gap or foreign exchange gap or better still, the gap between exports and imports. This occurs when there is a gap between import requirements for a given level of production and foreign exchange earnings or reserves of a country. Even though the saving gap could be small, a larger trade gap would undermine productive investment as a result of limited imports of capital goods needed for investment. This leads to increased deficit in current account of the developing country.

The savings gap therefore occurs where the amount of money which the savers in a country hold in their financial institutions is less than the level of investment that is needed in the country. Trade gap occurs where the value of total imports of a country is more than the value of the total exports of the same country. This will increase the demand for foreign currency and consequently reduce the exchange value of the local currency against the foreign currency. It is argued these two gaps exists in a developing countries and consequently, they require international capital like the official development assistance (ODA) to fill the gaps. The two gaps model is therefore an extension of the Harrod – Domar growth model and argues that the development of the less developed countries is constrained due the pressure from the two gaps. According to Conchesta (2008), the two gap model supports the hypothesis of investment-limited growth nexus.

Empirical Review

Various literatures were reviewed by the researcher to analyze the effect of official development assistance on human capital development in Nigeria in order to establish their nexus.

Inanga, Eno and Mandah (2008) conceptualised foreign aid (ODA) as an international transfer of capital, goods, or services for the benefit of other nations. Inanga and Mandah (2008) further noted that these aids come in forms of capital transfers in cash or kind, either as grants or loans. Technical assistance and training are part of official development assistance and usually come as grants in the form of human resources and technical equipment, and military assistance in the form of either equipment or training advisors.

Fashina, Asaleye, Ogunjobi and Lawal (2018) investigated the link between aid and human capital in promoting economic growth of Nigeria. The study used two models; the first model was used to test the validity of the medicine model in Nigeria; while the extended model was used to investigate the effect of aid and human capital shocks on growth using Engle-Granger and Vector Error Correction Model (VECM) estimation techniques respectively. The findings from the first model suggested that persistent increase in foreign aid flows beyond a particular point (the optimal point) may adversely affect growth thus confirming the proposition of the Medicine Model. Evidence from the study's extended model indicated that growth in Nigeria is sensitive to human capital shock via education while the response from aid shock is trivial in the long run. The mechanism through which aid impacts economies is influenced by

many heterogeneous factors, notably; the role played by the recipient governments is often not considered. The implication of the results is that government expenditures on education with additional inflows of aid can promote economic growth in Nigeria.

Alemu and Lee (2015) studied on foreign aid and economic growth in Africa: A comparison of low and middle income countries using the dynamic Generalised Method of Moment (GMM) model to address the dynamic nature of economic growth as well as the problem of endogeneity. The study found that a positive relationship between aid and GDP growth for only low income African countries and not the middle income ones.

Yiew and Lau (2018) looked at the role and the impact of foreign aid (ODA) on human capital development using 95 developing countries as the sample. Foreign direct investment (FDI) and population (POP) were included as the control variables. The panel data results indicate that a U-shape relationship existed between foreign aid and human capital development (Wamboye, 2012; Gyimah-Brempong & Racine, 2014). Initially, foreign aid negatively impacted the countries' growth and over a period of time, it positively contributed to human capital development. Further, the results strongly supported the view that both FDI and POP are more important determinants of HDI, implying that HDI is less likely to depend on ODA. Strengthening the legal framework would be essential for these countries while their over dependency on the influx of ODA might lead to negative impacts on human capital development as a whole. Importantly, effective management of foreign aid would ensure the Sustainable Development Goals (SDG) are achieved.

Githaniga and Kilong'i (2023) explored foreign capital flow, institutional quality and human capital development in Sub-Saharan Africa using sample from 32 countries in Sub-Saharan Africa and employed the system generalised Methods of Moment (GMM) estimator for the study. They found that ODA has a negative and significant effect on human capital development and that ODA is not influenced by institutional quality.

Using the Seemingly Unrelated Regression Estimation (SURE) technique, Anthony, Akachukwu and Elijah (2014) assessed the implications of four different types of foreign capital inflows, namely; Foreign Direct Investment (FDI), Official Development Assistance (ODA), Foreign Private Investment (FPI) and Remittances (REM) on output growth of the West Africa Monetary Zone (WAMZ) economies over the period 1981-2010. Their result showed that there are differences in the growth impact of the various forms of foreign capital inflows in the WAMZ countries. The result also showed that more than one form of capital inflow contributed positively to output growth in Nigeria. Again, they found that ODA positively contributed more to output growth in Sierra Leone and Ghana, whereas, FDI fostered more output growth in Nigeria and Gambia. Remittances had the highest contribution in Liberia and finally none of the inflows has positively impacted on Guinea's economic growth. They therefore recommended that WAMZ countries should endeavor to create competitive economic environments that will be attractive to foreign investors since promoting trade and investment through sound economic policies and strengthened institutions are essential in maximizing the benefits from Foreign Capital Inflows in the region.

Akpan and Udoma (2013) explored the challenges, policies, principles, and impact of official development assistance (ODA) on economic performance in Nigeria from 1970-2010. The paper utilized three stages least squares (3SLS) estimation technique in a simultaneous equation model to analyze the results. The result of the growth equation showed a positive but insignificant relationship between ODA and economic development in Nigeria. There was however, a significant relationship between capital expenditure and economic development.

Sitaicu and Barbulescu (2017) wrote on the relationship between foreign aid and human development in Africa in the book *International Development*. They found that life school expectancy is not improved in recipient countries through development assistance. They further found that healthcare and nutrition problems of poor countries have not been solved. He opined that a better healthcare, nutrition and education represent more opportunity for the poor to escape poverty and get better living condition.

Veledinah (2014) studied the impact of official development assistance on economic growth in Kenya. The study applied VECM estimation technique and time series data for the period 1970-2012 to investigate the ODA-Growth relationship. Solow growth model was used to establish a link between theory and empirical. The findings from the study showed a long run causality running from ODA, private external resource flows, gross domestic capital formation, final government consumption expenditure, trade openness, broad money, and inflation; to GDP growth per capita. While ODA seems to contribute to economic growth in the short run, its effect was not statistically significant. A statistically significant negative effect in the short run of private external resource flows and trade openness was established. The results also suggested that previous year's GDP growth per capita, gross domestic capital formation, and broad money (as a measure of financial depth) are the important factors that stimulated economic growth over the study period in the short run. It was concluded that Kenya should focus on internal factors to induce economic growth rather than depending on external factors especially in the short run.

Ozigbo and Ewubare (2019) explored the nexus between foreign aid human capital development in Nigeria. They found that the effectiveness of foreign aid in driving the process of human capital formation manifests mainly in the long run and that ODA has been playing a major role in that process.

Bashir (2013) evaluated the impact exacted by foreign assistance in the form of official development assistance (ODA) and foreign direct investment (FDI) on real growth in Nigeria over the period 1980 to 2011. Using the Two-Gap model and various econometric techniques which include Augmented Dickey Fuller (ADF) test, Granger causality test, Johansen co-integration test and Error Correction Mechanism (ECM), empirical results revealed that there was no Granger causality between any pair of the variables. Findings of the study also established a negative relationship between FDI and real growth as ODA exacted no impact on real growth in the country.

Makori, Kagiri and Ombui (2015) examined the effects of external capital on economic growth in Kenya and used a structural growth model involving gross domestic product, official development assistance, foreign direct investments and migrant remittances variables for the

period 1970 to 2013. By using ordinary least squares tests, the study sought to establish the effects of external capital on economic growth. Moreover, Augmented Dick Fuller test was done to ascertain the stationarity of the time series data. The results revealed that Foreign Direct Investment and Gross Domestic Product/economic growth do not have significant relationship. The findings further revealed that ODA had a positive significant relationship with the GDP. The results also revealed a positive and significant relationship between migrant remittances and GDP. Based on the findings above, the study concluded that FDI, ODA and migrant remittances are key aspects of economic growth of a country.

Nwani (2021) analysed human capital interaction on foreign aid –growth nexus evidence from Asia and Sub-Saharan Africa using panel data of countries in South Asia and Sub-Saharan Africa collected from the World Bank Development Indicators. The researcher found that foreign aid and human capital development have negative impact on economic growth. The study asserted that South Asia and Sub-Saharan African economies had not reaped the potential growth effect of foreign aid flow due to illiteracy rates and weak social capacities.

Halder and Sethi (2022) studied on the effect of sectoral foreign aid allocation on growth and structural transformation in Sub-Saharan Africa – analyzing the roles of institutional quality and human capital using the Griscoll-Kraay Fixed effect estimator, fixed effect panel threshold regression and methods of moment quartile regression. They found that both agriculture and social sector aid have positive significant effect on growth but negative significant effect on structural transformation.

Model Dimension

The researcher adopted the ex-post facto research design for this work using secondary data sourced from the archives of the World Bank Development Indicators and the Central Bank of Nigeria (CBN), Statistical Bulletin.

The model used for this investigation is the adaptation and modification of the works of Fashina, Asaleye, Ogunjobi and Lawal (2018). They analyzed the foreign aid, human capital and economic growth nexus: Evidence from Nigeria.

Their model is stated thus: $RGDP = f(SER, GEE, GHE, RI, FDI)$

Where:

RGDP = Real Gross Domestic Product, SER = Secondary school enrolment, which is measured as a percentage share of gross school enrolment, GEE = Government Education Expenditure, GHE = Government Health Expenditure, RI = Real Investment and FDI= Foreign direct investment.

Their model is modified as follows: $HDI = f(PAID, PRAID, TA, HA, FA)$ **with econometric equation as:**

$$HDI = b_0 + b_1 PAID + b_2 PRAID + b_3 TA + b_4 HA + b_5 FA + Ut \quad \text{--- --- Eqn (3)}$$

Where:

HDI = Human capital development index, PAID = Project Aid, PRAID = Programmed Aid,

TA = Technical Assistance, HA = Humanitarian Aid, FA = Food Aid, b_0 = Intercept of relationship in the model constant, b_1 - b_5 = The coefficients of the explanatory variables, U_t = Stochastic disturbance (Error Term).

A priori Expectation

The theoretical expectation of the study is that foreign direct investment will have positive effect on human capital development. The relationship is $\beta_1 > \beta_2 > \beta_3 > \beta_4 > \beta_5 > 0 < \beta_6$

Methods of Analysis

Econometric techniques of descriptive statistics, diagnostic test using Augmented Dickey Fuller test and the Auto Regressive Distributive Lag (ARDL test) (Bounds test) were used for the analysis. Descriptive statistics was used to describe the basic features of the data in the study. Augmented Dickey fuller test was applied to carryout diagnostic test for unit roots and the ARDL was used in testing the short run and long run relationships between the dependent and the independent variables.

Results and Discussion of Findings

Descriptive Statistics of variables of the study

	HDI	ODA
Mean	0.453000	1.569066
Median	0.475000	0.587100
Maximum	0.500000	8.120000
Minimum	0.350000	0.301200
Std. Dev.	0.053759	1.384615
Skewnes	1.241875	4.662941
Kurtosis	2.913926	24.53509
Jarque-Bera	2.573511	711.3622
Probability	0.276165	0.000000
Sum	4.530000	30.04105
Sum Sq. Dev.	0.026010	57.51475
Observations	31	31

Source: E-views 10.0 Output

The mean of 0.453%, insinuates that the level of human capital development Nigeria is not improving. The maximum and minimum values for the variables showed 0.5000% and 0.350% for HDI respectively. The mean for ODA is pegged at 1.56%. The maximum and minimum values for the variables showed 8.1% and 0.30% while the standard deviation is 1.38%. These values show that official development assistance is very low in Nigeria.

Augmented Dickey-Fuller Unit Root Test

Summary Unit Root test for Stationarity.

Variables	ADF Statistic	Order Of Integration	Level of Significance
HDI	-5.328712	1(1)	5%
PAID	-5.137321	1(0)	5%
TA	-4.266713	1(1)	5%
HA	-3.426741	1(1)	5%
FA	-4.357237	1(1)	5%

Source: *Researchers compilation using E-views 10.0 output*

The variables used in the analysis were subjected to Augmented Dickey Fuller (ADF) Tests, to confirm their stationarity. The test aimed to understand the state at which the variables could be held stable for regression analyses. The result of the ADF test indicated mixed stationarity with some variables being stationary at 5% level [1(0)] while others were stationary at first difference [1(1)].

Auto Regressive Distributive Lag Test (Bounds Test)

The Auto Regressive Distributive Lag (ARDL) test is used because it is the most suitable tool of analyses that accommodates both the short and long run trends in testing the relationship between the dependent and independent variables.

Cointegration Between Official Development Assistance and Human Capital Development in Nigeria.

ARDL Bounds Test

Date: 10/18/19 Time: 15:21

Sample: 1986 2018

Included observations: 31

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	1.702164	5

Critical Value Bounds

Significance	I0 Bound	I1 Bound
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10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

The F-statistic at 1.702164 is less than the lower bound at 1%, 2.5%, 5% and at 10% significance levels indicates a case of no co-integration between the variables. This implies that there is no long run relationship between official development assistance and human capital development in Nigeria.

Short Run Model of the Relationship Between Official Development Assistance and Human Capital Development in Nigeria.

Dependent Variable:HDI

Method: ARDL

Date: 10/18/19 Time: 15:19

Sample (adjusted): 19187 2018

Included observations: 31 after adjustments

Maximum dependent lags: 2 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (3 lags, automatic)

Fixed regressors: C

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
HDI(-1)	5.310668	0.347960	2.892827	0.0047
HDI(-2)	1.722942	0.353766	4.870288	0.0165
PAID	2.105525	3.108211	6.774074	0.0066
PAID(-1)	10.03577	5.964195	3.682670	0.0010
PAID(-2)	4.003275	3.741916	2.069846	0.0321
PAID(-3)	2.739711	5.959118	4.597511	0.0193
TA	5.050742	1.495445	3.102417	0.0049
TA(-1)	1.521955	0.783739	2.941916	0.0524
TA(-2)	0.002915	0.496826	0.005868	0.9957
TA(-3)	-1.088764	0.555446	-1.960162	0.1448
HA	2.296855	0.537354	4.274382	0.0235
HA(-1)	7.608590	0.757016	3.803932	0.0002
HA(-2)	3.290622	0.711690	2.408355	0.0042
HA(-3)	-0.422621	0.712217	-0.593388	0.5947
FA	-819.5464	253.9891	-0.226700	0.4583
FA(-1)	-769.1222	2.657879	-1.893745	0.2628
FA(-2)	18.07251	20.05280	0.090125	0.9339
FA(-3)	-1028.980	3282449	-0.508229	0.0204
C	8200.561	1285525	3.588043	0.0371

R-squared	0.879968	Mean dependent var	31807.60
Adjusted R-squared	0.829741	S.D. dependent var	38736.05
S.E. of regression	6.232940	Akaike info criterion	15.34765
Sum squared resid	1165486.	Schwarz criterion	16.42026
Log likelihood	-169.8456	Hannan-Quinn criter.	15.64515
F-statistic	4.413902	Durbin-Watson stat	2.534685
Prob(F-statistic)	0.37215		

From the ARDL test result, the regression equation for official development assistance and human development index is presented thus: $HDI = 5.310668 + 2.105525 PAID + 5.050742 TA + 2.296855 HA + 819.5464 FA + U$. The ARDL reveal that the constant parameter (HDI) is positive at 5.310668 meaning that if all the independent variables are held constant, HDI as the dependent variable will grow by 5.310668 units. The result of the analysis indicates that human capital development is an endogenous variable in the model of the effect of ODA on human capital development in Nigeria. Project Aid (PAID): The coefficient of PAID which is positive at 2.105525 with t-statistics of 6.774074 and probability value ($p = 0.0066 < 0.05$) shows that PAID has positive and significant effect on HDI. This implies that a unit increase in PAID leads to further growth in human capital development in Nigeria by 2.11%. Technical Assistance (TA): The coefficient of TA which is positive at 5.050742 with t-statistics of 3.102417 and probability value ($p = 0.0049 < 0.05$) shows that TA has positive and significant effect on human capital development in Nigeria. This implies that a unit increase in TA leads to further growth in human capital development in Nigeria by 5.05%. Humanitarian Aid (HA): The coefficient of HA being positive at 2.296855 with t-statistics of 4.274382 and probability value ($p = 0.0235 < 0.05$) shows that HA has positive and significant effect on human capital development in Nigeria. This implies that a unit increase in HA leads to further growth in human capital development in Nigeria by 2.30%. Food Aid (FA): The coefficient of FA which is negative at 819.5464 with negative t-statistics of 0.226700 and probability value ($p = 0.4583 > 0.05$) shows that FA has negative and insignificant effect on human capital development in Nigeria. This implies that a unit increase in FA leads to a decline in human capital development in Nigeria by 819%.

Diagnostic Tests:

The result of the study indicates that all the Variance Inflation Factor (VIF) are below five (5) which means that there is absence of Multi-collinearity in the model. The p. value of the model is greater than 0.05, which connotes that the model is serially correlated at 5% significance level. The results show that the probability values are greater than 0.05. The study therefore submits that model is not Heteroskedastic and the result obtained from the estimated model is unbiased. RESET test result shows that the p. value is less than 0.05 which asserts that the model is well specified and is good for estimation.

Test of Hypothesis

Ho₃: Official development assistance has no positive and significant effect on human capital development in Nigeria.

H₃: Official development assistance has positive and significant effect on human capital development in Nigeria.

Short run F-Statistics	2.13454	10% significance	5%. Significance	2.5% significance	1% significance
1(0) Bounds		2.45	2.86	2.25	3.74
1(1) Bounds		3.52	4.01	4.49	5.06

The F-statistics for Bound test (1.702164) is less than the lower (2.26) and upper (3.35) critical bounds values indicating non existence of long run effect in the model. The F-statistics for short run ARDL model is 4.413902 with p.value of 0.37215. The test is carried out 0.05 level of significance and the p.value is greater than 0.05.

Discussion of Findings

This study shows that official development assistance has no long run effect on human capital development in Nigeria but has positive and significant short run effect on human capital development in Nigeria. ODA may seem not to be essential for developing economies on the long run. The implication of the finding for government is that official development assistance is only useful as short term grants and should be committed to projects with short gestation period for full benefit and effects. Such short term aids should be channeled to agriculture and social sector aid have positive significant effect on growth in line with the finding of Halder and Sethi (2022). Generally, the finding from this study is consistent with the work of Yiew and Lau (2018) and Wasiu and Mubaraq (2018), Bashir (2013), Valedinah (2014) Sitaicu and Barbulescu (2017), Ozigbo and Ewubare (2019) amongst others.

Conclusion

Developing countries have witnessed little or low economic improvements despite having capitalised on different windows of foreign capital to support their economies. ODA as a variant of foreign capital has been debated internationally with questions of whether it leads to development of underdeveloped countries or whether it merely serves as tool for control and dominance by developed economies. In this study, the researcher explored the propriety of the use of official development assistance also known as foreign aids on human capital development in Nigeria. The specific objectives are to examine, determine, assess, explore and ascertain the effects of Programmed Aid (PRAID), Project Aid (PAID), Humanitarian Aid (HA), Technical Assistance (TA) and Food Aid (FA) on human capital development in Nigeria. The researcher employed analysis technique of Descriptive statistics, Augmented Dickey Fuller test for unit roots, Autoregressive Distributive Lag and Diagnostic tests in this study. The results of the Augmented Dickey Fuller stationarity test indicates that both the dependent and independent variables attained stationarity at level 1(0) and first differences 1(1) of stationarity which necessitated the use of Autoregressive Distributive Lag (ARDL) for the analysis. Again the study

carried out diagnostic test to analyse the reliability of the models with the Normality, Serial Correlation, Multi-collinearity, Heteroskedasticity, and Ramsey RESET Tests.

The variables employed had mixed stationarities when subjected to ADF test. ARDL test confirmed only the existence of short run relationship. The adjusted R-Squared is 0.829741 insinuating that 83% of the total variables of Human Development Index (HDI) can be explained by the dependent variables of PAID, TA, HA and FA while the remaining 17% is due to stochastic variables. The Durbin Watson at 2.534685 means the model is free from autocorrelation. The F-statistics is 4.413902 meaning that all the explanatory variables in the study have significant effect on human capital development in Nigeria. Official development assistance therefore has no long run effect on human capital development but has positive and significant short run effect on human capital development in Nigeria.

Recommendation

This study supports that official development assistance (ODA) when employed will only have short run positive and significant impact on human capital development. It is therefore recommended that government should avoid the use of official development assistance for long term project financing in Nigeria since findings from this study shows that there is no long term relationship between official development assistance and human capital development in Nigeria.

Additionally, foreign aids should be directed more to food and healthcare which have direct impact on the wellbeing of the people. A better healthcare, nutrition and education represent a gateway for the poor to escape poverty and enjoy better living conditions. Health is wealth and more foreign aid should be granted to food, education and healthcare.

Finally, undeveloped and developing economies should instill openness, financial discipline and anti corruption policies and ensure true sustainable development emplaced internally as against illusionary externally motivated development that in most cases have political attachment. This is evidenced by the cases of colonized countries that have remained perpetual puppets colonialists.

It will be interesting to simulate what the impact of ODA on economic development of Nigeria would be should all funds from ODA be channeled to only food, healthcare, education and social amenities. This should elicit interests for future studies.

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