Education and Health as Siamese Twins in Nigeria's Economic Development

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Abstract
The study examined the effect of education and health as Siamese twins' indicators of human capital (HC) in the economic development process in Nigeria. The imperativeness of HC in Nigeria becomes out-sound when such uprising like education standard, quality of graduates, tertiary institution ranking, standard of medical facilities, rising diseases/infections, rate of infant mortality, low life expectancy and access to medical service per thousand etc are considered. This study therefore seeks to question the efforts of government in contributing to transform these sectors and seek to know which sector impact more on economic growth in Nigeria. Annual data on education, health and economic output with the dynamics of both descriptive and econometric methods from 1981-2010 were used. The descriptive analysis showed that health and education effort by the government were inconsistent with expectation until the nations' democratic dispensation where a progressive efforts were evident in HC development. With innovation in the endogenous growth model, the OLS regression showed that the education growth contributes significantly to on economic growth rate in Nigeria within the study period while the health growth rate negatively relating to economic growth rate though at a non-significant level in Nigeria economy. Conclusively, both education and health are germane to economic growth but education impacted more in Nigeria and no effort exerted will be too much. The government and private sector are therefore implored to invest in education and health-related areas for healthy economic transformation in Nigeria.
Keywords: Education, Health, Human Capital, Complementarity, Economic Growth and Government

Introduction
Education and health sectors have long been recognized as potent ingredients of human capital (HC) in the developmental posture of nations. Its complementarity in nation-building is under scored by the central role they play both as inputs and outputs in the production mechanics of any economy. As Todaro and Smith (2011) aptly stated, "health is central to well-being, and education is essential for a satisfying and rewarding life; both are fundamental to broader notion of expanded human capabilities that lie at the heart of the meaning of development" Education and health as human capital are crucial precursors in the economic development process of any country. Consequently, the development of HC is a sine-quanon and a connection point of the domestic and the foreign scene for maximizing the gains from abroad. The contribution of human capital is not to be over emphasized as it spans through every sector of the economy and if its quality and quantity is affected, it will go a long way to affect the entire economy let alone the real sector. The production scene of the economy and other supportive sectors are critical to the development pace of such country to extent that human capital proportion has a lot of influence. The Nigerian case looks promising with huge population and a lot of discourse in the quality of education and health standard. Moreover, the rate at which Nigerians go abroad for medication and education call for question the effort of the government in improving human capital in the country.
Over the years, the asymmetry nature of funding of higher education calls for questions in Nigeria. Instead of the 30%, 30% and 40% proportion for Primary, Secondary and Tertiary education levels respectively, it nose-dived from 30% to 12% in federal allocation to tertiary education which would not help build the required infrastructure (Balami, 2003). Coupled with the dilapidated infrastructure in our university in the form of loss of facility, deterioration of equipment and plants, and uncompleted projects as a result of financial crisis facing the tertiary education system (Adewale et. al., 2007).This, as a departure from expected may not be unconnected with the 26% of total budgetary allocation to education sector recommended by UNESCO.
The standard of education and health sector in Nigeria has been termed low marked by low ranking, mass graduation with low prerequisite skill, incessant strikes, good brains leaving for greener pastures, poor medical service, high infant mortality, aids, low life expectancy to leaving the shores for better medical service. There have been occasions where strike has contributed to low output in education and health sectors in the country let alone the resources Nigerians used in sending their wards to schools and hospital abroad instead of patronizing domestic resources (Oluwatobi and Ogunrinola, 2011). The situation now calls for questioning the government position in making these all-important sectors the pivotal for economic development in the country. The study therefore seeks to know which of the two sectors impact more on economic growth in Nigeria. Thus the study presents the trend and empirical effort of government in transforming these sectors and their policy implication for economic development in Nigeria. The nation's performance inhuman development index ranking 0.511 and

29 in Africa out of 51, unemployment rate averaged 14.60 percent reaching an all-time high of 23.90 percent in December of 2011 from 5.30 percent in December of 2006.The literacy rate is estimated at 61% in 2012. Also, total graduate unemployment rate increased from 25.6 percent in the year 2003 to 40.3 percent 2009 (Economic outlook 2010, NBS, 2012, Akinyemi et al., 2012).

It is evident that Nigeria now spends more on health and education than ten years back but Adewale (2007) recorded difference in resources budgeted and actual spending in the education sector and even the demand for these services are also on the increase hence more efforts from both the private and the public sectors are germane. In the 2012 national budget, the education sector was allocated 8.42% which is the second largest priority in the budget (Nigeria Education Fact Sheet, 2012).The paper is organized into four sections; section 2 examines descriptive analysis and empirical evidence on education and health sectors spending and contribution to economic output in Nigeria; section 3 relates to model specification and analysis of results while section 4 presents the conclusion of the paper.

## Descriptive Analysis and Empirical Evidence

Different authors have documented their findings concerning the impact of education, health or both on economic growth in less developed and developed countries. Bakare and Olubokun (2011) examinedhealth care expenditures and economic growth in Nigeria using time series data between 1970 and 2008; the result showed a significant and positive relationship between health care expenditures and economic growth. The study further recommended that Nigerian policy makers should pay closer attention to the health sector by increasing its yearly budgetary allocation to the sector. Earlier, Scheffler (2004) identified three channels how health affects economic growth: as health improves, the infant mortality rates drop; ill health is a major cause of poverty, hence, health is wealth and educated female in a population increase the health of the family. The position of health is crucial for a country to develop as the saying goes that "a healthy nation is a wealthy nation". When one is sick, there is high tendency for the person to become poor and become poorer if the sickness persists. This means that increased health status, increases the output of the family and subsequently increases the national output. Risikat (2011) examined the effect of government educational spending and macroeconomic uncertainty on schooling outcomes in Nigeria. The econometric analysis revealed that schooling outcome co-integrated with all economic growth and public education spending impacts positively on schooling outcome while macroeconomic instability impacts negatively. The variance decomposition analysis showed that "own shocks" constitute the predominant source of variation in schooling outcome. The impulse response analysis showed that any unanticipated increase in the macroeconomic uncertainty rate would have a contractionary impact on literacy rate. Also Oluwatobi and Ogunrinola (2011) found in their study a long run relationship between human capital development in the form of capital and recurrent expenditure on education and economic growth in Nigeria.

It is imperative to state that this paper attempts to examine which of the human capital variables, education and health has more impact on Nigeria's economic growth. Education in the context of human capital attaches a high premium like every other factor of production if not more important to human skills in a nation's output production. The importance of education to economic growth and development is now very well recognized in development planning (Jhingan, 2005); in fact, the World Bank identified it as the factor retarding economic progress in less developed countries (World Bank, 1995) and education issues are what the Millennium Development Goals (MDGs) and UNESCO's prescription of 26 percent allocation of annual budget to that sector preaches. Therefore, as a matter of priority, Nigeria cannot afford to leave education sector to suffer but any amount of effort is not too much in developing her manpower and skills (Yetunde and Ola, 2011).

In another vein, Naeem and Jangraiz (2012) examined the contribution of education to economic growth in Pakistan using OLS and Johansen Co-integration test as analytical techniques. The OLS result showed that elementary and secondary education contributes significantly to the Real GDP Per Capita in Pakistan except elementary education was statistically insignificant. The co-integration test results confirmed the existence of long run relationship between education and Real GDP Per Capita. But here in Nigeria, the National University Commission (2004) revealed that apart from the qualifications, graduates need to possess other attributes (non-academic skill requirements like analytical skills, good communication skills, good personal and social skills, technical and managerial skills among others). Olomola (2007) further found from his study that economic growth is a critical causality of increased tertiary education enrolment in Nigeria. Employers of labour are not only interested in those having certificates but also practical skills appropriate for job fulfillment. This is what makes human capital more productive and useful in any economy (Abiodun, 2010). Bakare and Sanmi (2011) investigated health care expenditures and economic growth in Nigeria using ordinary least square multiple regression analytical method and found a significant and positive relationship between health care expenditures and economic. They further recommended closer attention to the health sector with efforts like increased yearly budgetary allocation and monitoring implementation in the health sector.

To further highlight the share of education and health in Nigeria's economic growth process we are here guided by the following data
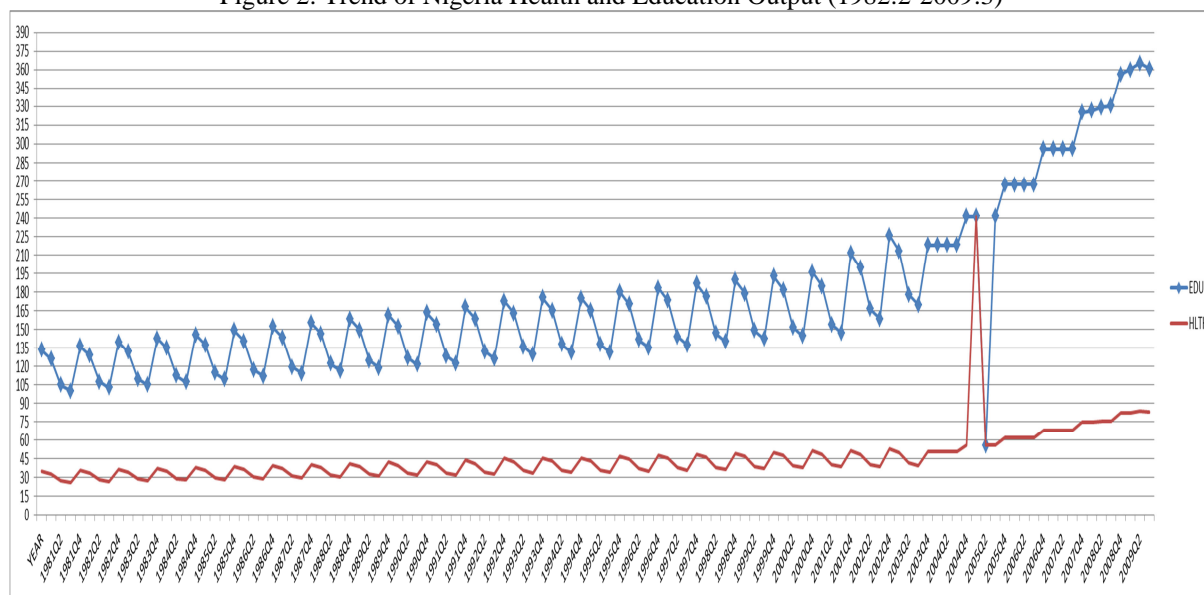
Figure 1: Health and education output in Nigeria (1981-2009)
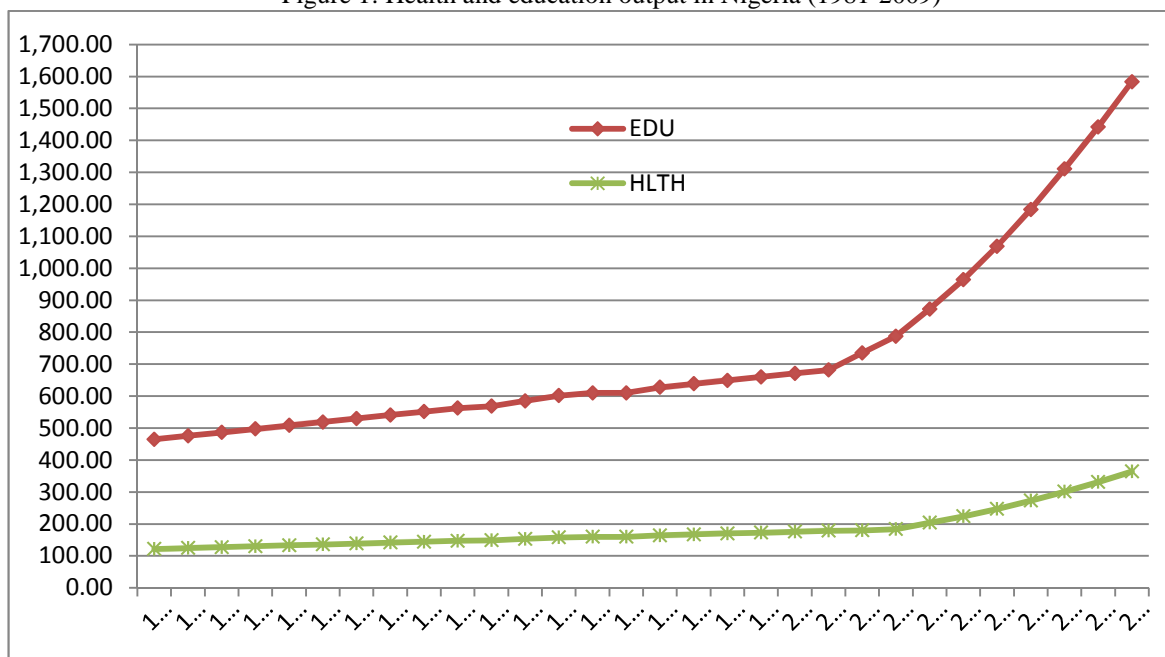
Source: CBN 2010 Statistical Bulletin and computed by Authors

Figure 1 above shows that education contributed more significantly to economic growth than health sector from 1981 to 2010 all through both in military and democratic dispensation. As at 2010 education contributed about ₦1.6billion to economic growth while health contributed close to N400million.

Figure 2: Trend of Nigeria Health and Education Output (1982:2-2009:3)

Source: CBN, 2010 and computed by authors

Showing a more frequent human capital output in the country in terms of quarterly series, figure 2 revealed that the health and education sectors did better in terms of GDP output in the period of democracy than period of military government and 2005 was dramatic as health output that was consistently below education output over took education output but fell back after a quarter below education sector's output and since then has remain below in the country.

Figure 3: Trend of School Enrolment in Nigeria
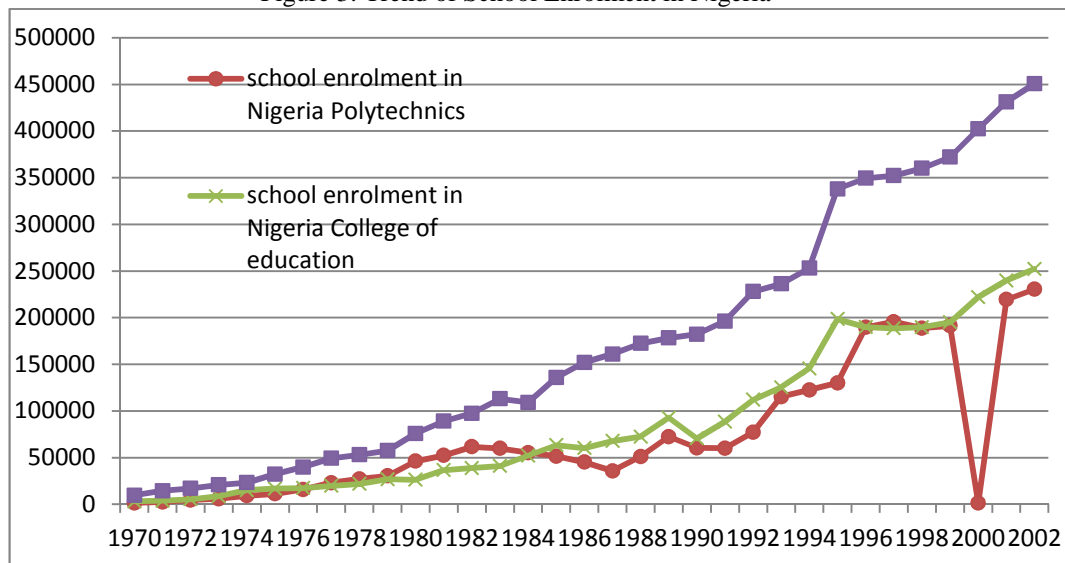
Source: Olomola (2007)

Figure 3 above shows incremental enrolment in Nigeria tertiary institutions. The university enrolment is the steepest followed by enrolment in college of education and polytechnics enrolment. It is of little surprise because of the rating of university and its certificate above college and polytechnics. And in 2000, polytechnic enrolment dropped to 1,220 from 191245 (about 99.44% fall in enrolment).

Model Specification and Analysis of Results

The theoretical model prescribed in this study deviates from the popular Mankiw, Romer and Weil of 1992 where human capital was used to augment the neoclassical growth model in a closed economic setting but the model of this study focused on the theoretical contribution of human capital in the form of education and health to the production setting in an economy. Thus the model in its structural form is given by:

$$Y = F(HC) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (1)$$

Where HC = human capital (HC) decomposed into health and education which implies

$$HC = HLTH_k + EDU_K \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(2)$$

Expressing equation (1) in the form of human capital Cobb Douglas production function, is thus:

$$Y = a_K + HLTH_K + EDU_K \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3)$$

Where a_K is the constant and for this study purpose, health and education output, growth rate and percentage contributions to economic growth, GDPR are allowed as exogenous variables to see how much they can influence economic progress in the Nigerian economy.

Where:

GDPR = economic growth rate,

EDU   = human capital on education output,

HLTH = human capital on health output,

RGDP =real gross domestic product represents Y in equation (3)

P is percentage of RGDP

EDUGROWTH is growth rate of education in Nigeria

HLTHGROWTH is the growth rate of health in Nigeria

Linear specification of equation (3) into a transformed explicit statistical form becomes:

$$GDP_R = a_P + HLTH_P + EDU_P + u \; \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots...(4)$$

$$GDP \; = \alpha + HLTH \; + EDU \; + \lambda \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(5)$$

$$GDP_R = a_g + HLTH_g + EDU_g + \mu \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots..(6)$$

All variables are as defined earlier, and u and λ are the error terms. The a'priori is that education and health outputs, rates and percentages are expected to positively affect economic growth and economic output in the country and that education would impact more than health sector on economic growth in Nigeria. The Gross Domestic Product, health and education data used are sourced from the 2010 Central Bank of Nigeria (CBN) Statistical Bulletin.

Thus subjecting data to econometric analysis this section focuses on the time series properties of the variables under consideration using the Augmented Dickey Fuller (ADF) tests. The results of the ADF tests for level, first difference, second difference and general F statistic of unit root at Level for all the variables are presented

below.

Table 1: UNIT ROOT TEST RESULT

VARIABLE	LEVEL	FIRST DIFFERENCE	SECOND DIFFERENCE	F STATISTICS AT LEVELS
RGDPP	-3.88993	-6.78226	-10.1035	8.003565
EDU	1.188362	1.718568	-2.35182	212.937
RGDP	2.037137	-1.45028	-3.86815	18.45332
HLTHP	-1.46188	-3.99901	-4.83831	4.480966
HLTHGROWTH	-0.76714	-4.13967	-6.26605	0.366437
HLTH	1.672973	0.758437	-3.28065	119.9809
EDUP	-1.70105	-4.04798	-4.9984	4.838652
EDUGROWTH	-0.30487	-3.21466	-6.27971	0.947409

Note: the critical value is (t = t) 2.93 and f value is 7.24 from Gujarati and Sangeetha (2007) and computed by authors using eviews 3.

GDP growth rate was the only variable stationary at levels, health and education sector's contributions and growth rates were stationary after first differencing while health output in Nigeria was stationary only after second differencing but education output was not stationary even at second difference but its general F statistic was statistically significant which gives us some confidence.

Table 2: CORRELATION RESULT OF VARIABLES

	RGDPP	RGDP	HLTHP	HLTHGROWTH	HLTH	EDUP	EDUGROWTH	EDU
RGDPP	1	-0.1424	0.0652	-0.0920	-0.1664	0.0490	-0.0463	-0.1522
RGDP		1	-0.8344	0.8621	0.9656	-0.7174	0.9042	0.9752
HLTHP			1	-0.6333	-0.6835	0.9789	-0.7925	-0.6992
HLTHGROWTH				1	0.8289	-0.4894	0.9134	0.8524
HLTH					1	-0.5519	0.8079	0.9975
EDUP					-	1	-0.6620	-0.5618
EDUGROWTH							1	0.8423
EDU								1

Source: Eviews 3 and computed by Authors (2013).

Dependent Variable: LOG(RGDPP)

Method: Least Squares

Date: 10/30/13   Time: 12:51

Sample(adjusted): 1985- 2010

Included observations: 23

Excluded observations: 3 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.468502	0.778580	-0.601739	0.5541
LOG(D(EDU))	0.927560	0.393826	2.355251	0.0288
LOG(D(HLTH))	-0.606720	0.407984	-1.487118	0.1526

R-squared	0.258518	Mean dependent var		1.518273
Adjusted R-squared	0.184370	S.D. dependent var		1.063393
S.E. of regression	0.960374	Akaike info criterion		2.878120
Sum squared resid	18.44638	Schwarz criterion		3.026228
Log likelihood	-30.09838	F-statistic		3.486504
Durbin-Watson stat	1.068460	Prob(F-statistic)		0.050235

Dependent Variable: LOG(RGDPP)
Method: Least Squares
Date: 10/21/13   Time: 21:06
Sample(adjusted): 1992 2010
Included observations: 11
Excluded observations: 8 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-17.04053	7.082164	-2.406119	0.0428
LOG(D(EDUP))	9.947448	3.342804	2.975780	0.0177
LOG(D(HLTHP))	-10.47470	3.594594	-2.914016	0.0195
R-squared	0.529510	Mean dependent var		1.123977
Adjusted R-squared	0.411887	S.D. dependent var		1.295237
S.E. of regression	0.993298	Akaike info criterion		3.051429
Sum squared resid	7.893127	Schwarz criterion		3.159945
Log likelihood	-13.78286	F-statistic		4.501772
Durbin-Watson stat	0.932553	Prob(F-statistic)		0.049001

Dependent Variable: RGDPP
Method: Least Squares
Date: 10/23/13   Time: 12:20
Sample(adjusted): 1982- 2010
Included observations: 29 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.450152	0.890654	4.996497	0.0000
D(EDUGROWTH)	2.150504	0.654981	3.283309	0.0029
D(HLTHGROWTH)	-0.465757	0.564811	-0.824626	0.4171
R-squared	0.314740	Mean dependent var		4.828238
Adjusted R-squared	0.262028	S.D. dependent var		5.501193
S.E. of regression	4.725817	Akaike info criterion		6.041655
Sum squared resid	580.6669	Schwarz criterion		6.183099
Log likelihood	-84.60400	F-statistic		5.970905
Durbin-Watson stat	1.155126	Prob(F-statistic)		0.007347

Edu and Hlth variable where first differenced including their per cent change in RGDP but RGDP and RGDP growth (RGDPP) were treated at levels after the unit root test to avoid spurious regression

Table 3: Estimated Results of Health and education effect on economic growth

	RGDPP	constant	EDU	HLTH
Model 1	**COEFFICIENT**	**-0.47**	**0.93**	**-0.61**
	T	**-0.60**	**2.36**	**-1.48**
	Prob	**0.55**	**0.03**	**0.15**
	F=3.49, DW=1.07 and R^2=26%			
	RGDPP	constant	EDUP	HLTHP
Model 2	**COEFFICIENT**	**-17.04**	**9.95**	**-10.47**
	T	**-2.41**	**2.98**	**-2.91**
	Prob	**0.04**	**0.02**	**0.02**
	F=4.50, DW=0.93 and R^2=53%			
	RGDPP	constant	EDUg	HLTHg
Model 3	**COEFFICIENT**	**4.45**	**2.15**	**-0.47**
	T	**5.00**	**3.28**	**-0.82**
	Prob	**0.00**	**0.00**	**0.42**
	F=5.97, DW=1.16 and R^2=31%			

Source: Eviews 3 and computed by Authors (2013).
Model 1 explains the empirical contribution of education and health outputs on economic growth. Model 2

estimates the real individual contribution of the explanatory variables to economic growth. However, Model 3 is a growth model where the growth rates of the explanatory variables (education and health output growth) were regressed on the real GDP growth rate of the Nigerian economy. These three models are integrated to see if an innovation to the original growth model using Cobb Douglass production function would produce useful country case results of human capital development in Nigeria developmental drive. A discussion of these results is presented below.

The predictive power of model 1 shows that only 26% (R^2=53%) influence of education and health output on economic growth in Nigeria. The value of the Durbin Watson (DW=1.07) is below the accepted rule of thumb (1.50 to 2.50) regions. But following the DW statistical table revealed that we do not reject the presence of positive serial autocorrelation in the model. The model has the required f Statistics probability (less than 0.05) but from the f statistical critical value, it showed that the overall f statistics is statistically significant only at 10% degree of freedom. The intercept was negatively relating to economic growth. The coefficient of education shows that education significantly adds to economic growth in the country. The coefficient of health output shows that the health sector impacted less to economic growth which was not expected to be, though the confidence of the health variable report has more degree of freedom.

In model 2, the model has a significant negative intercept (-17. 04). The coefficient of percentage contribution of education sector to economic growth has a statistically significant positive relationship. However, the coefficient of percentage contribution of health sector to economic growth was significant but negative. The model showed that a unit change in economic growth rate has 9% from the education sector while the health sector has a drop of 17%. A look into the predictive power of the model showed that the regression explains above average (R^2=53%), the influence of education and health percentage contribution to economic growth. However, the adjusted R^2 showed that the independent variables only explain 41% of the dependent variable. The value of the Durbin Watson (DW=0.9326) is below the accepted rule of thumb (1.50 to 2.50) regions, indicating absence of positive serial autocorrelation in the model. The model has the required f Statistics probability (less than 0.05) but from the F statistical table it showed that the overall f-statistics is statistically significant only at 10% degree of freedom.

The third model is a growth model which shows the influence of education and health annual growth rates on general economic growth rate in Nigeria. The crux of this regression is to help predict which human capital is more impacting to economic growth in the Nigeria context. The intercept indicates quite a significant positive relation to economic growth. The annual growth rate of the education sector in the country has a significant positive relation with the general economic growth rate of Nigeria. In fact, the education growth rate contributes 2.15 to every increase in economic growth rate in Nigeria. However, the health sector showed negative, though not significant relationship with economic growth rate in Nigeria within the scope of the study. This means that the education sector out of human capital context is more viable to economic development than health sector in Nigeria.

Looking into the statistical requirements of model 3 showed that the predictive power of the model is not too high. It revealed that the regression explains 31% (R^2=53%) influence of education and health growth rate on economic growth rate in Nigeria. The value of the Durbin Watson (DW=1.16) is below the accepted rule of thumb (1.50 to 2.50) regions. But following the DW statistical table showed that we do not reject the presence of positive serial autocorrelation in the model. The model has the required f Statistics probability (less than 0.05) but the f statistical critical value showed that the overall f statistics is statistically significant only at 10% degree of freedom.

Conclusion

The study showed that both education and health sectors are important but the health sector was not superior against our apriori expectation. The descriptive analysis showed that education contributed more than health sector in Nigeria. The econometric analysis also confirmed the superiority of education over health as contribution to economic development in Nigeria. This guide us to conclude that in the family of human capital Siamese twins, education is superior to health sector in terms of priority. The policy guide here is that skilled education should be more in the country for everybody to be able to contribute his or her quota to economic growth of the country.

References

Abiodun, S. O. (2010): Analysis of Mismatch Between Demand and Supply of Skills and University Graduate Unemployment in Nigeria. Unpublished M.Ed. Dissertation, Lagos State University.

Adewale, T.M, Ajayi, K.O and Enikanoselu,O.A. (2007), Trends in the Federal Government Financing Education in Nigeria, Revitalization of African Higher Education.

Akinyemi S, Ofem, I.B. and Ikuenomore S.O. (2012), Graduate Turnout and Graduate Employment in Nigeria, Department of Educational Management, Lagos State University, Lagos, Nigeria.

Bakare A.S and Olubokun Sanmi (2011), Health Care Expenditure and Economic Growth in Nigeria: An Empirical Study, Journal of Emerging Trends in Economics and Management Sciences (JETEMS) 2 (2): 83-87, © Scholarlink Research Institute Journals, 2011 (ISSN: 2141-7024),)

Bakare A.S. and Olubokun S. (2011), Health Care Expenditure and Economic Growth in Nigeria: An Empirical Study, Journal of Emerging Trends in Economics and Management Sciences (JETEMS) 2 (2): 83-87, Scholarlink Research Institute Journals, 2011 (ISSN: 2141-7024), jetems.scholarlinkresearch.org, Department of Economics, Adekunle Ajasin University, P.M.B 001. Akungba- Akoko. Ondo State,Nigeria

Dabalen, A. Oni, B. and Adekola, O. A. (2000): Labour Market Prospects for University Graduates in Nigeria.The Nigeria University system Innovation Project Study.

Jhingan M.L. (2005), The Economics of Development and Planning (Thirty Eight Edition), Vrinda Publications (P) Ltd. Delhi, India

Gujarati, N. D. and Sangeetha (2007), Basic Econometrics 4/e, The M cGraw-Hill companies, Special India edit ion page 304-331, 278.page 279

Mankiw, N Gregory, David Romer, and David N. Weil (1992), A Contribution to the Empirics of Economic Growth, Quarterly journal of Economics, Vol. 107, No. 2, May, PP. 402-37

Nabila A. and Asma A. (2012), Human Capital and Economic Growth in Pakistan: A Cointegration and Causality Analysis; www.ccsenet.org/ijef, International Journal of Economics and Finance, Vol. 4, No. 4,

Naeem U.R.K. and Jangraiz K. (2012), The contribution of education to economic growth: evidence from Pakistan; International Journal of Business and Social ScienceVol. 3 No. 4; Special Issue 145; Department of Economics, University of Peshawar, Pakistan.

Nigeria Education Fact Sheet (2012), United States Embassy in Nigeria Economic Section, Plot 1075, Diplomatic Drive Central Area Abuja, FCT, Nigeria, Tel: (+234 9) 461 4000; Website:http://nigeria.usembassy.gov
(http://photos.state.gov/libraries/nigeria/487468/pdfs/JanuaryEducationFactSheet.pdf)

National Bureau of Statistics (2010). Labour Force Survey March, 2009. Statistical News: Labour Force Statistics in Nigeria, ISSN 0794 – 1954, 476.

National University Commission (2004): Labour Market Expectations of Nigerian Graduates. Report of National Needs Assessment Surveys.

Olomola P.A. (2007), Higher education and economic growth: A causality Analysis for Nigeria, 1970-2002, Manpower Journal, vol. XLII, No. I, January-March, polomola@yahoo.com

Oluwatobi, S. O. and Ogunrinola, I. O. (2011), Government Expenditure on Human Capital Development: Implications for Economic Growth in Nigeria, www.ccsenet.org/jsd Journal of Sustainable Development, Vol. 4, No. 3; June 2011, Department of Economics and Development Studies, Covenant University, PMB 1023, Ota, Ogun State, Nigeria, E-mail: stephen.oluwatobi@yahoo.co.uk

Taiwo A. S. and Agbatogun K.K. (2011), GOVERNMENT EXPENDITURE IN NIGERIA: A SINE QUA NON FOR ECONOMIC GROWTH AND DEVELOPMENT. JORIND 9(2) December, 2011. ISSN 1596 – 8308. www.transcampus.org., www.ajol.info/journals/jorind, 155, Department of Economics, Tai Solarin Univeristy of Education Ijagun, Ijebu-Ode Nigera. Email: yommy2604@yahoo.com,

Taiwo M. and Abayomi T. (2011), Government expenditure and economic development: empirical evidence from Nigeria, Fountain University Osogbo, Nigeria. Department of Economics and Financial Studies", Tai Solarin University of Education, Ijebu-Ode,Nigeria. Department of Economics, Online at http://mpra.ub.uni-muenchen.de/37293/MPRA Paper No. 37293, posted 11. March 2012 20:45 UTC

Todaro, M.P and S.C Smith(2011), Economic Development, Essex, England, Pearson Educational Ltd, 11th edition

World Bank (1995), Review of Public Expenditure ODI, London.

Yetunde A. A. and Ola A. (2011), Human Capital Development: Nigeria's Greatest Challenge, Journal of Sustainable Development in Africa (Volume 13, No.7, 2011) ISSN: 1520-5509

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