

## Government expenditure and standard of living in an emerging market in Africa–Nigeria

Sarah Elechi Jeff-Anyeneh, Amalachukwu Chijindu Ananwude\*, Gideon Kasie Ezu, Andrew Izuchukwu Nnoje

Department of Banking and Finance, Nnamdi Azikiwe University, Anambra State, PMB 5025, Awka, Nigeria.

\*Corresponding author: [ac.ananwude@unizik.edu.ng](mailto:ac.ananwude@unizik.edu.ng)

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#### Author's email:

[elechiserah@gmail.com](mailto:elechiserah@gmail.com)

[gk.ezu@unizik.edu.ng](mailto:gk.ezu@unizik.edu.ng)

[andy1finance@yahoo.com](mailto:andy1finance@yahoo.com)

### Abstract

The effect of government expenditure on the standard of living has different impact for various level of economies. In this study, we determined the effect of government recurrent and capital expenditure on the standard of living in Nigeria using a test of causation. The long and short run estimates were done by utilizing an Autoregressive Distributive Lag (ARDL) model using data that spanned from 1981 to 2018. **Findings/Originality:** Precipitously, we asserted that government recurrent and capital expenditure have a significant effect on the standard of living in Nigeria. Nevertheless, that is not the true reflection of the living standard in the country. There is an enormous need for the government to increase its expenditure on the health sector. Investment in healthcare is positively related to economic growth and has the potential of reducing poverty, hence a better standard of living. The Federal Government of Nigeria ought to, as a matter of direness, prioritize capital expenditure over recurrent expenditure.

## Introduction

The conduit to assuaging the needs of the citizens by governments is to embark on expenditure through the allocation of funds to various sectors of the economy (Jeff-Anyeneh & Ibenta, 2019). The standard of living of people in economies that consistently experience economic growth is preferred to economies with volatility in growth rate consequent to coherent progress in basic infrastructures and development in human capital. The standard of living of the population will, in no small measure, influence national output at any given point in time. Following Wagner's law of public expenditure, the standard of living of citizens in a country witnessing industrialization will improve, which ultimately results in an increase in government expenditure. In this situation, the standard of living improves consequently to any rise in government expenditure, hence a positive relationship between government expenditure and the standard of living of the populace. At the macro level, Ahmad and Batul (2013) opined that countries having a low level of expenditure in education or an uneducated majority of the total population find it difficult, and at times, almost impossible to progress and considerably increase their GDP hence, deterioration and declining standard of living. According to Tiwari (2012), government expenditure increases the livelihoods of the individuals, and their increased incomes are likely to create equitable distributive effects on the overall income distribution of the economy thus, the provision of social services constitute the most important means of promoting greater equality of opportunities to the disadvantaged sections of the population.

Alimi (2014) empirically proved that improvement in the standard of living of citizens brings about increasing government expenditure. The standard of living of the citizens by way of reduction in poverty level can be directly or indirectly influenced by the expenditure pattern of the government. Dahmardeh and Tabar (2013) stated that the direct effects arise in the form of benefits the poor receive from expenditures on employment and welfare programs. In contrast, the indirect effects arise when government invests in rural infrastructures, agricultural researches, and the wellbeing and education of the country individuals, invigorate agricultural and non-agricultural development, driving to more prominent business and pay winning openings for the destitute, and to cheaper nourishment. The study of Jha, Biswal, and Biswal (2005) has shown that government expenditure in education, health, and development helps in improving the standard of living in India by reducing the poverty level. The study went further and emphasized that government expenditure on higher, university, technical, adult and vocational educations as opposed to elementary and secondary education is more effective in enhancing the standard of living of the populace. The empirical studies on fiscal policy – a standard of living nexus is mixed and conflicting, especially for emerging economies. This is usually attributed to the econometrical approach utilized by researchers. Consequently, we seek to empirically determine whether or not the standard of living in Nigeria has been influenced significantly by the continuous increase in government expenditure over the years: 1981 to 2018.

Government expenditure has been on the forefront of macroeconomic policies in Nigeria owing to the increasing public needs of the increasing population. Government expenditure gives a picture of the expenditure of the government on amenities and services for the growth and development of the economy, usually on an annual basis (Jeff-Anyeneh & Ibenta, 2019). The nature of its (government expenditure) impact on development will depend on its shape (Kweka & Morrissey, 2000). Government expenditure in any financial year is clearly expressed within the budget of that year. In any case, the real consumption may be distinctive from the budgeted use due to changes in the macroeconomic environment. In Nigeria, for instance, extra-budgetary expenditure or allocations like the additional purchase of military gears from the US on 29<sup>th</sup> August, 2017 to fight the Boko Haram terrorist group in the North East, relief materials giving to victims of the tanker explosion in Onitsha on 16<sup>th</sup> October 2019 aroused in the course of budget implementation (Nduka, Ananwude, & Osakwe, 2019).

The standard of living in the financial condition of the citizens translating to their ability to access the basic needs of life, otherwise termed “consumption”. Governments across the world have initiated and implemented economic policies geared toward improving the standard of living of the populace. Cvrlje and Coric (2010) defined standard of living as the level of welfare available to individuals or to the group of people that is, it concerns goods and services people are able to consume and the resources they have access to. Taking one of the propositions of Wagner’s law of public expenditure, Dogan and Tang (2006) envisaged that standard of living increases demand services, which are usually provided by the government, thus raising the share of public sector expenditure in gross domestic product.

The interplay of several factors determines government expenditures. In nature, the relationship between growth in population represent with population size and government expenditure depends upon the nature of the good or service that is being supplied, that an increase in population will increase expenditure (Ukwueze, 2015). Demographic pattern refers to the trends in population as envisage by the number of young, old, deaths, births, diseases, etc. in a place at any point in time also influences government expenditure. Technological change with advances in technology requiring more expenditure to align with a contemporary trend in technology to sustain performance in real output. From the point of view of Ukwueze (2015), these changes in technology may be such that they increase or decrease the relative importance of goods whose benefits are largely external, and which must therefore be provided by the government. Trade

openness is also considered as an essential determinant of government spending, especially in developing countries subject to various internal and external disturbances (Alm & Embaye, 2011). Trade openness has the potential of increasing economic growth and development via the attraction of foreign exchange.

Government expenditure's main factor is also represented by fragmentation, government revenue, and government debt. Fragmentation is the division of government into units in an area. Government units in Nigeria are fragmented into three: Federal, State, and Local Governments with different ethnicity, culture, and preferences, thus different pattern of expenditure across the various geopolitical zones. The debt profile of any country may influence the magnitude of expenditure, when the government incurs a larger and larger debt through continual net borrowing, assuming the interest is not falling, the interest charges on the public debt naturally grow, thus subsequent rise in government expenditure (Okafor & Eiya, 2011). The revenue base of the government is an important determinant of government expenditure. Governments with high revenue realization from taxes, exports, etc. may engage in high expenditure pattern compared to countries with small revenue base.

Theories such as the Keynesian theory of public expenditure, Baumol's model of public expenditure, Wagner's law of government expenditure, Peacock and Wiseman's hypothesis, and Musgrave theory of public expenditure growth have been used to explain the supposed linkage between government expenditure and economic growth. We limited our discussion to Wagner's law of government expenditure on the argument that its assumption has been validated in many countries of the world, especially in emerging economies which Nigeria is part of. Wagner's law of government expenditure envisaged the existence of a positive and direct relationship between government expenditure and economic growth that is, government responsibility/function is raised by virtue of higher spending (Jeff-Anyeneh, 2018). Wagner's law suggests that as per capita income (a measurement of the standard of living) and output increases, the public sector will grow in proportion to total economic activity on this belief that the cause of relative growth of government is social advance and the coming about changes within the relative circles of the private and open economy (Aggarwal, 2017). From Wagner's assumption, a country in an era of industrialization will witness a rise in the standard of living, which results in government spending to rise in the total expenditure of the population.

Exploration of the empirical studies was straight to point as against the orthodox elucidation of econometric tools, types of research designs adopted, the period covered, and sources of data among others. Even though there are no abundant empirical studies for emerging economies, selected empirical literature were directly related to the subject matter. The work of Nduka et al. (2019) uncovered that government consumption in Nigeria has a critical impact on the standard of living of her citizens. Ogbuagu and Ewubare (2019) appeared that expenditure education in both lag 1 and 2 have a positive and noteworthy effect on the standard of living, whereas wellbeing and utilization use have an inconsequential effect on the standard of living in Nigeria. Research on the relationship between national income and government aggregate expenditure in Nigeria, Nwude and Boloupremo (2018) divulged the validity of Wagner's law. Gimba and Isah (2016) found that the expansionary budget in Kaduna State exerts a positive impact on the standard of living. Churchill, Yew, and Ugur (2015) conducted a progressive meta-regression examination to audit 87 observational studies that detailed 769 gauges for the impacts of the size of government expenditure on the growth of the economy. When measured as the proportion of add up to government consumptions or government consumption expenditures to GDP, they found that government size is associated negatively with per-capita income growth in developed countries.

Akande (2016) revealed that government expenditure on education is related in the long run with the standard of living in Nigeria, and they rapidly adjust towards equilibrium. In a panel

of three African countries – Nigeria, Ghana, and South Africa, Alimi (2014) established that government expenditure does not influence national income in Nigeria and South Africa but affects the standard of living in Ghana. The research of Nwosa (2014) revealed that government consumption has a positive and noteworthy effect on the unemployment rate, whereas it encompasses a negative and immaterial effect on the destitution rate in Nigeria. Dahmardeh and Tabar (2013) disclosed that constructive expenditures positively affect poverty reduction in Sistan and Baluchestan Province of Iran. Hidalgo-Hidalgo and Iturbe-Ormaetxe (2018) showcased that open use in essential instruction features a substantial impact on raising people over the destitution line and lessening the likelihood of enduring wellbeing issues when grown-ups, and on expanding school participation past obligatory instruction.

The study of Ahmad and Batul (2013) revealed that increasing budgetary assignment to financing education alone without lessening destitution level would not be adequate to progress the education status of the nation. In India, the research of Tiwari (2012) inferred that the rising levels of per capita income of the people had been positively associated with social sector expenditures, which in turn has been correlated with a declining incidence of poverty in India. Grullion (2012) unveiled that Keynes's hypothesis was found not to be valid for the case of the Dominican Republic. Birowo (2011) depicted that government expenditure in overall did not have a negative relationship with the poverty rate; this result was opposite to the previous studies on a similar field. Dogan and Tang (2006) revealed that government expenditures affect national income only in the Philippines out of the five Asian countries (Indonesia, Malaysia, Philippines, Singapore, and Thailand) studied. Jha et al. (2005) showed that consumptions on education, wellbeing, and other advancement exercises have been viable in lessening destitution in India.

## Methods

The first step we took was to find out the descriptive features of the data and the level of collinearity between the two components of government expenditure (recurrent and capital) by way of a correlation matrix. In step two, the stationarity properties of the data were ascertained to ensure that the variables were devoid of stationarity defects that may likely affect the output of the regression equation.

Thirdly, we estimated the short-run and long-run relationship between the variables concerned using the Autoregressive Distributive Lag (ARDL) model, while the effect assessment was carried out using the Granger Causality approach. The choice of the granger causality procedure over the Ordinary Least Square (OLS) method is because it helps in determining whether one time series variable is useful in predicting or forecasting another. The OLS ordinarily tests for the “mere” relationship between variables. Two variables may relate without one causing changes in the other.

Lastly, sensitivity analysis (serial correlation LM test, heteroscedasticity, and Ramsey Reset Specification test) was performed in an attempt to evaluate the robustness of the model specified.

In determining the effect of government expenditures on the standard of living in Nigeria, a test of causation was chosen. The short and long-run relationship was evaluated by virtue of Autoregressive Distributive Lag (ARDL) model. The data used in the study spanned from 1981 to 2018 and were sourced from the Central Bank of Nigeria (CBN) statistical bulletins. We disaggregated expenditure of the government into Recurrent Expenditure (*REXP*) and Capital Expenditure (*CEXP*), then used per capita income to measure Standard of Living (*STDL*) as it is a widely accepted indicator of living standard of a country. We expressed standard of living as a function of recurrent and capital expenditures of the government. In the light of this, we instituted and estimated our model in the Autoregressive Distributive Lag (ARDL) form as:

$$STDL_t = \beta_{0i} + \beta_{1i}STDL_{t-1} + \beta_{2i}REXP_{t-1} + \beta_{3i}CEXP_{t-1} + \sum_{i=1}^p a_{1i} STDL_{t-i} + \sum_{i=1}^q a_{2i} REXP_{t-i} + \sum_{i=1}^q a_{3i} CEXP_{t-i} + \varepsilon_t \quad (1)$$

The long-run estimate is depicted as thus:

$$STDL_t = a_0 + \sum_{i=1}^p a_{1i} STDL_{t-i} + \sum_{i=0}^{q_1} a_{2i} REXP_{t-i} + \sum_{i=0}^{q_2} a_{3i} CEXP_{t-i} + \varepsilon_t \quad (2)$$

The short-run estimate is stated as:

$$STDL_t = a_0 + \sum_{i=1}^p a_{1i} STDL_{t-i} + \sum_{i=1}^q a_{2i} REXP_{t-i} + \sum_{i=1}^q a_{3i} CEXP_{t-i} \alpha ECM_{t-i} + \varepsilon_t \quad (3)$$

Where:

*STDL* standard of living

*REXP* government recurrent expenditure

*CEXP* government capital expenditure

$\beta_s$  unknown parameters to be estimated,

$a_{1i}$ -  $a_{3i}$  coefficient of the model's short-run dynamics merging to equilibrium

$\alpha$  the speed of adjustment

$\varepsilon$  the usual random disturbance term.

## Results and Discussion

Table 1 depicts the variables descriptive features. Panel A shows that the standard of living has a dispersion of 153,605.5 from one year to another, as evidenced by the standard deviation, while the average per capita income is ₦123,707.0. The minimum and maximum values of the standard of living are worth ₦1,245.22 and ₦462,068.0, respectively. From Panel B, the minimum and maximum values for recurrent and capital expenditure are respectively ₦4,750 million and ₦4,100 million; ₦5,675,190 million and ₦1,682,100 million. Based on the standard deviation (1,638,806 for recurrent expenditure and 441,609 for capital expenditure), there was a significant variation in recurrent expenditure relative to capital expenditure.

**Table 1.** Variables Descriptive Features

	Mean	Std. Dev.	Min.	Max.	Obs.
Panel A: Standard of Living					
<i>STDL</i>	123707.0	153605.5	1245.220	462068.0	38
Panel B: Government Expenditure					
<i>REXP</i>	1287464.0	1638806.0	4750.000	5675190.0	38
<i>CEXP</i>	425594.5	441609.0	4100.000	1682100.0	38

Note: Mean = mean of the variables; Std. Dev. = standard deviations of the variables; Min. & Max. = Minimum and maximum values of the variable, whereas Obs. = number of observation of the variables

**Table 2.** Correlation Matrix

	<i>STDL</i>	<i>GREXP</i>	<i>GCEXP</i>
<i>STDL</i>	1.000		
<i>GREXP</i>	0.953**	1.000	
<i>GCEXP</i>	0.854**	0.516	1.000

Source: E-views 10.0 version data output; \* and \*\* denote significance level at 1% and 5% respectively

In an effort to ensure that recurrent and capital expenditure are not highly correlated to the extent that would result in a problem of multicollinearity, the level of correlation between them was evaluated and divulged in Table 2. The correlation between recurrent and capital expenditure

is 0.51, an indication that the level of correlation between them is moderate. By this, we assumed no issue of multicollinearity in the model.

We subjected the variables to unit root test through Augmented Dickey-Fuller (ADF) and Philip Peron (PP). This was carried out using three criteria: intercept, intercept & trend, and none. Our result as depicted in Tables 3 – 4 divulged that the data have no stationarity defect that may cast a dent to the statistical reliability of regression output.

**Table 3.** ADF Test Result

Variables	Intercept	Intercept & Trend	None	Remark
Standard of Living <i>STDL</i>	-5.095*	-5.111*	-4.839*	Stationary/1(1)
Government Expenditure				
<i>REXP</i>	0.090	-3.952**	1.572	Stationary/1(1)
<i>CEXP</i>	-5.741*	-5.794*	-5.412*	Stationary/1(1)

Note: \* and \*\* denote significance level at 1% and 5% respectively, whereas 1(0) and 1(1) represent integration order at level and first difference equivalently

**Table 4.** PP Test Result

Variables	Intercept	Intercept & Trend	None	Remark
Standard of Living <i>STDL</i>	-5.179*	-5.149*	-4.961*	Stationary/1(1)
Government Expenditure				
<i>REXP</i>	-4.357*	-6.262*	-3.199*	Stationary/1(1)
<i>CEXP</i>	-5.724*	-6.386*	-5.398*	Stationary/1(1)

Note: \* and \*\* denote significance level at 1% and 5% respectively, whereas 1(0) and 1(1) represent integration order at level and first difference equivalently

Autoregressive Distributive Lag (ARDL) f-statistic of 8.562 in Table 5 is greater than the lower and upper bound critical values of 3.20 and 3.58, respectively at 5% level of significance. This implies the rejection of the null hypothesis of no co-integration. From this result, there is a long-run relationship between standard of living and expenditure of the government (recurrent and capital expenditure as applied in this study) within the period studied.

**Table 5.** ARDL Long-Run Relationship

T-Test	5% Critical Value Bound		Remark
F-Statistic	Lower Bound	Upper Bound	
8.562	3.20	3.58	Null Hypothesis Rejected

Source: E-views 10.0 version data output

From the ARDL output in Table 6, *STDL* was automatically lagged by three (3) years, *REXP* by four (4) years, and *CEXP* by two (2) years. We restricted our discussion to the non-lagged form of the variables. This is to say that we did not consider the lag form of the variables in interpreting the output in Table 6. There is a significant positive relationship between the standard of living in Nigeria and government recurrent expenditure: a percentage rise in recurrent expenditure would result to 7.86% increase in the standard of living of the citizens.

On the contrary, there is a negative significant relationship between capital expenditure and living standard in Nigeria that is, increasing capital expenditure by a unit leads to 7.62 decreases in the standard of living. A look at the coefficient of the constant, when recurrent and capital expenditure are held constant, the standard of living would be valued at ₦2,128.19. The adjusted R-square was robust enough to justify the model as it significantly explained 99.07% changes in

standard of living. This is further affirmed by the f-statistic (320.47) and p-value (0.00). The Durbin Watson value of 1.68 is still within the acceptable scale of no autocorrelation.

The nature of the long-run relationship, coupled with the speed of adjustment, are detailed in Table 7. In the long run, recurrent expenditure significantly relates to a standard of living, while capital expenditure insignificantly relates negatively with a standard of living. With respect to the error correction mechanism, the coefficient shows the expected negative sign, which is statistically significant at 5% level of significance. This indicates that the model has the tenacity to go towards equilibrium. About 67.51% error from the past period were addressed in the present period as entailed by the error correction coefficient of -0.6751

**Table 6.** Short Run Relationship

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>STD</i> L(-1)	0.839*	0.223	3.767	0.001
<i>STD</i> L(-2)	-0.192	0.306	-0.627	0.537
<i>STD</i> L(-3)	-0.322	0.268	-1.204	0.241
<i>REXP</i>	0.079*	0.027	2.917	0.008
<i>REXP</i> (-1)	-0.104*	0.034	-3.072	0.006
<i>REXP</i> (-2)	0.098	0.047	2.069	0.051
<i>REXP</i> (-3)	0.036	0.053	0.681	0.503
<i>REXP</i> (-4)	-0.053**	0.022	-2.376	0.027
<i>CEXP</i>	-0.076*	0.020	-3.914	0.001
<i>CEXP</i> (-1)	0.027	0.025	1.096	0.285
<i>CEXP</i> (-2)	0.081*	0.028	2.895	0.008
C	2128.185	4322.777	0.492	0.627
Adjusted R-squared	0.991	Durbin-Watson stat		1.684
F-statistic	320.474	Prob (F-statistic)		0.000

Note: \* and \*\* denote significance level at 1% and 5% respectively

Source: E-views 10.0 version data output

**Table 7.** ARDL ECM Estimate

Co-integration Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D( <i>STD</i> L(-1))	0.515*	0.135	3.800	0.001
D( <i>STD</i> L(-2))	0.322	0.196	1.648	0.114
D( <i>REXP</i> )	0.078*	0.017	4.479	0.000
D( <i>REXP</i> (-1))	-0.080*	0.019	-4.233	0.000
D( <i>REXP</i> (-2))	0.017	0.032	0.549	0.588
D( <i>REXP</i> (-3))	0.053*	0.019	2.821	0.010
D( <i>CEXP</i> )	-0.076*	0.016	-4.921	0.000
D( <i>CEXP</i> (-1))	-0.081*	0.022	-3.655	0.001
CointEq(-1)*	-0.675*	0.108	-6.239	0.000
Long Run Equation				
<i>REXP</i>	0.081*	0.017	4.721	0.000
<i>CEXP</i>	0.047	0.035	1.342	0.193
C	3152.587	6158.089	0.512	0.614

Note: \* and \*\* denote significance level at 1% and 5% respectively

Source: E-views 10.0 version data output

The robustness of the model in Table 8 was evaluated by serial correlation LM test, heteroskedasticity Test, and Ramsey Reset Specification. The serial correlation does not portray any issue of autocorrelation (p-value 0.585 > 0.05); there was no problem of heteroskedasticity (p-

value  $0.341 > 0.05$ ), and the model was well specified ( $p$ -value  $0.137 > 0.05$ ). With these results, the robustness of our model is justified.

**Table 8.** Diagnostic Test

	F-statistic	Prob.
Serial Correlation LM Test	0.551	0.585
Heteroskedasticity Test	1.203	0.341
Ramsey Reset Specification	2.397	0.137

Note: \* and \*\* denote significance level at 1% and 5% respectively

Source: E-views 10.0 version data output

In Table 9, we found the existence of a bidirectional/feedback causal relationship between standard of living and recurrent expenditure. Causality flows from recurrent expenditure to standard of living, and from the standard of living back to recurrent expenditure at 5% level of significance. Similarly, there is a unidirectional/one-way causal relationship between capital expenditure and standard of living. Causality flows from capital expenditure to standard of living at 5% level of significance. The implication of the granger causality test is that both recurrent and capital expenditure have a significant effect on the standard of living in Nigeria.

**Table 9.** Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.	Remarks
<i>REXP</i> does not Granger Cause <i>STDL</i> *	36	15.279	0.000	Causality
<i>STDL</i> does not Granger Cause <i>REXP</i> *		23.725	0.000	Causality
<i>CEXP</i> does not Granger Cause <i>STDL</i> *	36	10.840	0.000	Causality
<i>STDL</i> does not Granger Cause <i>CEXP</i>		0.484	0.621	No Causality

Note: \* and \*\* denote significance level at 1% and 5% respectively

Source: E-views 10.0 version data output

With the identification of the nature of the relationship between standard of living and government recurrent and capital expenditure, it is ideal to ascertain between recurrent and capital expenditure, which influences the standard of living in Nigeria most. In this regard, the variance decomposition was estimated. With inference from Table 10, the recurrent expenditure of the government was found to be more influential in determining the standard of living of the people compared to capital expenditure. However, changes in the standard of living were attributed heavily to fluctuation in the standard of living itself.

**Table 10.** Variance Decomposition of *STDL*

Period	S.E.	<i>STDL</i>	<i>REXP</i>	<i>CEXP</i>
1	19668.18	100.000	0.000	0.000
2	29649.29	69.085	27.763	3.153
3	34325.67	52.379	20.878	26.744
4	42261.63	42.078	18.744	39.178
5	60236.96	37.528	34.818	27.654
6	84430.07	36.901	48.161	14.938
7	115255.0	33.325	58.454	8.221
8	148925.3	29.197	63.908	6.895
9	184646.5	24.811	66.897	8.292
10	220567.4	20.970	68.233	10.797

Source: E-views 10.0 version data output

To determine the magnitude of variation in standard of living owing to a unit change in government recurrent and capital expenditure, the impulse response function analysis was performed. As depicted in Table 11, the standard of living responds positively to changes in government recurrent expenditure both in short and long term basis (see period 2 – 10). On the contrary, the standard of living responds positively to changes in government capital expenditure only in the short-run (see period 2 – 6) but negatively in the long run (see period 7 – 10).

**Table 11.** Impulse Response Function of STDL

Period	<i>STDL</i>	<i>REXP</i>	<i>CEXP</i>
1	19668.18	0.000000	0.000000
2	14848.28	-15622.23	5264.703
3	3137.447	1392.213	16952.57
4	-11591.84	9422.710	19612.13
5	-24702.01	30472.43	17426.65
6	-35619.60	46580.59	7838.236
7	-42382.99	65816.29	-5213.719
8	-45263.30	80056.27	-20910.39
9	-44537.09	92919.86	-36026.68
10	-41747.48	101917.5	-49250.69

Source: E-views 10.0 version data output

The ARDL co-integration result depicted that government expenditure is related in the long run with the standard of living. This implies that Nigeria's standard of living would improve if government expenditure is appropriately allocated and utilized by various sectors in the economy. The long-run estimate divulged a significant positive relationship between recurrent expenditure and the standard of living, whereas an insignificant positive relationship was observed between capital expenditure and standard of living. The short-run estimate revealed a significant positive relationship between recurrent expenditure and the standard of living, but a significant negative relationship between capital expenditure and the standard of living in Nigeria. Similarly, recurrent and capital expenditure was found to have a significant effect on the standard of living based on the Granger Causality test. This affirmed the research findings of Dahmardeh and Tabar (2013), Gimba and Isah (2016), Nduka et al. (2019), Nwude and Boloupremo (2018), and Ogbuagu and Ewubare (2019).

On the other hand, it is in disagreement with Alimi (2014) and Grullion (2012) on the ineffectiveness of government expenditure to improve the standard of living. The overall finding points to the relevance of recurrent expenditure on the welfare of citizens. When a government increases spending on workers through an increase in salaries, wages, etc., the consumption pattern of the labour force will rise, which results in a reduction in poverty and improved standard of living. With the recent increase in the minimum wage by the Federal Government, all things been equal (level of inflation does not skyrocket, minimum or barest fluctuation in macroeconomic variables), the living standard of workers would improve a little, which translate in a reduction in poverty among the workers at the lower cadre/junior workers or casual staff as the case may be. However, civil servants, especially the University lecturers and non-academic staff are yet to see the implementation of the new minimum wage as their salaries remained the same when December 2019 salaries were paid.

In summary, the result of this study has shown that government recurrent expenditure increases the standard of living of its citizenry rapidly, while capital expenditure nurtures long term economic growth, which precipitates a high standard of living. In Nigeria, it is a different kettle of fish because contracts for capital projects are inflated, and on many occasions, money budgeted

for those contracts are diverted into private pockets as a result of corruption in public offices by public officials, thereby impeding economic growth and stimulating poor standard of living hence, fewer funds will be available to citizens to access their basic needs resulting in a declining standard of living. In the same vein, the result of the Granger causality test showed that recurrent expenditure and standard of living are positively related, but it should be noted that borrowing to pay salaries and wages, as is being done by the Nigeria government, can increase the standard of living of Nigeria citizens in the short-run but will seriously hurt the economy in the long-run since the loan was not invested in a profitable venture, which can generate revenue for seamless loan repayment.

Recurrent expenditure having more influence on the standard of living compared to capital expenditure lays credence to the delay in submission of budget by the executive arm of government and subsequent passage of a budget by the legislators. There is this tradition in Nigeria that before the budget for a fiscal year is passed into law, it must be approved by the legislators. However, this is obtainable in both emerging and developed economies. However, the problem in Nigeria is that there are unnecessarily prolonged deliberations on the budget, and this has been regarded as the fundamental factor contributing to poor budget implementation. It takes approximately three months (one quarter), and in some cases, four months for a budget of a fiscal year to be approved and considered valid in line with the constitution of the Federal Republic of Nigeria. In this scenario, the actualization or execution of capital projects that would result in a better or improved standard of living of the citizens is not completed or abandoned. For instance, a capital project of the government called “Ajaokuta Steel Mill Company” located in Ajaokuta, Kogi State, has been abandoned for almost four decades now. As of 1983, the Steel Mill was at a 95 percent completion rate or stage, but as of today, that project has not been fully (100 percent) completed. That notwithstanding, the Federal Government on the 13<sup>th</sup> of May, 2020 inaugurated a team to revive the Ajaokuta Steel Mill company to generate employment and take her citizens out of poverty to ensure a better/improved standard of living.

## Conclusion

The standard of living of the population is, in no small measure, influenced by national output at any given point in time. In this study, we determined the effect of government recurrent and capital expenditure on the standard of living in Nigeria using a test of causation with the help of the Granger Causality test. The long-run and short-run estimates were done by utilizing the Autoregressive Distributive Lag (ARDL) model using data that spanned from 1981 to 2018. Precipitously, we empirically asserted that government recurrent and capital expenditure have a significant effect on the standard of living in Nigeria. Nevertheless, that is not the true reflection of the living standard in the country. Despite our vast oil wealth, a larger fraction of our populace lives underneath the destitution line. A report by World Poverty Clock in June 2018 put 86.9 million Nigerians living in abject poverty. The high cost of living in recent times, coupled with macro-economic instability, has to a high extent, perpetrated ineffable hardship on the people, especially the rural population.

There is an enormous need for the government to increase its expenditure on the health sector. Investment in healthcare is positively related to economic growth and has the potential of reducing poverty, hence a better standard of living. Fiscal policies geared toward the expansion of economic activities should be pursued vigorously by the government. This will mean strengthening the industrial sector (by providing the steady power supply, good roads and communication networks, etc.), agricultural sector (reducing interest rate on agricultural loans, providing subsidy for mechanized agriculture, etc.), and hospitality and tourism sector, among others. Considerably, this would strengthen the economy resulting in sustainability in gross domestic products. The Federal Government of Nigeria ought to as a matter of direness, prioritize capital expenditure over

recurrent expenditure. The current scenario was recurrent expenditure gulps 78.47 percent of the total annual budget for the year 2018 (while meager 21.53 percent for capital expenditure), for instance, is not ideal for improvement in the standard of living of the citizens.

## References

- Aggarwal, R. (2017). Growth of public expenditure. *Pacific Business Review International*, 9(9), 122–128.
- Ahmad, Z., & Batul, T. (2013). Relationship among poverty, education expenditure, and education status: Empirical evidence from Pakistan. In *Proceedings of the World Congress on Engineering*. London, UK.: World Congress on Engineering.
- Akande, R. (2016). Impact of education on living standard in Nigeria. *International Journal of Development and Management Review*, 11(1), 215-220–220.
- Alimi, R. S. (2014). *A time series and panel analysis of government spending and national income* (MPRA Paper No. 56994).
- Alm, J., & Embaye, A. (2011). *Explaining the growth of government spending in South Africa* (Tulane Economics Working Paper Series No. 1105).  
<http://repec.tulane.edu/RePEc/pdf/tul1105.pdf>
- Birowo, T. (2011). *Relationship between government expenditure and poverty rate in Indonesia: Comparison of budget classifications before and after budget management reform in 2004*. Ritsumeikanasia Pacific University. <https://core.ac.uk/reader/60533650>
- Churchill, S. A. M., Yew, S. L., & Ugur, M. (2015). *Effects of government education and health expenditures on economic growth: A meta-analysis* (MPRA Working Paper Series No. 40).
- Cvrlje, D., & Coric, T. (2010). *Macro & micro aspects of standard of living and quality of life in a small transition economy: The case of Croatia* (Working Paper Series No. 10–02). Zagreb.
- Dahmardeh, N., & Tabar, M. H. (2013). Government expenditures and its impact on poverty Reduction: Empirical from Sistan and Baluchestan Province of Iran. *International Journal of Academic Research in Economics and Management Sciences*, 2(1), 251–260.
- Dogan, E., & Tang, T. C. (2006). Government expenditure and national income: Causality tests for five South East Asian countries. *International Business & Economics Research Journal (IBER)*, 5(10), 49–58. <https://doi.org/10.19030/iber.v5i10.3516>
- Gimba, V. K., & Isah, H. A. (2016). Impact of expansionary budget on living standard in Kaduna State, Nigeria (1996 – 2015). *Saudi Journal of Business and Management Studies*, 1(3), 118–126. <https://doi.org/10.21276/sjbms.2016.1.3.7>
- Grullion, S. (2012). National income and government spending: Co-integration and causality results for the Dominican Republic. *Developing Country Studies*, 2(3), 89–98.
- Hidalgo-Hidalgo, M., & Iturbe-Ormaetxe, I. (2018). Long-run effects of public expenditure on poverty. *The Journal of Economic Inequality*, 16(1), 1–22. <https://doi.org/10.1007/s10888-017-9360-z>
- Jeff-Anyeneh, S. E. (2018). *Effect of government expenditure on economic growth and development in Nigeria*. Nnamdi Azikiwe University, Awka.
- Jeff-Anyeneh, S. E., & Ibenta, S. N. (2019). Government expenditure and economic growth: Evidence from the Nigeria economy (1981 – 2016). *Advances in Research*, 19(4), 1–14. <https://doi.org/10.9734/JSRR/2019/v23i630136>

- Jha, R., Biswal, U. D., & Biswal, B. P. (2005). *An empirical analysis of the impact of public expenditure on education and health on poverty in Indian States* (Queen's Economics Department Working Paper No. 998). Ontario. <https://doi.org/10.2139/ssrn.236888>
- Kweka, J. P., & Morrissey, O. (2000). *Government spending and economic growth in Tanzania, 1965-1996* (CREDIT Research Paper No. 00/6). Nottingham.
- Nduka, J. A., Ananwude, A. C., & Osakwe, C. I. (2019). Expenditure of the federal government of Nigeria: Effect on the standard of living of her citizens. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(4), 57–64. <https://doi.org/10.6007/IJARAFMS/v9-i4/6658>
- Nwosa, P. I. (2014). Government expenditure, unemployment and poverty rates in Nigeria. *Journal of Research in National Development*, 12(1), 77–84.
- Nwude, E. C., & Boloupremo, T. (2018). Public expenditure and national income: Time series evidence from Nigeria. *International Journal of Economics and Financial Issues*, 8(1), 71–76.
- Ogbuagu, A. R., & Ewubare, D. B. (2019). The dynamic correlation between fiscal spending on education, health, consumption and standard of living in Nigeria. *International Journal of Economics and Financial Issues*, 9(3), 259–267.
- Okafor, C., & Eiya, O. (2011). Determinants of government expenditure in Nigeria: An empirical analysis. *Research Journal of Business*, 5(1), 44–50. <https://doi.org/10.3923/rjbm.2011.44.50>
- Tiwari, M. (2012). Rising government expenditure and the status of poor: A study. *Shodh Sanchayan*, 3(2), 1–8.
- Ukwueze, E. R. (2015). Determinants of the size of public expenditure in Nigeria. *SAGE Open*, 5(4), 1–8. <https://doi.org/10.1177/2158244015621346>