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The Effects of Government Expenditure on Education and Health on Nigeria Economic Growth

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Abstract: *This study examined the effects of government recurrent and capital health and education expenditure on the growth process of the Nigerian economy from 1980 to 2022, using the ECM test approach to cointegration. Annual data were sourced from the National Bureau of Statistics, Central Bank of Nigeria (CBN) Statistical Bulletin and World Bank Indicators (various issues). The Augmented Dickey Fuller test was used to check the level of stationarity while the ECM test to cointegration was adopted to justify the long-run relationship. The existence of a positive relationship was found between government health and education expenditure and RGDP growth of the Nigerian economy. Therefore, an improved health sector due to increased budgetary allocation would trigger a positive growth on the educational sector. The study recommends that for quality human capital development, the government should increased her spending on health and education and ensure that policies are implemented with high level of transparency, honesty and accountabilty, in Nigeria. Furthermore, an increase in government spending on the anti-corruption agencies would encourage the arrest and prosecution of those who divert and embezzle public funds in the country.*

Keywords: government expenditure, economic growth, health, education**,** Nigeria.

INTRODUCTION

The first wealth of a nation is its health and its potential for dynamic technology is rested on education. There is empirical evidence that the health and level of education of a nation significantly enhances its economic development (Atun & Fitzpatrick, 2005). Health and education are important factors that determine human capital quality, a necessary factor for economic growth. In general, a strong relationship exist between health and education in Nigeria. For instance, people with higher level of education are most likely to be gainfully employed and afford health-promoting benefits like health insurance. In other words, personal income has positive effect on personal health and people with

higher level of education tend to earn higher income who can purchase healthy foods, good medical care and other health safety practices. Furthermore, high income earners tend to face less social and economic hardship, which are inimical to health. In consonance with the above, a consensus of opinion has been formed among researchers recognizing health as a public good, the demand and supply of which cannot be left at the mercy of invisible hands or profit-maximizing individuals and on utility maximizing practice alone. Hence, there is the the need for government to intervene in order to deliver good and qualitative healthcare services and quality education that are affordable and accessible (Olarinde & Bello, 2014). The recognition of the importance of the above led the World Health Organisation (WHO) to propose at the 2010 World Health Assembly, issues that will address financing of health, which will ensure qualitative and affordable healthcare services (Ataguba and Akazili, 2010). The health financing pattern can be linked to the health quality that is capable of achieving the nation's long-term economic development goals (Riman, 2012). In Nigeria, the sources of education investment funds are mainly public in nature. The government finances education through its annual budgetary allocations which are distributed in form of subventions or grants. These subventions or grants are usually channeled through the Ministry of Education and coordinated by sub-agencies like the National Universities Commission (NUC), Universal Basic Education Board (UBEB) and Post Primary Schools Board (PPSB) among others. Adesina (2011) noted that the implications of Nigeria government assuming total financing of education system were far reaching. It means that the amount of education to be provided in a given year would solely be determined by the amount government is willing and able to give to education. Furthermore, the volume of education has to be drastically pruned down anytime government declares its inability to meet the financial requirements of the system. For instance, in the first national rolling plan document (1990-1992) it was pointed out that the sharp fall in federal government subvention especially to the universities from which they have never recovered since 1984 explains their present financial predicament with regard to the implementation of their capital projects.

Quality education and health services are very important aspects of every individual's well-being, and since individuals make a nation, therefore, education and healthcare could be regarded as necessary conditions to achieving a sustainable long-term economic development. Health may refer to a general physical condition of the mind or body, especially in terms of the absence or presence of injuries, illness or impairments. Health is a very sensitive issue because it deals with humans and the human body. Without a good health condition, it is not possible to carry out any economic activity and if at all there is any it will certainly not be efficient. Quality education may lead to thoughtful behaviour, informed citizenship, and a strong sense of responsibility. It empowers people to meaningfully contribute to the society and nation at large (Oluwatoyin, Folasade & Fagbeminiyi, 2015).

Education and healthcare finances are critical determinants for attaining universal literacy and health coverage. This is because they determine whether the services are available are affordable to those that need them or not. In Nigeria, the education and health sectors are financed through different sources and mechanisms. There are basically five main ways to finance education and health services, each of which have advantages and disadvantages. They include general tax, hypothecated tax, user pays out-of-pocket, private education/medical insurance and social insurance. However, the Nigerian economy has remained under-developed and the adult literacy rate and quality of life, of the average citizens have coarsened progressively with growing numbers of citizens below the critical poverty level (Oluwatoyin, Folasade & Fagbeminiyi, 2015). The country's maternal mortality ratio is one of the highest in the world and the incidence of sexually transmitted infections is believed to be high in Nigeria even though data are unavailable. Adolescent reproductive health status is poor with early sexual initiation, high level of unsafe sexual practices, moribund education infrastructure, low

utilization rate of modern family planning methods, poor staff welfare, high rate of brain drain in both sectors and lack of access to quality services in Nigeria. Many girls are been given out under the age of 18 years against their consent and a number of other harmful practices against women are prevalent in Nigeria. These include female genital cutting, spouse battering, widow hood rites and the belief that females belong to the kitchen and other domestic responsibilities. (Anyanwu, Andrew & Erhijakpor, 2007).

Despite huge budgetary allocations, the funding for education and health sectors have been very low and the sectors are experiencing numbers of basic systemic problems, which contribute to the low level of performance of the sectors. It is important to note that since 2011, government recurrent expenditure has accounted for about 75 to 95% of the proposed allocations to the Federal Ministry of Health. For about 5 years government have continued to invest less on capital components of the budget for health. Personnel and Overhead costs make up the largest chunks of expenditure. (Riman, 2012). For instance, in 2018, a total sum of N265.00bn was proposed for the Federal Ministry of Health as Recurrent expenditure. The figures revealed a decrease of recurrent expenditure from 81.9% in 2017, to about 77.83% in 2018 .

The issues militating against economic growth and development in Nigeria appears to be linked to spending patterns of the government, as significant expenditures of the government have been made year after year, but the economy's performance has always been below target. That is to say, the country's (Nigeria) fiscal management has been lacking. Making reference to the 2019 budget, an increased allocation was made on recurrent expenditures than capital expenditures, with infrastructure receiving an allocation of 87 percent for capital expenditure and 12.2 percent for recurrent expenditure. Finally, national productivity and overall economic growth of any nation is determined by the quality of the health and education sectors.. The improvement and extension of healthcare delivery and education in Nigeria have been constrained by gaps in financing, their contributions are still marginally low whereas the extent of their impact on economic growth is undermined and the desired results have not been met. This is particularly worrisome as several questions have been raised on the situation and which, the study intends to answer within its scope and context. The factors that is responsible for low marginal contribution of the health and education sectors to overall growth and development of the Nigerian economy and how it can be addressed, is the major thrust of this study.

The primary objectives of this study is to examine government recurrent, capital and total expenditure on education and health on economic growth in Nigeria between 1980 to 2022.

2.0 Review of Related Literature

2.1 Conceptual Issues

2.1.1 The Concept of Economic Growth

Aranda (2010) opined that the sources of economic progress can be traced to a variety of factors. By and large, investment that improve the quality of existing physical and human resources, increases the quality of these same productive resources through invention, innovation and technological progress have been and will continue to be the primary factor in stimulating economic growth in any society. Samuelson and Nordhaus (2002) viewed economic growth as an increase of a country's real GDP. Barenberg (2015) saw economic growth as the steady change in the long run increase in investment and savings.

2.1.2 Growth Mechanisms

The study by Berger & Messer (2002) explained that economic growth theorists from the era of Adam Smith till date have discussed plethora of models (classical, neoclassical and endogenous) on how to stimulate and sustain economic growth. However, the fundamental models have remained the

same with minor variations. Of all the factors of production; land, labour, and capital generally construed as physical capital (Berger & Messer 2002). The contemporary growth theories (endogenous) however stressed the importance of technology (research and development) embedded in human person as a form of capital termed human capital. Taking an excerpt from the work of Birhanu & Robert (2020), there are at least three mechanisms through which education may affect economic growth. First, education increases the human capital present in the labour force, which increases labour output and transitional growth towards a greater equilibrium level of output (as in augmented neoclassical growth theories, Boachie & Ramu (2016). Second, education is capable of increasing the innovative capacity of Nigeria, new technologies, products and processes which aid growth (as in the theories of endogenous growth by Boachie & Ramu (2016). Thirdly, quality education can potentially facilitate and diffuse knowledge that are required to understand and process new information and to successfully implement new technologies devised by others, which again promotes economic growth as detailed in Kur et al. (2020).

2.1.3 Capital Expenditure on Education and Economic Growth in Nigeria

Ogundipe & Adeniyi (2011) examined issues addressing the effectiveness of the Nigerian education sector in meeting the human capital needed for economic development in an era of reforms. The study explained the world lags behind altogether the indications won't to assess its effectiveness. The paper recommended major reforms within the sector including increased funding, overhaul of college curricula and introduction of a replacement incentive structure for college workers. Ogungbenles, Olawunmi & Obasuyi (2014) observed that the general view on recurrent and cost is that it may be growth enhancing. The study used co-integration and error correction technique to test the impact of public expenditure on tertiary education and economic process in Nigeria. it had been concluded that government spending on tertiary education is positively related to economic process in Nigeria. It absolutely was recommended that government and personal sectors should partner by mobilizing resources to furnish tertiary institutions and equip them with adequate facilities so as to boost tertiary education development for sustainable economic process.

2.2 Theoretical Literature

2.2.1 *The Wagner's Theory on Government Activities*

The study was anchored on the Wagner's law of the increasing state activity (Oni, 2014). The Wagner's hypothesis deals with the growing relative importance of government activities. From the study of Wagner, 1883 cited in Oni (2014) there are three reasons to expect an expansion of the scope of public activity. First, as nations developed, there was an increase in the complexity of legal relations and communications, as well as greater urbanization and population density, and this forces government to produce the regulatory framework that would accompany the greater intricacy of economic agent relations. Second, as income levels rise, societies demand more education, entertainment, more equitable income distribution, and more public services in general. Finally, the technological needs of an industrialized society necessitate greater amounts of capital infrastructure than are available from the private sector, necessitating government intervention to fill the void. The law was made on the assumption that there is a long run propensity for the scope of government to increase with higher levels of economic growth and development.

2.2.2 Endogenous Growth Theory

Endogenous growth theories describe economic growth which is generated by factors within the production process such as economies of scale, increasing return or induced technological changes; as opposed to exogenous factors such as increase in population. The several endogenous growth models link public spending with the economy's long-term growth.

2.2.3 The Keynesian Theory

The Keynesian theory posits that expenditure can contribute positively to economic growth; Keynes discussed the relation between public expenditures and economic growth, he categorized public expenditures as a major determinant of promoting economic growth. This means that an increase in government consumption may lead to an increase in profitability, employment and investment through the multiplier's effects on aggregate demand.

2.3 Empirical Literature

Researchers have studied the effect of government expenditure on health and on health outcomes. Some literature have examined the existing relationship between government health expenditure and human health, especially as it influences child mortality and life expectancy at births. However, some studies have reported no impacts, limited impacts and significant impacts. For example, Anyanwu and Erhijakpor (2007) investigated health expenditures and human health outcomes in Africa and came up with econometric evidence that linked African countries' per capita total as well as public health expenditures and per capita income to two health outcomes: infant mortality and under-five mortality using data from 47 African countries. Health expenditures were found to have significant effect on infant mortality and under-five mortality. For African countries, the findings revealed aggregate health expenditures and public component, are potent determinants of human health. Furthermore, child mortality were positive and related to human health for Sub-Saharan Africa. The opposite is true for North-Africa that exhibits HIV and ethno-linguistic fractionalization prevalence with positive effects on human health outcome while a greater number of female and physicians literacy undermine these health outcomes.

Novignon, Olakojoand & Navignon (2012) carried out a study with an objective to investigate the influence of private and public healthcare expenditure on human health status in 44 Sub-Saharan Africa countries with panel data from 1995-2010. Fixed and random effects panel data regression models were fitted to investigate the effects of healthcare expenditure on population health status and private and public expenditure sources. The results shows that expenditure on healthcare is significant in influencing human health status through improving life expectancy. Government spending on public and private healthcare revealed a strong and positive association with human health status even though public healthcare spending had relatively higher impact..

Ogunyimi.& Adebayo (2019) carried out a study on the effect of Govt. expenditure on human capital development in the country of Nigeria and found that government spending on education and health are not significant and do not promote Human Development Index (HDI) in Nigeria. On contrary, Oseni et al.(2020) found in India, from 1990 to 2014, that expenditure on education significantly influenced HDI in India. Similarly, Edeme (2019) investigated the distributional and composition impacts of government expenditure on HDI and education by using data from UNDP and World Development Indicators from 2007 to 2017 and the study found that education, and health expenditures, significantly increase HDI. Similarly, Piabuo & Tieguhong (2017) also concluded in the context of Indonesia that Government health expenditure (GEX) on education and health plays a significant role in the up-gradation of HDI. Therefore, overall the impact of Govt. spending on education on HC formation produces mixed results; so there is still a dire need to examine the role of Govt. expenditure on education in human capital.

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2.4 Theoretical Framework

An endogenous model of economic growth appears to be the most suitable theoretical framework for this study. Endogenous growth theory describes economic growth which is generated by factors within the production process such as economies of scale, increasing return or induced technological changes, government policies, political stability, market distortions, human capital etc., can significantly affect economic growth. The framework of this study assumes a standard neoclassical production function which premise on changes in quantities of factors of production account for growth. The neo-classical model is based on the Cobb-Douglas production function and is given as:

$$Y = f(A_t, K_t, L_t)$$

The neoclassical growth theory states that the changes in quantities of factor inputs in production (capital and labour) account for growth of output (Solow 1957). Where: Y = Aggregate real output, K = Capital, L = Labour force, A = Level of technology and t = time dimension.

3.0 Materials and Methods

3.1 Method of Data Collection

Data for this study were obtained from secondary sources, which include Central Bank of Nigeria Statistical Bulletin (2019), Central Bank of Nigeria Annual Report and Statement of Accounts (various issues), Nigerian Economic and Financial Reviews, Securities and Exchange Commission Statistical Bulletin (various issues), internet, academic journals, textbooks, seminar papers and the Nigerian Stock Exchange journals.

3.2 Method of Data Analysis

This study used the Ordinary Least Squares technique starting with the application of the Augmented Dickey-Fuller (ADF) test statistics, Johansen Cointegration techniques and the error correction mechanism on a multiple regression model. These techniques used in analyzing the data collected for this research are basically statistical and econometric in nature. The Augmented Dickey-Fuller test statistics was used to determine the unit root stationarity test. Statistical theory requires that variables be stationary before application of standard econometric techniques.

3.3 Models Specification

In order to capture the effects of government recurrent, capital and total health and educational expenditure on Nigeria economic growth, three models were specified:

Model I

$Y = F(THE, TEE)$ - - - - - - - - **-1**

$Y = \alpha_1 + \alpha_2 THE + \alpha_3 TEE + Ut$ - - - - - - -2

Model 2

$Y = F(TRHE, CHE)$ - - - - - - - - -3

$Y = \beta_1 + \beta_2 TRHE + \beta_3 + CHE + Ut$ - - - - - - -4

Model 3

$Y = F(RHE, CEE)$ - - - - - - - - -5

$Y = \gamma_1 + \gamma_2 RHE + \gamma_3 CEE + Ut$ - - - - - - -6

Where Y = Real Gross Domestic Product,
THE = Total health Expenditure,
TEE = Total educational Expenditure,
TRH = Total recurrent health expenditures,
CHE = Capital health expenditures,
RHE = Recurrent expenditures on education,

CEE = Capital expenditures on education
U_t = Error Term, α_1,β_1,and γ_1= Intercept, α_2 and α_3, β_2 and β_3 and γ_2 and γ_3 = Coefficient of the independent variables and t is the time trend.

4.0 Results and Discussion

4.1 Unit Root Test

The results of the ADF unit root test are presented below:

Table 4.1a: Augmented Dickey Fuller (ADF) summary of Unit Root Test result

Variables	ADF Test Statistics (At level)	Mackinnon Critical Values			1st Difference	Remark
		1%	**5%**	**10%**		
TRH	3.267088	-3.600	-2.935	-2.605	-5.8759682	I(1)
THE	3.872042	-3.615	-2.941	-2.609	-5.3650224	I(0)
TEE	3.876352	-3.600	-2.935	-2.605	4.788995	I(1)
RHE	0.317887	-3.605	-2.936	-2.606	-8.645748	I(1)
CHE	0.261443	-3.600	-2.935	-2.605	-6.666662	I(1)
CEE	0.742071	-3.615	-2.941	-2.609	-5.625229	I(1)

Source: Author's Computation

The Augmented Dickey Fuller (ADF) unit root test result suggests that Total recurrent health expenditures (TRH) is stationary at first difference, that is I(I). However, Total health expenditures (THE) attained stationarity at levels, that is I(0). Total Educational expenditures (TEE), Recurrent expenditures on education (RHE), Capital health expenditures (CHE) and Capital expenditures on education (CEE) became stationary at first difference, that is I(I). This can be seen by comparing the observed values (in absolute terms) of the ADF statistics at 1 percent, 5 percent and 10 percent levels of significance. Since all these stated variables were stationary at levels and first difference and on the basis of this, the null of non-stationarity is rejected and it is safe to conclude that the variables are integrated of order zero and order one, that is, I(0) and I(1).

4.2 Cointegration Test

The Johansen co-integration test was used to test the long-run equilibrium relationship among the variables. Table 4.2 shows the Johansen test result

Table 4.2: Unrestr icted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen Value	Trace Statistics	0.05 critical value	Prob.**
None *	0.992340	492.3210	125.6154	0.0001
At most 1*	0.952401	292.5802	95.75366	0.0000
At most 2*	0.915348	167.7371	69.81889	0.0000
At most 3*	0.577877	66.49941	47.85613	0.0004
At most 4*	0.351174	31.13857	29.79707	0.0348

At most 5	0.277411	13.40233	15.49471	0.1009
At most 6	0.001970	0.080859	3.841466	0.7761

Trace test indicates 5 co-integrating eqn(s) at the 0.05 level
**denotes rejection of the hypothesis at the 0.05 level*
***Mackinnon-Haug-Michells (1999) p-values*

Table 4.3: Unrestr icted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigen Value	Max-Eigen Statistic	0.05 critical value	Prob.**
None *	0.992340	199.7408	46.23142	0.0000
At most 1*	0.952401	124.8431	40.07757	0.0000
At most 2*	0.915348	101.2377	33.87687	0.0000
At most 3*	0.915348	35.36084	27.58434	0.0041
At most 4*	0.351174	17.73623	21.13162	0.1400
At most 5	0.277411	13.32147	14.26460	0.0701
At most 6	0.001970	0.080859	3.841466	0.7761

Max-eigenvalue test indicates 4 co-integrating eqn(s) at the 0.05 level
**denotes rejection of the hypothesis at the 0.05 level*
***Mackinnon-Haug-Michells (1999) p-values*

The result of the Johansen co-integration test indicates five (5) co-integrating equations. The trace statistic indicates five (5) co-integrating equation and the Maximum Eigenvalue statistic also indicate four (4) co-integrating equations. The existence of at least one co-integrating equation permits us to estimate the over parameterize and the parsimonious ECM models which form the basis of the next section.

4.3 Over parameterized and Parsimonious ECM Result

The over parameterized ECM result is made up of two lags each of the dependent and the independent variables. The result of the over-parameterized ECM is shown in table 4.4 below:

Table 4.4: Summary of over Parameterized ECM Result. Modeling: RGDP

Variable	Coefficient	Std. Error	t-Statistics	Prob.
RHE	0.604475	1.216783	0.496781	0.6423
RHE(-1)	2.040441	1.317113	1.549177	0.1356
RHE(-2)	0.511603	2.486772	0.205730	0.8389
TEE	5.565361	2.475006	2.248625	0.0349
TEE(-1)	-0.864739	3.282310	-0.263454	0.7947
TEE(-2)	0.248978	3.037071	0.081979	0.9354
THE	-0.554601	1.941810	-0.285610	0.7778
THE(-1)	2.406831	1.793894	1.341680	0.1934
THE(-2)	-2.114333	1.526388	-1.385187	0.1799
TRH	-8.861617	5.541398	-1.599166	0.1240

TRH(-1)	-2.331002	7.748122	-0.300847	0.7664
TRH(-2)	4.566688	5.700356	0.801123	0.4316
CEE	0.294263	1.203362	0.244534	0.8091
CEE(-1)	-1.107133	0.602207	-1.838460	0.0795
CEE(-2)	0.278457	0.174640	1.594464	0.1251
CHE	-0.064769	1.010375	-0.064104	0.9495
CHE(-1)	1.309807	1.086986	1.204990	0.2410
CHE(-2)	-1.372552	1.927171	-0.712211	0.4838
ECM(-1)	-0.043647	0.972539	-0.044879	0.9646

R-squared	*0.964872*	*Mean dependent var*	*575300.3*
Adjusted R-squared	*0.936131*	*S.D. dependent var*	*412364.8*
S.E. of regression	*104213.9*	*Akaike info criterion*	*26.25058*
Sum squared resid	*2.39E+11*	*Schwarz criterion*	*27.04467*
Log likelihood	*-519.1368*	*Hannan-Quinn criter.*	*26.53974*
Durbin-Watson stat	*2.376534*		

The parsimonious ECM result was gotten by deleting insignificant variables from the over parameterized ECM result. The Akaike Information Criterion, Scharz Criterion and log likelihood ration, were used to select the appropriate lag length. Table 4.5 shows the summary of the parsimonious or preferred ECM result:

Table 4.5: Summary of Parsimonious ECM Result Modeling: RGDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RHE (-1)	0.588050	9.311789	1.886049	0.0679
TEE	-0.161797	0.603444	-0.268123	0.7902
TRH	3.680530	1.157440	3.179888	0.0031
CEE(-1)	0.029988	0.012577	2.384368	0.0228
CEE(-2)	0.020349	0.013996	1.453924	0.1551
ECM(-1)	-0.042508	0.332712	0.127762	0.8991
C	241942.8	28381.77	8.524584	0.0000

R-squared	*0.954345*	*Mean dependent var*	*575300.3*
Adjusted R-squared	*0.946288*	*S.D. dependent var*	*412364.8*
S.E. of regression	*95568.70*	*Akaike info criterion*	*25.92733*
Sum squared resid	*3.11E+11*	*Schwarz criterion*	*26.21989*
Log likelihood	*-524.5103*	*Hannan-Quinn criter.*	*26.03386*

Durbin-Watson stat 2.130707

The result of the parsimonious ECM result indicates that Recurrent expenditures on education (RHE) from lag 1 RHE (-1) have positive impact on economic growth in the Nigerian economy. This is an indication that the quest for growth and development in Nigeria can be harnessed via its educational expenditures. This result is in agreement with the work of Eryiğit, Eryiğit & Selen (2012) who disaggregated total educational expenditures into recurrent and capital. It was revealed from their findings that government recurrent expenditures exhibits a short-run relationship with growth. Consequently, government recurrent expenditures on is a major driver of growth in Nigeria. Wilson et al. (2008) did a similar study and investigated on economic growth in LDCs. It was observed that government recurrent expenditures on education in LDCs increases steadily and influences growth.
The Parsimonious result also indicates that total educational expenditures from TEE is not statistically significant in explaining growth in the Nigerian economy. This may be due to the fact that the total money spend on education does not transmit to growth in Nigeria. The Parsimonious result also indicates that total recurrent health expenditures is statistically significant in growing the Nigerian economy via the health sector.

The Parsimonious result also indicates that capital expenditures on education from lag one (1), and lag two (2) that is, CEE (-1) and CEE (-2) is not statistically significant in explaining growth in Nigeria. The implication of this result is that capital expenditures via investment in educational sector is not significant in explaining growth in Nigeria, which is an indication that the total money spent on education need to be increased in order for it to be effective.
The diagnostic statistics shows that the equations are well specified. The R^2 (0.954345) and adjusted R^2 (0.946288) is very high and this fulfill the condition of goodness of fit. The F-statistics 118.54(0.0000) is highly significant at 1% critical level, this show that there is significant relationship between the dependent variable and independent variables. The statistical significance of the ECM is an indication of a satisfactory speed of adjustment. The result indicates that about 4 percent of the errors are corrected each period.
Table 4.6 shows the residual diagnostic test.

Table 4.6: Result of Post Estimation Test

Equations / Models	**Post Estimation Tests**			
	Normality of Distribution.	**Breusch-Godfrey Serial Correlation LM Test.**	**Heteroskedasticity Test: Breusch-Pagan-Godfrey.**	**Remark**
	Jarque-Bera	Prob. F(2,23)	Prob. F(13,25)	
RGDP Model	10.28967	0.504708	0.599288	Robust Estimation

***Source**: Researcher's Computation, 2023.*

Table 4.6 presents the results of post estimation tests conducted on the RGDP model where CEE, CHE, RHE, TEE, THE and TRH are the five regressors. The result shows that Jarque-Bera value of 10.28967, which indicates a goodness-of-fit test that measures unravel the fact that sample data has skewness and

kurtosis that are similar to a normal distribution. The Jarque-Bera test statistic is always positive, and not zero, showing that the sample data has a normal distribution.

5.0 Conclusion and Recommendations

This study investigated the nexus between educational and health expenditure and economic growth in Nigeria using the unit root test, co-integration, over parameterize and parsimonious ECM. The error correction model result revealed some degree of inconsistencies as regards the impact of recurrent and capital expenditures on the Nigerian economy. Recurrent educational expenditure was statistically significant in explaining changes in real GDP and capital educational expenditure exhibited insignificant influence on economic growth, both in the short and long run. The study concluded that educational spending effects on real GDP is determined by the level of investment in expenditure types in Nigeria. This means that educational expenditure has been influenced by extraneous factors like policy mismatch, inadequate funding as well as fund misappropriation.

In summary, the results of the parsimonious indicate that it will be difficult for Nigeria to achieve effective growth via human capital investment which have to do with its budgetary allocation to the educational sector in terms of growth, because the policy measure in government expenditures in these sectors is very small and unable to meet the goal of effective and efficient growth. In this case, the results of experiments show that more targeting government expenditure towards improving education services will foster economic growth and then reduce the poverty level.

The study recommends the following:

1. The study recommended that; in line with international standards, the Nigerian educational system requires an institutional transformation in terms of policy formulation, implementation and monitoring. There is also the need for sincere commitment through proper funding in adherence with UNESCO minimum benchmark of 26% education share of total budgetary allocation. Also, the need to prioritize capital investment in education especially in technical and vocational education becomes imperative. Lastly, sincere commitment by stakeholders in the education industry (government and its agencies, students, educational investors among others) towards their obligations could go a long way in correcting the anomaly that has over time distorted the relationship between educational expenditure and economic growth in Nigeria.
2. Higher budgetary allocation to capital formation and utilization of disbursed funds for capital projects should be closely monitored, especially in the area of procurement (of goods, services and works) as this constitute a major channel through which political office holders and other government appointees connive with government contractors to siphon or embezzle public funds in the country. The Bureau of Public Procurement (BPP) should be strengthened to carry out its functions effectively. Those entrusted with utilization of public funds for development purposes should be made to account for every amount expended.
3. Transparency, rationality, responsiveness, equity, accountability, efficiency, adherence to the rule of law, economy, should be the guiding principles in the utilization of public funds. Until these are observed, the intended objectives and goals of government expenditure will not be realized.

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