

IMPACT OF PUBLIC EXPENDITURE AND HUMAN CAPITAL DEVELOPMENT ON ECONOMIC GROWTH IN NIGERIA

¹Aminu Abubakar Mikailu,
&

²Sunday Mlanga

¹Department of Economics; Federal College of Education, Zaria

²College of Private Sector Accounting, ANAN University, Kwall

Corresponding Author's email: abubakarluty88@gmail.com

Abstract

This paper examines the impact of public expenditure and human capital development on Nigeria's economic growth. It utilizes Autoregressive Distributed Lag (ARDL) Model of co-integration. Data for the analysis are extracted from annual series of the selected relevant macroeconomic variables from 1985 to 2019. The findings reveal that federal government expenditure on economic services has positive and significant effect on GDP; expenditure on general administration has no effect on GDP; rate of inflation has a negative but insignificant effect on GDP; education tax and investment in human capital development have positive and significant effect on the growth of the Nigerian economy over the sampled period. In order to boost GDP and overall performance of the economy, the study recommends for the need for the federal government to tilt the level of annual budgetary allocation in favor of economic services; productive government expenditure in conjunction with private sector investment plans should always outweigh expenditure on consumption and luxury items; and effective control of the rate of inflation should be part and parcel of federal government's medium and long term expenditure frameworks; provide a suitable environment for ensuring macro-economic stability through effective utilization of income from education tax that will encourage increased investment in human capital in the public sector.

Keywords: Economic Growth, Public Expenditure, Human Capital Development, Revenue

Introduction

The Federal Government in Nigeria has, since its return of democracy in 1999 initiated divergent fiscal policies with the aim of propelling economic growth and development of the nation. The fiscal policy options entailed planned expansion of government's sources of income and control of expenditure directed at achieving the desired government's short term and long term macroeconomic objectives. The

efficacy of fiscal policy options as important macroeconomic instruments for the realization of sustainable economic growth has been highlighted in the works of Jhingan *et al.* (2008), Gbosi (2008), Philips (1997), Tombofa (1999), Agiobenebo (2003), and Brennan and Buchana (1980). As a concept, fiscal policy provides for the process by which the three tiers of government (Federal, State and Local) try to improve their revenue and simultaneously adjust their

level of expenditure as encapsulated in their approved annual budgets with the aim of monitoring and influencing the performance of the economy. So in combination with the CBN's monetary policy instruments, which influence the pattern and level of money supply at any given point in time, fiscal decisions provide the surest way of enabling especially the federal government to implement the macroeconomic frameworks set out in the national budgets. These frameworks or objectives include improvement in the rate of employment, as well as realization of price stability, reduction of the level of poverty and attainment of sustainable economic growth (Odewunmi *et al.*, 2012).

Economic growth is defined as a rise in national income or output per capita over a long period of time. It's an economic condition in which the rate of rise in national output must outpace the rate of population growth. In addition, economic growth is the long-term expansion of the economy's productive potential. However, with regards to Nigeria, the potentials for enhanced economic growth have been dwarfed as a result of a series of fiscal policy summersaults, leading to misappropriation of government spending patterns, as significant expenditures have been made continuously year in year out, yet the economy's performance has remained below target. Using the 2019 budget as an example, more funds are allocated to recurrent expenditure than capital expenditure, with only the infrastructure sector receiving a higher allocation of 87% for capital expenditure and 12.2 percent for

recurrent expenditure (budget, 2019). This leads to rising level of inflation as put by the National Bureau of Statistics at 28.92% as of December, 2023 (NBS, 2024). However, around 2020, the economy had been heading into another round of economic recession as a result of sharp decline in revenue earnings and uncontrolled management of expenditure largely exacerbated by the global covid-19 pandemic and weak fiscal policy dynamics. Overall, a lot of authors have tried to analyze many of the issues related to the nation's weak fiscal policy prescriptions. These include rising level of inflation and decline in real income (Agu *et al.*, 2014); corruption and mismanagement of public funds (Okemini & Uranta 2008; and Gbosi 2008); and lack of harmonization and coordination of fiscal policies (Onoh 2007, Anyanwu 2011, Amadi & Essi 2006, Essi *et al.*, 2011 and Chinedu, 2022).

Education is generally considered as a powerful tool in reducing poverty and enhancing economic growth. It plays a vital role in shaping the way in which the citizens learn to support the microeconomic demands of economic growth. Educational institutions prepare the citizens to be able to participate actively in all walks of life including economic activities (Lockheed, Jamison and Lau, 1980). Education is fundamental to development, and is regarded as the key vehicle through which the society can be developed. It does not only help in supplying the needed human capital, which is a necessary condition for economic growth, it is also essential for poverty reduction and a means to promote equity, fairness and social justice (Okojie, 1995; Yesufu, 2000; Todaro *et al.*, 2007).

Spending on schools, universities, and other public and private entities that provide or support educational services is included in education spending. Education spending by the federal government (current, capital, and transfers) is expressed as a proportion of total federal spending across all sectors (including health, education, social services, and others). It includes spending financed by overseas transfers to the government (Gootjes, de-Haan, Jong-A-Pin, (2021). There are two types of public education spending: current and capital. Government expenditures on educational institutions (both public and private), education administration, and subsidies for private entities (students/households and other private entities) are all included in public expenditure on education (Nikiforos, 2021)

The role of education in economic growth and development of an economy has been underscored in many studies. Education, as a key component of human capital formation is recognized as being vital in increasing the productive capacity of people. Education, especially at the higher level, contributes directly to economic growth by making individual workers more productive resulting from the creation of knowledge and technological innovation (Larocque, 2008; Urhie 2014). Education in a broad sense is a process by which an individual acquires the many physical and social capabilities demanded by the society in which he/she is born into to function (Eduwenet *al*, 2017). An investment in human capital is very beneficial in the society, both at the micro and macro level, and affects the system both directly and indirectly. Increase in individual's wage is a

direct effect while additional positive externalities associated with education are an indirect effect (Dahlin 2005, Heckman & Klenow, 1997 & Michaelowa, 2000). Investment in education leads to the formation of human capital, comparable to physical and social capital, and that makes a significant contribution to economic growth (Dickens, Sawhill & Tebbs 2006; Loening, 2004). Education as an investment secures returns in the form of skilled manpower that is geared to the needs of development, both for accelerating economic development and for improving the quality of the society (Yogish, 2006).

In the case of Nigeria, a major trend in education is that public investment in the education sector has not been encouraging. A simple comparison between the level of funding in only one UK University and that of the entire federal education sector can bring out the picture very clearly. From its 2019 annual report, the actual total expenditure of Imperial College London for 2018-19 is 1.127 billion pounds (equivalent to ₦560 billion at the official exchange rate of that time). This is higher than the total figure of ₦490 billion released by the federal government to the whole federal education sector in Nigeria during the 2018 to 2019 period. Therefore, the future direction of the return on investment in human capital in Nigeria is uncertain. This uncertainty may be attributed to the existence of macroeconomic disequilibrium in financial allocation and unsatisfactory performance of the country's economy (Risikat, 2004). According to (Risikat, 2009), the country has continued to be a mono-cultural economy, depending on oil

for foreign exchange inflows, indicating that the export base is yet to be diversified.

As a concept, education tax (also referred to as tertiary education tax) is a tax which is chargeable on all companies registered in Nigeria on their assessable annual profit as their contribution to the tertiary education sector. The education tax law was promulgated as Education Tax Act No. 7 of 1993, which was later repealed and replaced by the Tertiary Education Trust Fund (TETFund) Act of 2011. Under the provision of the Act, all registered companies in Nigeria are required to pay a tax of 2% of their assessable profit into the Fund. However, non-resident companies and unincorporated entities are exempted from payment of the tax. The distribution of the funds accruable to TETFund is on the ratio of 2:1:1 between the universities, polytechnics, and colleges of education across the six geographical zones of the country. In specific terms, TETFund is mandated to disburse any appropriated education tax funds for human capital development, and provision and maintenance of essential physical infrastructure for learning, teaching and research, as well as for procurement of teaching and research materials and equipment in tertiary institutions of learning. As a result, government spending and economic growth are disaggregated, resulting in distorted economic performance and widespread corruption; thus, there is, therefore, a need to examine the impact of public expenditure and human capital development on economic growth in Nigeria with inclusion of inflation, education tax and investment in education as key variables

with a view to deriving implications for policy direction and also to determine the extent to which Nigeria's fiscal policy has impacted on the economy over the sampled period.

Literature Review

There are a significant number of studies on the impact of fiscal policy in relation to public expenditure on Nigerian economic growth. Most of these studies, including Oseni & Onakoya (2012); Sikiru & umaru (2011); Ubesie & Edeg (2016); Aguet *al* (2014); Peter & simeon (2011); Onuorah & Akujuobu (2012); Onyemaechi (2014) investigate the impact of fiscal policy on economic growth in Nigeria using regression analysis; Jonhansen co-integration and ordinary least square techniques.

Oseni & Onakoya (2012) examine the fiscal policy options that contributed to economic growth in Nigeria using annual time-series data for the period of 1981 to 2010. The results reveal a positive and significant relationship between sound fiscal policy and economic growth in the long run. Sikiru & Umaru (2011), study the period between 1977 to 2009 and using Engle-Granger co-integration approach establish that productive expenditure, rather than fiscal decisions rooted in consumption covered by disproportionate recurrent spending, has positively impacted on economic growth in Nigeria during the period under review. Peter & Simeon (2011), on the other hand, investigate the impact of fiscal policy variables on Nigeria's economic growth using annual time series data between 1970 and 2009 and adopt the arcane method of

Vector Autoregression (VAR) and error correction mechanism techniques. The result indicates that there is long-run equilibrium relationship between economic growth and fiscal policy variables. Ubesie (2016) examined the effect of fiscal policy on economic growth in Nigeria between the periods 1985 to 2015 utilizing Ordinary Least Square (OLS) regression. The study finds that total government expenditure is significantly and positively related to government revenue, with expenditures climaxing faster than revenue. However, investment expenditures are found to be much lower than recurrent expenditures providing evidence that explains the weak growth of the country's economy.

Other notable empirical works that investigate the impact of fiscal policy on Nigeria's economic growth include: Agu *et al.*, (2014), discover that a total government expenditure between 1961 and 2010 tends to increase with increase in revenue even though the increase in expenditure is far in excess to what was earned thereby slowing the rate of growth of the Nigeria's economy; Onuorah and Akujuobu (2012), reveal that there is no statistically significant relationship between public expenditure variables and the economic growth in Nigeria; Onyemaechi (2014), covers the period 1980 to 2005, and discovers that there is a positive relationship between federal expenditures on economic services and the growth of the Nigerian economy. On the other hand; he finds negative relationship between government expenditures on administration and social and community services and economic growth over the period under review.

With regards to education, there is quite an appreciable volume of empirical studies on the impact of investment in education on Nigeria's economic growth. Most of these studies, including Risikat (2009); Afzal *et al.*, (2010); Kabiru & Hussaini (2015); Ifionu & Nteegah (2013); Omojimate (2010); investigate the impact of investment in education on economic growth in Nigeria using ordinary least square regression analysis techniques. The findings reveal positive correlation between investment in education and economic growth in Nigeria.

Risikat (2009) examines the relationship between investment in education and economic growth in Nigeria using annual time series data from 1977 to 2007 and employing Johansen co-integration technique and error correction methodology. The empirical results reveal that there is a significant long-run relationship between investment in education and economic growth. In his study, Yusuf (2014), explores the impact of investment in education on economic growth in Nigeria between 1975 and 2012. The analysis reveals that investment in human capital in form of capacity building through training and research has positive impact on economic growth in Nigeria. Kabiru and Hussaini (2015) covering the period 1981 to 2013 reveal that, among other factors and variables, both human capital and recurrent expenditures are significantly and positively related to economic growth in Nigeria. Ifionu and Nteegah (2013), covering the period 1981 to 2012 also find out that investment in education in Nigeria has significant implications on the country's economic growth over the sample period of

the study. Omojimate (2010) examines the impact of formal education on economic growth in Nigeria for the period 1980 to 2005 and found that there is co-integration between public expenditures on primary school enrolment and economic growth. From the international perspective, Afzal *et al* (2010) investigate the relationship between education, poverty and economic growth employing ARDL model for the period 1971 to 2009 in the case of Pakistan. The study reveals that the combined effect of physical and human capital on economic growth is positive and significant both in the short run and in the long run. But, the effect of education and human capital alone is positive and significant only in the long run.

Methodology

Sources and Measurement of Data

The variables on which the data are collected are government expenditure, general administration expenditure on recurrent expenses, rate of inflation, school enrollment, expenditure on TETFund and GDP. Data are collected from World Bank Development Indicators (WDI) (2019), the Central Bank of Nigeria (CBN) statistical bulletin (CBN) (2019), National Bureau of Statistics (NBS) (2019). Data for all the variables covers a period of thirty-five years from 1985 to 2019 adopting the Autoregressive Distributed Lag (ARDL) Models. Gross Domestic Product (GDP) is used as dependent variable while government expenditure (GE), administration (ADM), rate of inflation (INF), education (EDU) and education tax (EDUT) were the independent variables. GDP was measured in 2010 constant prices,

government expenditure is measured as federal government expenditure on economic services, administration was measured as general administration expenditure on recurrent expenses, inflation proxied by rate of inflation, education is measured as school enrollment and education tax was measured as allocation to TETFund.

Model Specification

The empirical model is anchored on the endogenous growth theory propounded by Romer, 1986 and Lucas 1988. The endogenous model is considered to be more relevant and appropriate to provide the theoretical framework for this study because first it tries to underscore and explain the key determinants of economic growth and secondly because it can appropriately be applied to an aggregate production function with more than two variables or components. In the model, total factor productivity and other macroeconomic variables are considered to have impact on total output (GDP) through deployment of advanced and appropriate technology in the production process. It also has an impact on efficiency and human capital to improve the rate of growth in output. In order to measure the relationship between the selected public expenditure and human capital development variables on GDP using annual time series data covering the period of 1985 to 2019, the Autoregressive Distributed Lag (ARDL) Model is adopted. The functional and econometric representations of the relationship among the variables of the study are given in equation (1) and (2) as:

$$GDP = f(GE, ADM, INF, EDU, EDUT) \dots \dots \dots (1)$$

$$GDP_t = \beta_0 + \beta_1 GE_t + \beta_2 ADM_t + \beta_3 INF_t + \beta_4 EDU_t + \beta_5 EDUT_t + \varepsilon_t \dots \dots \dots (2)$$

Where; GDP (output) represents real GDP per capita, GE represents federal expenditure both on economic and administrative services, ADM represents expenditure of administration, INFL represents inflation rate, EDU represents education and EDUT indicates education tax.

Long Run Equations of Autoregressive Distributed Lag (ARDL) Model

The Autoregressive Distributed Lag (ARDL) Model is based on the bounds-testing approach proposed by Pesaran and Smith (1998), Pesaran *et al.*, (2001) and Narayan (2005) and is given by the following equation as follows:

$$GDP_t = \beta_0 + \sum_{i=0}^n \beta_{1i} GDP_{t-i} + \sum_{i=0}^n \beta_{2i} GE_{t-i} + \sum_{i=0}^n \beta_{3i} ADM_{t-i} + \sum_{i=0}^n \beta_{4i} INF_{t-i} + \sum_{i=0}^n \beta_{5i} EDU_{t-i} + \sum_{i=0}^n \beta_{6i} EDUT_{t-i} + \beta_1 \ln GDP_{t-1} + \beta_2 \ln GE_{t-1} + \beta_3 \ln ADM_{t-1} + \beta_4 \ln INF_{t-1} + \beta_5 \ln EDU_{t-1} + \beta_6 \ln EDUT_{t-1} + \varepsilon_t \dots \dots \dots (3)$$

Where n represents the optimal lag length, t is time.

Model for the Speed of Adjustments for Autoregressive Distributed Lag (ARDL) Model

The speed of the adjustment (Error Correction Model, (*ECM*)) explain how much time the system will take to return to the long term equilibrium after a random shock and the expected sign will be negative to ensure the convergence.

The error correction model (unrestricted) for the ARDL model is specified in the equation below:

$$\Delta \ln GDP_t = \pi_0 + \sum_{i=0}^n \pi_{1i} \Delta \ln GDP_{t-i} + \sum_{i=0}^n \pi_{2i} \Delta \ln GE_{t-i} + \sum_{i=0}^n \pi_{3i} \Delta \ln ADM_{t-i} + \sum_{i=0}^n \pi_{4i} \Delta \ln INF_{t-i} + \sum_{i=0}^n \pi_{5i} \Delta \ln EDU_{t-i} + \sum_{i=0}^n \pi_{6i} \Delta \ln EDUT_{t-i} + \gamma ECM + \varepsilon_t \dots \dots \dots (4)$$

Where the speed of adjustment will be γ and *ECM* is the residuals which were obtained through the application of the co-integration model.

Results and Discussion

The unit root test for all the variables are conducted to identify the order of co-integration of the variables by using the Augmented Dickey–Fuller (ADF) test (Dickey and Fuller 1979, 1981), the Phillips Perron (PP) test (Phillips and Perron, 1988). It provides an indication to use or not to use a constant as a plot of time series, a trend with a constant, or none. Therefore, estimation is made to test equation that includes both constant and time trend for testing unit roots for all the variables. The results of the unit root tests show that all the variables are stationary at first difference which indicates that the order of integration of the variables are combination of I(0) and I(1). In conclusion, this forms the basis for estimating the long run relationship between the variables and gave the validity to use both the ARDL Model.

Table 1: OLS Results Estimation of $\ln Y_t = \beta_0 + \beta_1 \ln GE_t + \beta_2 \ln ADM_t + \beta_3 \ln INF_t + \varepsilon_t$

Dependent Variable: RGDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
$\ln FGE$	0.228	0.036	6.345	0.000***
$\ln ADM$	0.023	0.017	1.395	0.172
$\ln INF$	-0.008	0.024	-0.321	0.750
Constant	7.205	0.081	88.534	0.000
R-squared	0.723	Mean dependent var		7.172
Adjusted R-squared	0.700	S.D dependent var		0.240
S.E of regression	0.131	Akaike info criterion		-1.129
Sum squared resid	0.620	Schwarz criterion		-0.961
Log likelihood	26.589	F-statistic		31.392
Durbin-watson stat	0.677	Prob(F-statistic)		0.000

Note: *Significant at 10% level. ** Significant at 5% level. ***Significant at 1% level.

Source: Computed by the researcher using EViews 9, 2023

From Table 1, the result indicates that the ratio of federal expenditure both on economic and administrative services has positive relationship on economic growth in Nigeria at 1% significance level. While expenditure on administration, though positive, it does not have a significant effect on economic growth. Also, the result indicates that, the rate of inflation has a negative and statistically insignificant effect on economic growth. To be specific, the rate of inflation has no effect on GDP. Overall the regression result shows that the model

estimates are generally robust except for the lower value Durbin-Watson. The computed R^2 with the coefficient values of 0.723 implies that 72% of the total variation in the GDP is explained by the regressors; the remaining 27% are accorded factors exogenous to the model but covered by the error term; Also, the overall model is statistically significant at 5% confidence level as shown by the F-statistics calculated of 31.392. The results confirm Agu *et al* (2014); Ubesie (2016); and Oseni & Onakoya (2012).

Table 2: The Bounds Test Result for the Model

Test Statistic	Value	K
F-Statistic	^a 10.682	2
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

Note: Based on Narayan Table Case III (Narayan, 2005)

a) Denote the Model co-integrated F-statistics with their corresponding critical bond values, respectively.

Source: Computed by the researcher using EViews 9, 2023

The co-integration result presented in Table 2 shows that the model is co-integrated as the calculated F-statistics values (10.682) based on the optimum lags selected exceed the upper bound of the critical bounds table

developed by Narayan (2005), at 1%. Therefore, the results are in agreement with the long run relationship between the variables in the model. This allows for the estimation of the short-run error correction model and the long run coefficients.

Table 3: The estimated Long Run and Short Run Coefficients Based on Schwarz Bayesian Criterion for the Model

Regressors	Coefficients	T-Ratio[Prob]
The long run results		
$\ln \text{EDU}_t$	3.019	16.915[0.000]***
$\ln \text{EDUT}_t$	0.030	2.678[0.028]**
Constant	0.656	0.986[0.353]
The short run results		
$\Delta \ln \text{EDU}_t$	-63.507	-1.587[0.151]
$\Delta \ln \text{EDUT}_t$	0.007	1.386[0.203]
ECM (-1)	-0.982	-5.058[0.001]***
Adjusted R ²	0.952	
Durbin-Watson statistics	0.553	

Note: LRGDP = Dependent Variable: Lag lengths are 3, 4, 3 selected based on SBC

Note: *Significant at 10% level. ** Significant at 5% level. ***Significant at 1% level. ECM = Error Correction Model and Δ = difference operator

Source: Computed by the researcher using EViews 9, 2023

Table 3 presents the long run and short run estimates for the Model. The long run result discloses that education tax is positive and significant at 5% significance level. The coefficient suggests that a 1% increase in education tax will increase economic growth by 0.030%. The result indicates that in the long run education tax has a direct positive impact on human capital performance and economic growth in Nigeria. This finding confirms Risikat (2009); Afzal *et al.*, (2010); Ifionu and Nteegah (2013); and Omojimate (2010). However, in the short run, the direct impact of education tax in Nigeria is insignificant. This suggests that education tax has no significant impact in human capital to stimulate economic growth in the short-run period. The long run results in

table 3 also reveal that investment in education is positive and significant at 1% level. Also, the long run result shows that a 1% increase in investment in education will increase economic growth by 3.02%. This strongly implies that investment in education stimulates and encourages human capital performance with an effective increase in long run economic growth.

The Error Correction Model (ECM) with the coefficient (-0.982) indicates that the speed of adjustment of the variables convergence from short run to long run equilibrium as 98.2%. This shows that in the event of any shock, the speed of adjustment is strongly high.

Table 4: Diagnostic Tests

Test-Statistics	LM Version	F Version
Serial Correlation	CHSQ(2)= 8.321 [0.016]	F(2,6) 1.969[0.220]
Heteroscedasticity	CHSQ(11)= 4.667[0.987]	F(11,9) 0.234[0.987]

Source: Computed by the researcher using EViews 9, 2023

Like any other time-series analysis, diagnostic tests are imperative in assessing the validity, efficiency and consistency of the estimated model. The tests result in Table 4 shows that the model has passed all

the diagnostic tests. The result is free from autocorrelation and is stable. The results of the Heteroskedasticity show that the residual is constant over time.

Post-Estimation Tests: CUSUM & CUSUMSQ for Johansen Cointegration Model

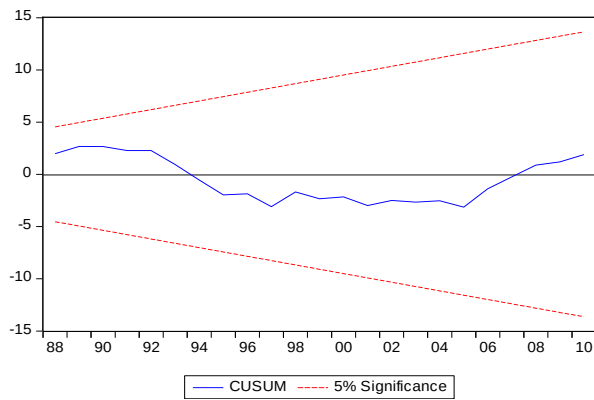


Figure 1: Cumulative Sum of Recursive Residuals

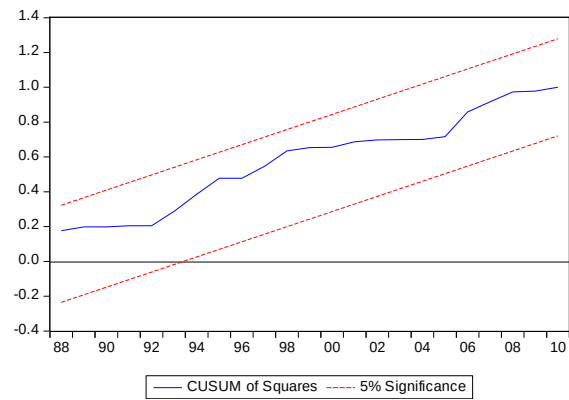


Figure 2: Cumulative Sum of Squares of Recursive Residuals

Source: Computed by the researcher using EViews 9, 2023

One last diagnostic test is for the stability of the short run and long run coefficients estimates. The Stability test conducted by plotting the Cumulative Sum of Recursive Residuals (CUSUM) and the Cumulative Sum of Squares of Recursive Residuals (CUSUMSQ) tests both suggest that the

estimated model is stable over the sampled period (see figures 1 and 2).

Conclusion and Recommendations

The study examines the impact of public expenditure and human capital development on economic growth in Nigeria. The findings reveal that public expenditure and

human capital development have a direct positive and significant impact on the growth of the Nigerian economy over the sampled period. In other words, the study confirms a significant long term relationship between economic growth, government expenditure and human capital development in Nigeria. However, it reveals an insignificant relationship between economic growth and the rate of inflation. This indicates that effective fiscal policy framework and lower level of rate of inflation are essential to support government's efforts for Nigeria to record higher levels of GDP. Over the long-run, the study has shown that education tax and investment in human capital has a direct positive impact on the growth of the Nigerian economy over the sampled period. The Error Correction Model (ECM) for the model confirms the long-run relationship and indicated a high speed of adjustment of the variables convergence to equilibrium.

Arising from the above conclusion, the following recommendations are proffered to guide policy and decision making in order to boost the economy: there is need for the federal government to tilt the level of annual budgetary allocation in favor of economic services far higher than the current situation where over 50% of budget allocations are made in favor of recurrent expenditure, which is heavily dominated by the demands of salary payments and related administrative expenses; productive government expenditure in conjunction with private sector investment plans should always outweigh expenditure on consumption and luxury items; effective

control of the rate of inflation should be part and parcel of federal government's medium and long term expenditure frameworks. To achieve this target, the government will require the support of members of parliament to support its medium and long term fiscal policy decisions; Nigeria would need to, among other policy frameworks, provide a suitable environment for ensuring macro-economic stability that will encourage increase investment in education in the public sector; For effective and speedy economic growth and development in Nigeria, the government, beneficiaries (students/parents), employers of labor and other stakeholders in the society should share the responsibility for financing primary, secondary and tertiary education, as these levels provide solid foundation for human capital formation for any country. Overall, there is the need for the federal government to continue to fund the operations of TETFund through effective and efficient collection of education tax by the Federal Inland Revenue Service.

References

- Afzal, M., Farooq, M. S., Ahmad, H. K., Begum, I., & Quddus, M. A. (2010). Relationship between school education and economic growth in Pakistan *Pakistan Economic and Social Review*48(1), 39–60.
- Agiobenebo, T.J. (2003). Macroeconomic Stability and Issues in Fiscal Management: Implications for Monetary Policy in Nigeria: *Conference Proceedings, 11th-12th December, 2003* (p. 126).
- Agu, S. U., Okwo, I. M., Ugwunta, O. D.,

- & Idike, A. (2015). *Fiscal Policy and Economic Growth in Nigeria: Emphasis on Various Components of Public Expenditure 2014?*
- Amadi, S.N. and Essi, I.D. (2006). Government economic policy and Nigerian capital market behavior: A causality analysis. *Journal of Dev. Alternatives*
- Anyanwu, J. C. (2011). Determinants of foreign direct investment inflows to Africa, 1980-2007 (African Development Bank Group)
- Ayara, N.N. (2003). The paradox of education in Nigeria in *Human Resource Development in Africa* 371-394
- Chinedu, U. (2022). Government Expenditure On Education And Economic Growth In Nigeria, 9(2), 126–134.
- Dahlin, B. G. (2005). The impact of education on economic growth (Working paper: Duke University)
- Dickens, W. T., Sawhill, I. V., & Tebbs, J. (2006). *The effects of investing in early education on economic growth* (pp. 1-26). Washington, DC: Brookings Institution.
- Gbosi, A. N. (2008). *Modern Public Finance and Fiscal Policy*. (Harry Publication Ltd. Port Harcourt)
- Gootjes, B., de-Haan, J., Jong-A-Pin, R. (2021). Do fiscal rules constrain political budget cycles? *Public Choice*, 188, 1–30.
- Heckman, J. J., & Klenow, P. J. (1997). Human capital policy (University of Chicago: working paper)
- Ifionu, E. P., & Nteegah, A. (2013). Investment in education and economic growth in Nigeria: 1981-2012. *West African Journal of Industrial and Academic Research*, 9(1), 155-172.
- Jhingan, S., Nojiri, S., Odintsov, S. D., Sami, M., Thongkool, I., & Zerbini, S. (2008). Phantom and non-phantom dark energy: the cosmological relevance of non-locally corrected gravity. *Physics Letters B*, 663(5), 424-428. how relevant is this paper?
- Larocque, N. (2008). *Public-private partnerships in basic education: An international review*. (Reading: CfBT Education Trust).
- Lockheed, M. E., Jamison, T., & Lau, L. J. (1980). Farmer education and farm efficiency: A survey. *Economic development and cultural change*, 29(1), 37-76.
- Loening, J. L. (2004). Time series evidence on education and growth: the case of Guatemala, 1951-2002. *Revista de Análisis Económico*, 19(2).
- Lucas, R. E. (1988). On the Mechanics of Economic Development. *Journal of Monetary Economics*, 22(1): 3-42.
- Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *The quarterly journal of economics*, 107(2), 407-437.
- Narayan, P. K. (2005). The saving and investment nexus for China: evidence from cointegration

- tests. *Applied economics*, 37(17), 1979-1990.
- Nikiforos, M. (2021). Crisis, austerity, and fiscal expenditure in Greece: Recent experience and future prospects in the post-COVID-19 era. *Eur. J. Econ. Econ. Policies Interv.*, 1, 1–8.
- Odewunmi. M. I., Adeline, N. I, & David, U. (2012). Fiscal Policy and Economic Growth in Nigeria: Emphasis on Various Components of Public Expenditure. *Singaporean Journal of Business, Economics and Management Studies*, 51(1449), 1-18.
- Okemini, E. B., & Uranta, D. T. (2008). Poverty and criminality in the Niger-Delta region: A Critical Analysis. *Integrated Soc. Mgt. J*, 1(2), 1-8.
- Okojie, C. E. E. (1995). Human capital formation for productivity growth in Nigeria. *Nigerian Economic and Financial Review*, 3(1), 44-45
- Omojimite, B. U. (2010). Education and economic growth in Nigeria: A Granger causality analysis. *African Research Review*, 4(3).
- Onoh, J. K. (2007). Dimensions of Nigeria's Monetary and Fiscal Policies-Domestic and External. (Aba: Astra Meridian Publishers).
- Onuorah, A. C., & Akujuobi, L. E. (2012). Empirical analysis of public expenditure and economic growth in Nigeria. *Oman Chapter of Arabian Journal of Business and Management Review*, 34(968), 1-14.
- Onyemaechi, O. J. (2014) "Impacts of fiscal policy components on economic growth in Nigeria: An empirical trend analysis." *Kuwait Chapter of Arabian Journal of Business and Management Review* 33, no. 2579 (2014): 1-19.
- Oseni, I. O., & Babatunde, O. A. (2012). Fiscal policy variables-growth effect: hypothesis testing. *American journal of business and management*, 1(3), 100-107.
- Pesaran, M. H., & Shin, Y. (1998). An autoregressive distributed-lag modelling approach to cointegration analysis. *Econometric Society Monographs*, 31, 371-413.
- Peter, N. M., & Simeon, G. N. (2011). Econometric analysis of the impact of fiscal policy variables on Nigeria's economic growth. *International Journal of Economic Development Research and Investment*, 2(1), 171-183.
- Philips, A. O. (1997). Nigerian Fiscal Policy from, 1998-2010. (Nigerian Institute of Social Economic Research (NISER), Monograph Series No. 17)
- Risikat, S. D. (2004). Education and economic performance: simplistic theories and their policy consequences. 20(2), 315–333.
- Risikat, S. D. (2009). Investment in education and economic growth in Nigeria: A Cointegration approach. *Global Conference on Business and Economics*.
- Sikiru J. B, and Umaru A. (2011). "Fiscal policy and economic growth relationship in Nigeria." *International Journal of Business and Social Science* 2, no. 17.
- Todaro, M. P., & Smith, S. C. (2007). Poverty, inequality, and

- development. *Economic development*, 229-291.
- Tombofa, S.S. (1999). Fiscal Relations among the various Tiers of Government in Nigeria. *Journal of Monetary Economics (NJOME)*, 1(152), 103-116.
- Ubesi, M., & Edeh, C. (2016). Effect of tax morale and tax compliance in revenue generation in Nigeria. *IDOSR Journal of Scientific Research*, 1(1), 59-80.
- Urhie, E. S. (2014). Public education expenditure and economic growth in Nigeria: a disaggregated approach. *Journal of Empirical Economics*, 3(6), 370-382.
- Yesufu, T. M. (2000). *The human factor in national development: Nigeria*. (Spectrum Books Limited).
- Yogish, S. N. (2006). Education and economic development. *Indian Journal of Social Development*, 6(2), 255-270.