



## HUMAN CAPITAL DEVELOPMENT AND ECONOMIC GROWTH: EMPIRICAL EVIDENCE FROM NIGERIA

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### ABSTRACT

*The study examined the contribution of different measures of human capital development to economic growth in Nigeria. It used data from Nigeria and adopted the growth account model which specifies the growth of GDP as a function of labour and capital. The model also included a measure of policy reforms. Based on the estimated regression and a descriptive statistical analysis of trends of government commitment to human capital development, it was found that though little commitment had been accorded health compare to education, empirical analysis showed that both education and health components of human capital development are crucial to economic growth in Nigeria.*

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**Key Words:** Human capital, Economic Growth, Nigeria.

### INTRODUCTION

Human capital is recognized as an agent of national development in all countries of the world. Providing education and health services to people is one of the major ways of improving the quality of human resources. Apart from being issues of social concern, both provide an economy with healthy trained human resources required for economic growth and development.

Prior to the Second World War (1939-1945), academic discourse on the relationship between education and economy was insignificant. However, later studies by Schultz (1961), Denison (1962) and a host other economists confirmed that the economy depended on education to foster economic growth.

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Similarly, health is fundamental to economic growth and development and is one of the key determinants of economic performance both at the micro and macro levels. This derives from the fact that health is both a direct component of human well-being and a form of human capital that increases an individual's capabilities (Bloom and Canning, 2003). Grossman (1972) has equally demonstrated that health is a form of human capital. Schultz (1992) argued that population quality is the decisive factor of production and emphasized the merits of investing in education and health (see also Bloom and Canning, 2000 and 2003).

Meeting the commendable United Nation health Millennium Development Goals (MDGs) of a reduction by two-thirds in the under-5 mortality ratio and a reduction by three-quarters in maternal mortality, and halting and beginning to reverse the spread of HIV/AIDS, malaria and other major diseases by 2015 will be completely elusive for Sub-Sahara African countries like Nigeria if sufficient attention is not paid to health expenditures. Similarly, eradicating illiteracy as one of the objectives of the (MDGs) will be a mirage if adequate attention is not given to educational expenditure by the federal government. It is against this backdrop that this paper examines the correlation between Expenditures on Education and Health Services, and Economic Growth in Nigeria. Among other objectives, the paper focuses on public expenditures on the education and health sectors during the period under review with a view to ascertaining the relative commitments of the governments to these sectors. In addition, the study empirically identified the various outcomes from expenditures on education and health services and their correlation with economic growth. The rest of this paper is structured as follows: Section 2 is on the review of some extant literature. The focus of section 3 is on the commitment of government towards education and health in Nigeria during the last few decades. Section 4 is the empirical analysis where time series data are employed to estimate the impact of education and health indicators on economic growth in Nigeria. Section 5 concludes the paper.

## **LITERATURE REVIEW**

Studies have shown the handsome returns to various forms of human capital accumulation: basic education, research, training, learning – by doing and capacity building. Education enriches people's understanding of themselves and the world. It improves the quality of their lives and leads to broad social benefit to individual and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances, demonstrated in several countries such as Malaysia, Bolivia, China (World Bank, 1999).

Schumpeter (1954) has similarly stressed the role of innovation (which is a by-product of education) in the process of economic growth. This, he asserted, can be achieved by assigning key role to entrepreneurs particularly because of their ability to innovate which could be seen in

different ways: creation of new products, and new markets; designing of more cost effective method of production; and organizational restructuring.

The World Development Report (1997) examines how knowledge influences development. The report reinforces some well – known lessons, such as the value of knowledge gained through trade and foreign investment. It also highlights others that have sometimes been overlooked, such as how imperfect information leads to failure in all markets and the importance of institution to facilitate the flow of information. Moreover, the report looks at the role of knowledge in development, examining difference in knowledge across and within the countries, the impact of knowledge gaps and information failures on development, and the way in which governments in developing countries and international institutions can foster development by addressing these issues.

Similarly, the report observes that the acquisition of knowledge and information is becoming increasingly critical to economic growth as science and engineering findings proliferate and take on ever-greater importance in production of goods and services. As information grows exponentially and as its incorporation in the production processes becomes increasingly complex, the ability to acquire, adopt, and adapt a new knowledge will be an important determinant of economic growth. This perhaps must have heightened the need to investigate the link between education and economic growth (Isola, 2002).

A review of literature on the link between education and economic growth is very illuminating. While many studies have found that additional years of education per person in the labour force increase real output or growth rate (World Bank, 1991; 1993), some studies reported that human capital accumulation has had a significant negative or an insignificant impact on economic or productivity growth.

The literature on return to human capital in developing countries focuses predominantly on measuring the returns to additional years of schooling for wage earners. Psacharopoulos (1994) summarises the results from more than 55 wages studies from Africa, Asia, and Latin America. These summaries present a consistent pattern of very large returns to primary education and somewhat smaller returns to secondary and post- secondary education.

Psacharopoulos (1994) found that average private rate of return to primary education in developing countries was 29%, while the returns to secondary and post secondary education were 18% and 20%, respectively. The main problem with the focus of this study is that majority of individuals in developing countries are not wage earners. For example, only about 20% of working individuals in Ghana were wage earners at that time. Similarly, wage earners made up to 15% of work force in India, 19% in Haiti, 20% in Nigeria, and 11% in Togo (World Bank, 1995, Table A2).

The inclusion of non- wage income as part of returns to human capital has been discussed extensively elsewhere (see Jollite, 1998).

Recent empirical studies based on international comparisons question the conventional development wisdom on the importance of education for growth. Using panel data to correct inherent shortcomings of cross-country estimates of neo- classical growth models, Caselli, Esquivel and Lefort (1996) did not find robust evidence to support the view that investing in human capital necessarily produces growth, as suggested earlier by Mankiw, Romer, and Weil (1992). Casual comparative observations in a number of developing economies confirm this statement: improvement in the education attainment of the labour force does not always have a positive impact on the rate of growth of output per worker (Pritchett, 1996). The author even wondered where all the education had gone! Or, in other words, what is the utility of schooling expenditures?

A plausible explanation may be that the quality of education systems evolves differently from one country to another. Indeed, an analysis made by Hanushek and Kin (1995) shows the significance of labour force quality as an explanation of the international differences in per capital growth rates. Since it has also been shown by Lee and Barro (1996) that labour force quality was correlated with educational infrastructure, one might think that simply introducing the latter into the neo- classical growth model would reconcile cross-country and panel data estimates. Unfortunately, multiplying the measure of human capital with an indicator of quality to account for differences in the quality of education systems does not significantly change the picture.

Many developing countries have made significant progress in ensuring better access to education as evidenced by improved literacy and enrollment rates and higher quality and more equitable distribution of education services. But the returns from the investment in education vary a great deal. Thomas and Wang (1996) have argued that education alone is not a guarantee for sustainable economic growth. They observed that Sri Lanka had higher per capital income than the Republic of Korea in the 1960s and its social indicators outstripped those in many low- income countries. But its income growth rate stagnated in the 1970s and 1980s. Similarly, for some time, East Asia has scored high both in the importance people attach to basic education (the demand side) and its broad availability (the supply side). But the financial crisis of the 1990s has exposed the need for East Asian countries to restructure their economies and upgrade the supply of high – skilled labour and their regulatory capacity.

China experienced the most rapid growth of any large country in any part of the world during its period of economic reform. In less than two decades, it achieved what it took other countries to accomplish in centuries. Its per capital income doubled between 1978 and 1987 and then doubled again between 1987 and 1996(World Bank 1997, Table 3). Over 170 million of the 270 million

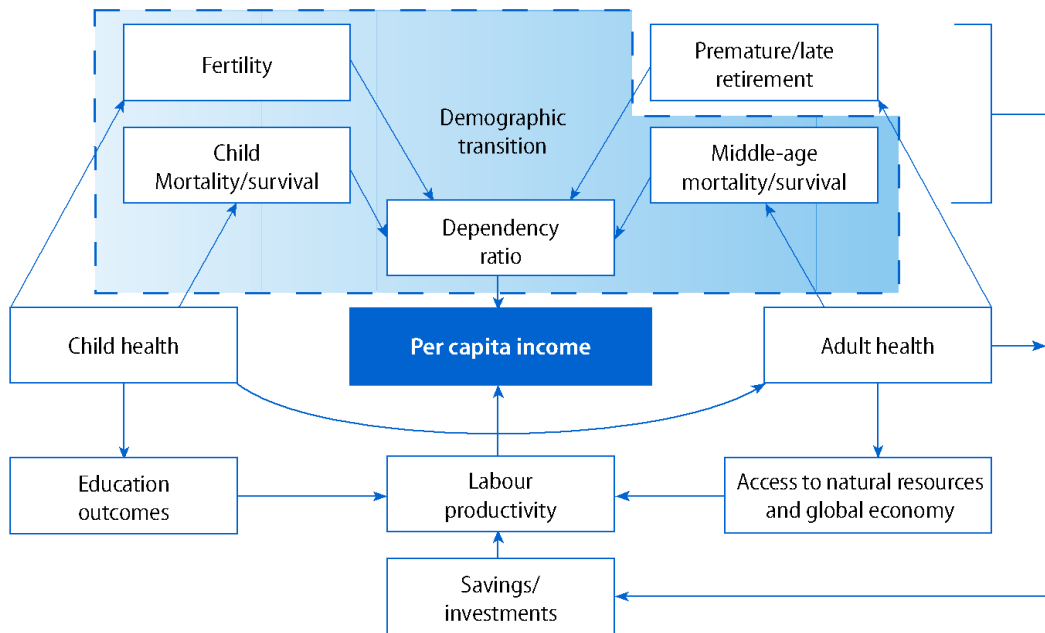
Chinese living in absolute poverty in 1978 were raised above the poverty threshold. China went from lack-luster growth of 3.9% before the reforms to 8 to 9.5% after the reforms.

However, studies have shown that significant share of China's growth could be explained by the accumulation of human capital (see World Bank, 1997). Can the link between education and economic growth be established in Nigeria? This is an empirical question that is addressed in the subsequent sections of the paper.

The effects of health on economic performance are usually discussed at both the micro and macro levels in the literature. Evidence of this link at the micro level has been discussed extensively elsewhere (see Schultz, 2002). Good health is a necessary condition for school attendance since a child has to be healthy to endure the rigours of schooling. Also, healthier students, in contrast to their less healthy counterparts, have lower malingering and higher cognitive functioning, and thus receive a better education for a given level of schooling which in turn guarantees higher earning over a longer period of time. Sound health enhances workers' productivity through the spill-over effects on their physical and mental abilities. All other things being equal, it is presumed that healthy workers work harder and longer and reason more plainly than those who are less gifted with good health. Good health can also minimize the incidence of poverty through higher labour participation and reduction in cost of medical services, thus releasing income for other welfare-improving consumption. This condition holds irrespective of whether the worker is skilled or unskilled.

Besides, at the macroeconomic level, it seems that a strong link between health and economic growth has been demonstrated. For instance, several cross-country studies have shown a strong link between measures of aggregate health such as life expectancy or child mortality, and growth per capita (Barro 1991, 1997; World Bank 1994; Barro and Lee 1994; Gallup and Sachs 2000). Improved health increases both the magnitude and quality of the labour force, and thereby leading to economic growth.

The World Health Organisation (1999) vividly captured the link between health and income as depicted in Figure 1. There is proven evidence that adult health depends on child health and itself directly influences labour productivity. In other words, improvements in child health, for instance, which implies reduction in child mortality rates, translate into improvements in adult health in subsequent years. Arising from this, several options are noticeable. First, better adult health implies a reduction in middle-age mortality and reduction in premature retirement. This improves the demographic transition by reducing dependency ratio in the economy with ultimate improvements in per capita income. Besides, improved adult health means longer period of working life. This means higher savings with improvements in the savings-investment ratio. The improved labour productivity emanating from this contributes positively to per capita income.

**Figure-1:** The Relationship between Health Outcomes and Economic Growth

Source: WHO: The World Health Report, 1999, p 11

Evidence abounds today about the potential symbiotic relationship between health and economic growth. The paths through which health improvements can influence the economy, as identified in the literature, include its effects on child health, labour market participation, worker productivity, savings, investments in human capital, education outcomes, fertility, dependency ratio, and population age structure (Bloom and Canning 2000; World Health Organisation, 1998).

Most studies on the education/health-economic outcomes nexus, both at the micro and macro levels, have generally examined two types of education/health indicators. According to Jafaroy and Gunnarsson (2008) quoting Verhoeven et al. (2007), performance indicators are divided into desired outcome and intermediate output indicators. Desired outcomes correspond to the underlying objectives sought by policy makers. Intermediate outputs are thought to be related to desired outcomes but can be more closely associated with current spending. For health care, the intermediate output indicators are the density of physicians, pharmacists, and health care workers, the number of hospital beds, and the number of immunization vaccines. The key outcome variables include infant, child and maternal mortality rates; the standardized death rate from all causes per 1,000 people as defined by the World Health Organisation (WHO); incidence of tuberculosis and average life expectancy (as defined by WHO). For education, the key intermediate output indicators are primary school pupil/teacher ratio, enrolment rate, rates of progression to secondary education and graduation. The main outcome indicator is the average score on an international

standardized test (Programme for International Student Assessment, 2006) in mathematics (secondary) education. It must be noted at this point that the intermediate output indicators are highly influenced by government policies in developing countries through fiscal budgetary expenditure. In explaining the performance of health and education sectors in some selected countries, United Nations Development Programme (2008) admitted that in the last quarter of the century, many countries made remarkable advances in education and health. For instance, all 80 countries for which data were available for both 1980 and 2006 have registered progress in education. For most, there have been fairly stable progress over time, although, there was a notable handful of countries which had setbacks during this period. For instance, there were five countries (out of 110 with data) for which education attainment levels were no better than what they were in 1990: Armenia, the Maldives, the Federation of Russia, Tajikistan, and Trinidad and Tobago. The picture of health was rather worse. There were about 30 countries (out of 180 with data) for which life expectancy were no better today than what they were in 1990. Most of these countries are in sub-Sahara Africa, but many transition countries in Eastern and Central Europe were also in this group as well as Jamaica, and Trinidad and Tobago in the Caribbean.

The question therefore is, to what extent has the federal government of Nigeria accorded recognition to education and health in Nigeria in the last few decades. Answer to this question is the focus of the next section of this paper.

## DEVELOPMENT IN THE EDUCATION AND HEALTH SECTORS IN NIGERIA

Table 1 presents the government expenditure on the health and education sectors over time.

**Table-1:** Health and Education Expenditures in Nigeria, 1980-2010 (N million)

Years	Recurrent Exp. on Health	Capital Exp. On Health	Total Health Expenditure	Recurrent Exp. on Education	Capital Exp. On Education	Total Education Expenditure
<b>1980-1989</b>	191.4	110.9	<b>302.3</b>	748.4	363.89	<b>112.3</b>
<b>1990-1999</b>	2,961.69	2,241.7	<b>5,203.3</b>	8,988.7	3,661.44	<b>12,650.1</b>
<b>2000</b>	11,612.6	6,569.2	<b>18,181.8</b>	44,225.5	23,342.6	<b>67,568.1</b>
<b>2001</b>	24,523.5	20,128.0	<b>44,651.5</b>	39,884.6	19,860.0	<b>59,744.6</b>
<b>2002</b>	50,563.2	12,608.0	<b>63,171.2</b>	100,240.0	9,215.0	<b>109,455.0</b>
<b>2003</b>	33,254.5	6,431.0	<b>39,685.5</b>	64,755.9	14,680.0	<b>79,435.9</b>
<b>2004</b>	33,377.4	26,410.0	<b>59,787.4</b>	72,217.9	21,550.0	<b>93,767.9</b>
<b>2005</b>	50,032.8	21,652.6	<b>71,685.4</b>	92,594.7	27,440.8	<b>120,036.0</b>
<b>2006</b>	67,550.2	38,039.8	<b>105,590.0</b>	129,422.0	35,791.8	<b>165,214.0</b>

<b>2007</b>	81,900.0	34,728.8	<b>116,628.8</b>	150,800.0	30,960.6	<b>181,760.6</b>
<b>2008</b>	98,200.0	38,702.5	<b>136,902.5</b>	164,000.0	33,276.5	<b>197,276.5</b>
<b>2009</b>	90,200.0	42,676.2	<b>132,876.2</b>	137,116.0	35,592.4	<b>172,708.4</b>
<b>2010</b>	102,620.0	46,649.8	<b>149,269.8</b>	158,640.0	37,908.2	<b>196,548.2</b>

Source: Central Bank of Nigeria's Statistical Bulletin, 2010, p 95

It could be seen that government recurrent expenditure in both sectors was significantly higher than her capital expenditure in all the years. This means that government did not invest sufficiently in these sectors given the fact that capital expenditures represent real investment in the sectors. Table 1 shows that there was increase in total health expenditure from an average of ₦5, 203.3million within the 1990 – 1999 periods to ₦18, 181.5million in year 2000. It rose to ₦44, 651.5million in 2001 and by 2003, it was ₦39, 685million representing a decrease of 11.122%. However, total expenditure on health rose between 2004 and 2010, except in 2009, when it was ₦13, 2876.2million which is lower than ₦13, 6902.5m, the figure for 2008. By 2010, total expenditure on health increased to ₦14, 9269.8m. Government expenditure on education witnessed a very high growth rate of 83% in 2002 amounting to ₦109,455m and this later dropped by 27% in 2003 after which it increased to ₦196,548.2 in 2010, except for 2009 when the value stood at ₦172,708.4million.

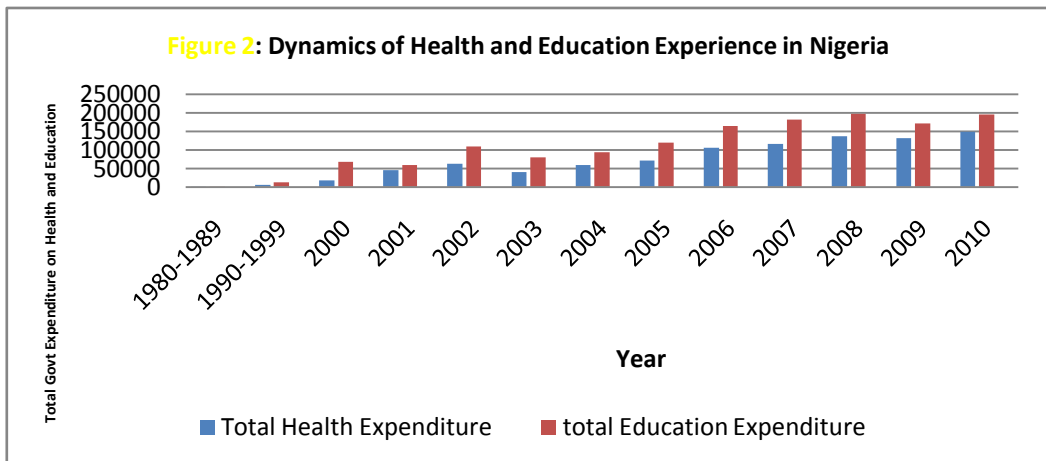


Table 2 shows government's commitment to these sectors through the percentage of each sector's expenditure in the total government expenditure. An observation of the table suggests that government showed little commitment to the health sector. For instance, in 2000, only 2.7% of government expenditure was expended on the health sector. However, it rose to 5.6% in 2006 which was the highest ever attained within the period under study. This is far below what is required given the nature of the Nigerian economy, its rising population, prevalence of diseases, and low level of health facilities.

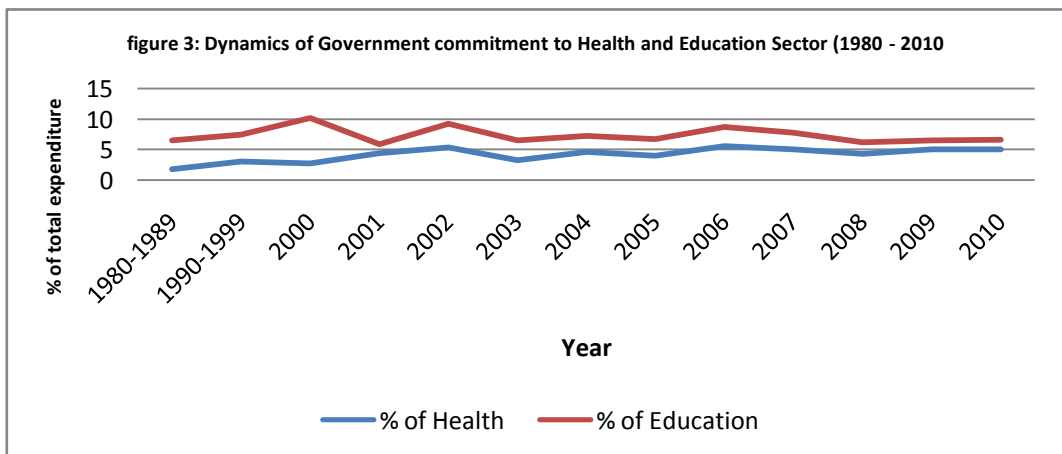


**Table-2:** Government's Commitment to Health and Education Sectors, 1980-2010

Years	Total Health Expenditure	Total Education Expenditure	Total Expenditure	Govt. % of Health	% of Education
1980-1989	302.3	112.3	17,041.47	1.774	6.527
1990-1999	5,203.3	12,650.14	169,104.8	3.077	7.481
2000	18,181.8	67,568.1	664,735	2.735	10.165
2001	44,651.5	59,744.6	1,018,026.0	4.386	5.869
2002	63,171.2	109,455.0	1,188,715.0	5.314	9.208
2003	39,685.5	79,435.9	1,225,957.0	3.237	6.480
2004	59,787.4	93767.9	1,302,232.0	4.591	7.201
2005	71,685.4	120,036.0	1,799,938.0	3.983	6.669
2006	105,590	165,214.0	1,900,010.0	5.557	8.695
2007	116,628.8	181,760.6	2,333,659.6	4.998	7.789
2008	136,902.5	197,276.5	3,193,440.0	4.287	6.178
2009	132,876.2	172,708.5	2,646,904.7	5.02006	6.525
2010	149,269.8	196,548.2	2,978,807.8	5.01106	6.598

**Source:** Central Bank of Nigeria's Statistical Bulletin, 2010, p 91

Government's commitment to the education sector fluctuated between 1980-1989 and 2010 as shown in Figure 2. Throughout the years, a steady fall and rise (shock) was recorded with a peak of 9.2% in 2000. It fell to 6.6% in 2005, rose to 8.9% in 2006, and after that year, the percentage of government expenditure on education declined. This situation is not encouraging given the population and the need for research and development in the country. Again when viewed against the United Nations' benchmark for developing countries of spending about 26% of the annual budget on education, Nigeria needs to invest more in education.



**THEORETICAL/EMPIRICAL ANALYSIS**

**Model Specification**

In the earlier neo – classical model, human capital was not considered a major input for production and hence was not included in growth models. Perhaps, Solow’s (1956) model could be seen as the pioneer in this direction. Solow incorporated human capital as one of the independent variables in his model. The model attributed growth in national income to three sources namely: increase in the stock of physical capital, increases in the size of labour force, and a residual representing all other factors. Solow uses the aggregate production function which is continuous and homogenous of degree one.

$$Y = F(L, K, T) \dots\dots\dots (1)$$

Where Y is aggregate real output, K is stock of capital, L is labour and T is Technical change.

Taking technical change as constant, equation 1 can be re-written as:

$$Y = A f(K, L) \dots\dots\dots (2)$$

Equation (2) can be expressed in growth term to obtain:

$$dY/Y = [A.dY/dK]dK/Y + [A.dY/dN.N/Y]dN/Y + dA/A \dots\dots\dots (3)$$

which can be written for estimation purposes as:

$$\Delta Y/Y = \alpha_0 + \alpha_1 I/Y + \alpha_2 \Delta N/Y \dots\dots\dots (4)$$

**Where:**

- $\alpha_0 = dA/A$
- $\alpha_1 = A.dY/dK$
- $\alpha_2 = A.dY/dN.N/Y$
- $I = dK =$  change in capital (investment)
- $I/Y =$  ratio of investment to income
- $\Delta N/Y =$  ratio of change in population to income

The constant term ( $\alpha_0$ ) is assumed to capture the growth in productivity,  $\alpha_1$  is the marginal productivity of capital, and  $\alpha_2$  is the elasticity of output with respect to population. Therefore, with this background, the model can be formed as:

$$G_y = \alpha_0 + \alpha_1 G_k + \alpha_2 G_L + U \dots\dots\dots (5)$$

**Where:**

- $G_y =$  Growth rate of real GDP
- $G_k =$  Growth rate of capital
- $G_L =$  Growth rate of labour
- $U =$  disturbance term

The  $\alpha$ 's are coefficients to be estimated and their signs are expected to be positive. In order to examine the impact of education and health on economic growth, variables such as life expectancy

and adult literacy rate were introduced as independent variables. We also introduced a dummy variable to capture the effect of economic reform. Given this adjustment, equation (5) can be modified as:

$$\text{GRY} = \alpha_0 + \alpha_1 \text{LR} + \alpha_2 \text{LE} + \alpha_3 \text{GRL} + \alpha_4 \text{GRC} + \alpha_5 \text{SAP} + U_t$$

**Where:**

GRY = Growth rate of GDP

LR = Adult literacy rate

LE = Life Expectancy

GRL = Growth rate of labour

GRC = Growth rate of capital

SAP = Structural Adjustment Programme

The study employed ordinary least square method to estimate the impact of adult literacy rate, life expectancy, growth rate of labour, growth rate of capital and a dummy variable on the growth rate of GDP. Level of stationarity of the variables was also examined through Augmented Dickey Fuller Test. The data set for the study consisted of annual time series data for 1980 to 2005. The data were obtained from the Central Bank of Nigeria statistical bulletin, Annual Reports and Statement of Accounts (various issues) and World Bank Development indicators.

### Empirical Analysis

In order to test for the stationarity of the variables, Augmented Dickey-Fuller (ADF) tests was used to investigate if the variables had a unit root or not.

### Unit Root Test

The Augmented Dickey-Fuller (ADF) test for unit roots was conducted for all the time series employed for the study. The ADF results in Table 3 show that all the variables are non-stationary in their levels. However, with their first differences, growth rate of real GDP, growth rate of capital, life expectancy, and growth rate of labour become stationary, that is, they are I(1) since the ADF value of each of these variables are greater than the 5% critical value. Also, time series data on adult literacy rate become stationary only after second differences, thus, it was integrated series of order I (2). With these results, all variables are regressed at their stationary level.

**Table-3:** Unit Root Test Result

Variable	1 <sup>st</sup> Difference	Critical Value	2 <sup>nd</sup> Difference	Critical Value	Order of Integration
GRGDP	-5.713	-3.749	-6.744	-4.4415	I(1)
LR	-4.3248	-4.4167	-5.9894	-4.4415	I(2)
GRCAP	-6.1690	-3.6496	-6.8020	-3.6576	I(1)
LIFEEXP	-4.752	-3.749	-9.271	-3.766	I(1)
GRLAB	-6.3933	-3.6496	-8.5535	-3.6576	I(1)

**PRESENTATION OF RESULTS**

$$D(\text{GRY}) = 0.09 + 2.46 D(\text{LR},2) + 2.73 D(\text{LE}) - 0.012 D(\text{GRL}) + 0.051 D(\text{GRC}) + 9.0 \text{SAP}$$

(0.89) (2.57)                      (1.96)    (0.89)    (2.04)                      (0.807)

$$R^2 = 0.46$$

$$F(5, 21) = 3.04$$

$$P\text{-value} = 0.036$$

$$\text{DW statistic} = 2.36$$

The t-values are reported in parentheses below the coefficients. An examination of the result above shows that t-values of literacy rate, life expectancy and growth rate of capital are significantly different from zero at the 4% level, 9% level and at the 6% level respectively. With an  $R^2$  of 0.46, it is clear that the five independent variables explained 46% of the systematic variations in Nigeria's growth rate of gross domestic product during the period under study. The Durbin Watson test of serial correlation indicates absence of serial correlation as indicated by a D-W statistic of 2.36. All the variables, except growth rate of labour, have the correct signs but only three are significantly different from zero, using 10% level of significance. The F-statistic of 3.04 is significant at the 4% level. Thus, the hypothesis of a significant linear relationship between economic growth, measured by the growth rate of GDP, and the five independent variables is validated.

In examining the relationship between each of the independent variables and economic growth, it could be observed that education, measured by literacy rate, had a positive relationship with economic growth. The coefficient of literacy rate was 2.465. Thus, a 1% increase in literacy rate resulted in a 2.465% increase in the growth rate of GDP. Thus, investment in education was a worthwhile venture during the period under study. The result shows the significance of education to growth in Nigeria. Despite low budgetary allocation to education, its impact on economic growth was still felt during this period of study. The result also showed the importance of health in the process of economic growth. The coefficient of life expectancy was 2.73. This indicated a positive relationship between health, proxied by life expectancy, and economic growth. An increase of 1% in life expectancy, other things being constant, raised growth rate by about 2.73%. This equally showed that public investment in the health sector was worthwhile. Table 4 presents details about the results. Growth of capital (investment) had a positive impact on economic growth. The coefficient of growth of capital indicated that a 1% increase in investment led to about 0.051% in growth rate of the economy. Also, economic reform had a positive effect on economic growth during the period of this study. However, growth of labour force had a negative sign. One of the major reasons for this was the downsizing of industries which occurred immediately after the structural adjustment programme. This led to retrenchment of many workers. In addition, the poor labour- growth relationship was also exacerbated by political crises that characterized these periods.

**Table-4:** Regression Results

Dependent Variable: D(GRGRP)

Method: Least Squares

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Sample(adjusted): 1982 2005

Included observations: 24 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.090200	0.891564	0.101170	0.9205
D(LR,2)	2.465256	1.091293	2.259023	0.0365
D(LIFEEXP)	2.733646	1.480777	1.846089	0.0814
D(GRLAB)	-0.011830	0.109583	-0.107953	0.9152
D(GRCAP)	0.051569	0.025245	2.042720	0.0560
D(SAP)	9.004114	5.929249	1.518593	0.1462
R-squared	0.457967	Mean dependent var		0.152086
Adjusted R-squared	0.307403	S.D. dependent var		5.122953
S.E. of regression	4.263446	Akaike info criterion		5.950350
Sum squared resid	327.1855	Schwarz criterion		6.244864
Log likelihood	-65.40420	F-statistic		3.041667
Durbin-Watson stat	2.366006	Prob(F-statistic)		0.036638

## CONCLUSION

The study examined the commitment of the federal government of Nigeria to education and health through her budgetary allocations within the last few decades. It was found that little attention was paid the health sector as the percentage of budgetary allocation to the sector ranged from less than 2.7% in the 1980s to 5.6% in 2006 compared with education. However, government's commitment to education fluctuated within the period. It reached the peak in 2000, after which it decreased to about 8.7% in 2006. However, when the budgetary allocations to education were compared with the 26% of the total budget recommended by UNESCO for developing countries like Nigeria, it is clear that government has to devote more resources to the sector.

In spite of the meager resources allocated to both sectors, the result of the empirical analysis showed that education, measured by adult literacy rate, and health, measured by life expectancy, had positive relationship with economic growth. Thus, investment in education and health was a worthwhile venture during the period under study.

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