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THE IMPLICATIONS OF OIL RENT ON BASIC EDUCATION IN NIGERIA

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Abstract

The impact of the income from crude oil in a nation cannot be fully ascertained without analyzing the socioeconomic aspect. The relationship between oil rent and education is based on the argument that access to oil rents, particularly during the oil boom could cause the expansion of the public sector and increase government revenue. This revenue accruing to the government is channeled to the various sectors of economy including education. This paper focused on the implication of oil rent on basic education in Nigeria for the period, 1995 to 2020.Time-series data on oil rent and gross basic school enrolment were sourced from the World Bank data archive.The GMM test showed that oil rent impacted positively on gross basic school enrolment but not significantly. The granger causality test revealed that gross basic school enrolment granger caused oil rent. The conclusion from the empirical results is that the proceeds from crude oil did not have significant implication on gross basic school enrolment in Nigeria. The study therefore recommended that the government should channel a large proportion of the proceeds from oil rent to investment in basic education in Nigeria.

KEYWORDS: Oil rent, education, gross basic school enrolment.

1. INTRODUCTION

Nations that are blessed with natural resources have the opportunity to earn huge returns from the extraction and production of such resources (Ewubare & Uzoma, 2019). One of such resources is crude oil. The revenues a country earns from the extraction of crude oil after making allowances for the cost of its extraction is oil rent. This is to say that oil rent is basically the difference between the value of crude oil production at world prices and total costs of production (Uzoma & Odungweru, 2021). Economies record remarkable or slow growth rates depending on how the proceeds from their resources are utilized to improve the welfare of its citizens. However, an assessment of a country's welfare should not only be based on economic indices alone but also on socioeconomic indices (Ewubare & Obayori, 2019).

A popular indicator used in assessing the socio economic development of a country is education which is a crucial part of the Human Development Index (HDI) developed by the World Bank using the number of primary school enrolment as a proxy for education and literacy level. The importance of assessing the growth and development of a society using the socio economic framework was further buttressed by the United Nations (UN) when they commissioned the Millennium Development Goals (MDGs) of which the achievement of universal primary education was inclusive. Amadioha & Akor (2018) viewed education as the process through which children, younger or even adults are helped to cultivate and grow their abilities, attitudes, values and other forms of behavioural attributes that represent positive value aimed at changing the individual to enable him/her contribute to the well-being of himself/herself and other members of the society. This implies that education avails individuals the capacity to contribute positively to the development of the society the find themselves in (Amaddioha & Akor, 2020).

The fact that no country can achieve a meaningful development without a reasonable investment in human capital development shows that education is a long term investment. With education, employment opportunities are broadened, income levels are increased and lower crime rates are reduced (Etale & Bariweni, 2019).

Despite the huge windfalls from crude oil, Nigeria has one of the lowest expenditure commitments to education in Africa. In the 1980s and most of the 1990s, less than 1 percent of the nation's GDP was apportioned to education while her educational expenditure-budget ratio averaged about 9.5% between 1997 and 2006 (Umo, 2012). Furthermore, Abayomi (2012), Ojewumi and Oladimeji (2016) observed that the education budget as a percentage of total national budgets were 8.43 percent in 2012 and 8.67 percent in 2013 which is obviously below the United Nations Educational, Scientific and Cultural Organization's (UNESCO's) recommendation of 26 percent budget allocation to educational. Etale & Bariweni (2019) further noted that the quality of education a country can provide for its citizenry is directly linked to the resources channeled to the sector. This has led to the quest to carry out this study on the implications of oil rent on basic education in Nigeria. The rest of this study is grouped into literature review, methodology, results and discussion; and conclusion and recommendations.

2. LITERATURE REVIEW

The relationship between oil rent and education is based on the argument that access to oil rents, particularly during the oil boom could cause the expansion of the public sector and increase government revenue. This revenue accruing to the government is channeled to the various sectors of economy. Etale & Bariweni (2019) rightly posited that the quantum of funds available for investment in education is to a large extent dependent on the revenue available to the government.

The impact of oil rent in a nation cannot be fully ascertained without analyzing the socioeconomic aspect. This is because even though the relationship between oil and growth is positive in an economy, it does not imply that the welfare of the citizens is automatically guaranteed.

While existing literature focuses on the impact of the proceeds from oil on some macroeconomic indices, there seems to be no empirical evidence of its effect on basic education in Nigeria. This is the major gap that this study fills.

Basic Education in Nigeria

Basic Education is the first level of education. The universal basic education (UBE) scheme was introduced in Nigeria on the 30th September 1999 to replace that of Universal Primary Education (UPE) which was prevalent at that time. Universal Basic Education (UBE) was to accommodate formal education up until age 15, as well as adult and non-formal education including education of the marginalized groups within the Nigerian society (Yusuf & Ajere, 2009). Since then, the structure of the Nigerian educational system has undergone some changes. From 1999, the 9-3-4 system of education began, representing 9 years of primary and junior secondary schools, 3 years of senior secondary school and 4 years of tertiary education, depending on the nature of the discipline at the higher learning level (Irughe, Edafe & Adeyemi, 2020). In addition, vocational skills were inculcated into the primary and secondary education while technical secondary schools was also introduced to develop skills, attitudes, work habits and aspirations encompassing knowledge and information needed to make progress in employment on a useful and productive basis (Ikpe, 2010). The UBE programme is guided by some objectives which includes:

1. The development of permanent literacy and numeracy and also the ability to communicate effectively.

2. The laying of a strong foundation for scientific and reflective thinking.

3. The access to citizenship education as a ground for effective participation and contribution to social life.

4. Themolding of character and sound attitude and morals in children.

5. The development of the ability to adapt to children's environment.

6. To expose the children to opportunities to develop manipulative skills that will enable them function effectively in the society they find themselves in and

7. The provision ofthe basic tools for greater educational advancement including preparation for trades and crafts of the locality.

Basic education in Nigeria is compulsory between the ages of 6 and 15, generally from grades one to nine. However, according to a study by UNICEF, about 10.5 million children aged 5-14 years are not in school even though primary education is officially free. Only about 61 percent of 6-11 years-olds regularly attend primary school and only 35.6 percent of children aged 36-59 months receive early childhood education. .

According to CBN annual report and statement, thegross enrolment in 1995 was 15,741,678 with a negative growth rate of 2.7 percent. The figure grew to 19,794,082 in 1997 and further to 27, 384,991 in 2002. By 2010, the enrolment figure was 26,064,512 representing a growth rate of 8.3 percent. Okuneye and Olukayode (2014) observed that between 1980 and 2010, the growth rates of primary school enrolment were less than 15 percent.

Empirical Literature

Quite a number of related literatures on the subject matter exist and they include the works of Okuneye and Olukayode (2014) who examined the impact of primary school enrolment on economic growth in Nigeria from 1980 to 2010 using the Ordinary Least Square estimation technique. Their findings confirmed that primary enrolment is a tool through which appreciable economic growth can be enhanced in Nigeria. They further observed that primary enrolment exhibited a strong predictive power in explaining variation in economic growth in Nigeria. Based on their findings, they recommended that government should adequately fund the education sector in the light of weak and sluggish trend of primary enrolment in Nigeria.

In investigating the role of education in economic growth for the period 1981 to 2012, Zita and Ogugua (2014) used recurrent education expenditure as a proxy for education. Their findings showed that a positive relationship exists between education and growth in the short run but does not in the long run.

Ibraim and Owofasa (2015) examined the determinants of expenditure on education in Nigeria using vector auto-regression (VAR) method of analysis. Findings from their study sowed tat oil revenue was the most determining factor of the level of funding and investment in education for both the long run and short run periods.

Ishola et al, (2015) examined therelationship between oil revenue and government expenditure and also economic growth in Nigeriafor a 29 – year time period. Their result sowed tat education impacted positively on growth (which was proxied by literacy rate).

Inimino et al. (2017) examined the impact of public education expenditure on economic growth in Nigeria for the period 1980-2015 using the co-integration/error correction mechanism technique. Their result showed that government capital education expenditureand government

recurrent education expenditure had significant relationship with economicgrowth. Based on the findings, they recommended amongst others that government should implement UNESCO's recommendation of 26 per cent of the country's annual budget allocate to the educational sector.

Etale and Bariweni (2019) investigated the relationship between some selected components oftax revenue and educational development in Nigeria from 2010 to 2018 using the Ordinary Least Square (OLS) method. Their result revealed that there exists an insignificant positive relationship between value added tax, education tax and education development. Based on the findings of the study, they concluded that the contribution of education tax to the development of the education sector did not have the desired effect on the sector. They therefore recommended that the education tax be increased from 2 percent to 5 percent in order to contribute more significantly to education development.

Irughe, Eregha & Adeyemi (2020) carried out a study on the impact of various levels of education on different components of growth in Nigeria for the period 1970 to 2013 using the Fully Modified Ordinary Least Square (OLS) and Dynamic OLS techniques. Their result revealed that different levels of education had positive impacts of varying magnitude on the components of growth, as well as on overall growth in Nigeria, but the magnitude of the impact from completion rates was greater on overall growth. By way of recommendation, they suggested that government should provide modalities to curtail school dropouts in the education system as a measure to boost completion rates to facilitate growth.

3. METHODOLOGY

The data for this study was sourced from the World Bank data archive. The Augmented Dickey-Fuller unit root test, Generalized Method of Moments and Granger Causality test were adopted to determine the impact of oil rent on basic education in Nigeria.

Model Specification

The model is functionally specified as;
$GBSE=f(OLRT)$…… (1)
The econometric form of the model is further stated as:
$GBSE=\beta_0+\beta_1 OLRT+\mu_t$……(2)
Where; GBSE = Gross basic school enrolment (a proxy for basic education), OLRT = Oil rent, μt =Error term,β_0 = Autonomous components of GBSE, β_1 = slope of oil rent.

4. RESULTS AND DISCUSSION

The section provides empirical tests and analysis of relevant data, and a discussion of the findings.

Unit Root Test

This involves testing for the stationarity properties of each of the variables using the Augmented Dickey Fuller (ADF) test to find the existence (or otherwise) of unit root in each of the time series. The result of the unit root test is presented in the table 1 below.

Table 1: Unit Root Test for Stationarity (Augmented Dickey Fuller)

Variables	ADF Test @ Level	5% Critical Value	ADF Test @ 1st Diff	5% Critical Value	Order of Integration
GBSE	-3.072617	-3.612199	-4.488388	-3.612199	I(1)
OLRT	-3.257690	-3.603202	-6.788882	-3.622033	I(1)

Source: Author's Computation

The stationarity test reported in Table 1 showed that the variables did not attain stationarity at levels but at first difference. Having established the stability of the variables, we went further to carry out generalized method of moment (GMM) estimation.

Generalized Method of Moments (GMM)

The result of the generalized method of moment (GMM) estimation technique is presented in table 2 below. This technique is preferable in this study because of its ability to generate unbiased estimators in the presence of lagged dependent variables which acts as instruments. The correlation between the error term and the lagged endogenous variable makes it capable of avoiding biased results.

Table 2: Generalized Method of Moments Result

Dependent Variable: D(GBSE)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.191950	0.213231	0.900195	0.3793
LOG(OLRT)	0.174550	0.117655	1.483583	0.1543
R-squared	0.503187	**Mean dependent var**		0.005640
Adjusted R-squared	0.455871	**S.D. dependent var**		0.060102
Durbin-Watson stat	1.915740	**J-statistic**		2.38E-4

Source: Author's Computation

From the result of the GMM, the R^2 value of 0.5 shows a moderate fit implying that about 50 percent variation of gross basic school enrolment was caused by oil rent. Furthermore, the durbin watson value of 1.9 shows the absence of serial correlation in the model. Furthermore, the coefficient of oil rent was positively signed, in line with the theoretical expectation but not statistically significant at 5 percent level. This goes a long way to prove that oil rents capacity of improving basic education in Nigeria has not been maximized. The reason is not far from the low proportion of government's investment in education as seen in the budgetary allocation to education leading to very poor and unconducive learning environment. In some cases, pupils are forced to learn under trees with the exposure to sun and rain.

Causality Test

The pairwise granger causality test was used to analyze the causal relationship between gross basic school enrolment and oil rent in the model. The null hypothesis will be rejected if the probability value is greater than 5 percent. On the flip side, if the probability value is lower than

5 percent, we accept the null hypothesis of no causality. A unidirectional causality exists between two variables when either of the null hypotheses is rejected. Also, bi-directional causality occurs if both null hypotheses are rejected and no causality exists if neither of the null hypotheses is rejected.

Table 3: Pairwise Granger Causality Test

Sample: 1995 2020
Lags: 2

Direction of Causality	**F-value**	**Prob.**	**Decision**
(OLRT) ⟶ (GBSE)	0.30469	0.7409	Accept H_0
(GBSE) ⟶ (OLRT)	2.71911	0.0915	Accept H_0

Source: Author's Computation

The result of the Pairwise Granger causality test in table 3 shows that no causality exists between oil rent and gross basic school enrolment at 5 percent significance level. At 10 percent level however, gross basic school enrolment granger caused oil rent.

5. CONCLUSION AND RECOMMENDATIONS

This paper examined the implications of oil rent on basic education in Nigeria within the period, 1995 to 2020. Time-series data on oil rent and gross basic school enrolment were sourced from the World Bank data archive. The stationarity test via the ADFshowedthat the variables became stationary after first difference. The GMM test showed that oil rent impacted positively on gross basic school enrolment but not significantly. The granger causality test revealed that gross basic school enrolment granger caused oil rent. The conclusion from the empirical results is that the proceeds from crude oil did not have significant implication on gross basic school enrolment in Nigeria. The study therefore recommended that the government should channel a large proportion of the proceeds from oil rent to investment in basic education in Nigeria.

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