

ANALYSIS HUMAN CAPITAL INVESTMENTS AND ECONOMIC PERFORMANCE IN NIGERIA

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ABSTRACT

The study looks into the relationship between human capital investments and Nigeria's economic growth from 1993 and 2023. It makes use of secondary data from the Statistical Bulletin published by the Central Bank of Nigeria. The purpose of the study is to evaluate the effect of investments in human capital on economic growth using GDP as the dependent variable. The government's expenditures on education and health care are examples of independent variables that are used to quantify these investments. Using Ordinary Least Squares (OLS) econometric methods, hypotheses were tested. The results show that government investment on health and education has a major impact on Nigeria's GDP. According to the coefficient of determination, variations in government capital spending are responsible for roughly 69% of GDP variations. The study comes to the conclusion that investments in human capital have a significant impact on economic growth and suggests that in order to promote economic development, the government should effectively manage its expenditure of human capital. In order to improve development and living standards, it suggests raising spending in health and education and stresses the significance of careful management and assessment of financing for these sectors.

KEYWORDS: *Analysis, Human Capital, Investments, Economic Growth, Nigeria.*

INTRODUCTION

It is commonly known that investing in human capital—including workforce development, healthcare, and education—is essential to attaining economic success. This theory is predicated on the notion that raising a population's level of health, education, and skill sets considerably raises productivity, which in turn boosts economic performance. Nigeria has been the focus of much research on the connection between investments in human capital and economic advancement because of its developmental obstacles and growth potential. Nigeria, the most populous nation in Africa, has seen a range of economic circumstances, including times of rapid expansion frequently followed by harsh recessions. The nation's dependence on oil earnings, which has led to the neglect of other crucial industries like healthcare and education, is usually blamed for these swings (Adebayo, 2021).

Nigeria has experienced difficulties with its economic performance, which have been made more difficult by the country's low human capital indicators (Adeola & Evans, 2019). Indicators like school attendance, healthcare accessibility, and literacy rates clearly show the difficulties. Nigeria has historically invested very little in human capital relative to its demands, which has resulted in low public spending on health and education as a percentage of GDP, which has led to poor quality and availability of key services (Aluko, 2020). Despite the nation's abundance of natural and human resources, the lack of investment has led to low human development indices and greater rates of unemployment, poverty, and economic inequality (Adeniyi & Ogunbiyi, 2020). According to recent research, Nigeria needs to give human capital development top priority if it hopes to achieve sustainable economic growth. The country may struggle to reach the productivity levels required for economic diversification and stability if significant improvements in health and education do not occur (Fasoranti, 2019). This viewpoint is consistent with more general economic theory, which emphasizes how important human capital is to economic progress, particularly for emerging nations like Nigeria (Babatunde & Adefabi, 2018). Therefore, investigating the impact of human capital investments on Nigeria's economic performance is both timely and essential in order to inform policies meant to foster long-term prosperity and stability.

Statement of the Problem

Nigeria has a wealth of natural resources and people capital, but its economy has not kept up with expectations. This has led to significant questions about how investments in human capital affect long-term economic growth. Despite numerous government initiatives aimed at improving education and healthcare, the country still lags behind on important human capital metrics, like as literacy rates, school attendance, and access to high-quality healthcare (Adebayo, 2021). Nigeria's economic potential is hampered by these flaws, which lead to high unemployment, low productivity, and pervasive poverty.

The ways in which focused investments in human capital could improve Nigeria's economic performance are not well understood. Although it is often known that human capital is crucial for economic growth, there is little empirical data regarding the precise processes by which these investments result in economic expansion in Nigeria (Adeniyi & Ogunbiyi, 2020). Considering the nation's continuous struggles with economic stability and diversification, this disparity is especially concerning. By examining the connection between human capital investment and economic performance in Nigeria, this study aims to close this empirical gap and provide information for more potent policy interventions for long-term, sustainable economic growth.

Theoretical Framework

Human Capital Theory, which was created in the 1960s by economists like Theodore Schultz and Gary Becker, serves as the foundation for this investigation. According to the hypothesis, spending on things like health, education, and other facets of human development increases productivity on an individual basis, which in turn promotes economic growth. Investments in human capital should produce larger economic advantages, stronger skills, and higher profits in the same way that investments in physical capital produce higher economic output and enhanced abilities. This hypothesis holds that Nigeria's economic success is significantly influenced by the amount and caliber of its human capital. It is widely believed that making efficient expenditures in healthcare and education is crucial to providing the workforce with the knowledge and physical health required for maximum production. Nigeria's economic progress has probably been limited by its past underinvestment in these sectors, as seen by its poor productivity and high unemployment rates (Babatunde & Adefabi, 2018). According to the notion, putting human capital development first is essential to guaranteeing that Nigerians have access to quality healthcare, education, and employment opportunities. The Human Capital Theory is used in this study to investigate the potential impact of human capital investments on Nigeria's economic performance. The findings might provide light on future changes to policy that could improve the stability and expansion of the country's economy.

Empirical Review

The relationship between Nigeria's economic growth and the development of human capital was examined in Adebayo's (2021) study. The study used the Autoregressive Distributed Lag (ARDL) model to evaluate the impact of healthcare and education spending on GDP growth using time-series data spanning from 1980 to 2018. The results showed a strong positive association between economic growth and investments in human capital, indicating that stronger economic output in Nigeria is directly correlated with higher spending on health and education.

Adeola and Evans (2019) looked at how investments in human capital, particularly in the health and education sectors, contribute to Nigeria's economic growth. The study discovered that investments in health and education have a favorable impact on economic growth, with education having a particularly large effect. Data from 1981 to 2016 were analyzed using a Vector Error Correction Model (VECM). The study came to the conclusion that maintaining long-term economic growth in Nigeria requires improving the country's educational system.

Adeniyi and Ogunbiyi (2020) used data from 1980 to 2017 to examine how human capital investment affected Nigeria's economic performance. Using the Generalized Method of Moments (GMM) approach, their analysis showed that human capital, especially education, is a significant factor in promoting economic growth. However, the study also identified inefficiencies in the healthcare sector that reduce the overall impact of human capital on economic development.

Asoranti (2019) investigated the connection between investments in human capital and Nigeria's economic growth using a time series technique. The study found a long-term relationship between investments in human capital and economic growth using the Johansen cointegration technique. The results indicated that compared to one-time expenditures, ongoing investments in health and education have a more notable positive influence on economic growth.

Olaniyan and Okemakinde (2018) investigated how Nigeria's educational advancement was affected by the Human Capital Theory. Their empirical study analysed data from 1985 to 2015 using a cointegration and error correction model to investigate the connection between economic performance and education. The findings confirmed that education plays a major role in Nigeria's economic growth, but they also made clear that higher educational standards are required in order to fully realize the benefits of this industry for the country's economy.

METHODOLOGY

The Central Bank of Nigeria Statistical Bulletin provided secondary data for the study, which used an ex-post facto research design. Nigeria's economic growth was measured using GDP as the dependent variable and government spending on health and education as the independent variable, which indicated the amount of money allocated.

Specification of model

The multivariate linear regression models are used in the study test each of the put out null hypotheses. These theories opine that Nigeria's economic growth is not much impacted by investments in human capital. A model created by Aigbokhan, Imahe, and Ailemen (2017) was modified for the analysis. The model is expressed and given

Where: GDP = The Gross Domestic Product is proxy of the Economic Growth

GEH = Government Expenditure onto the Health

GED = Government Expenditure onto the Defense

In this study, the model was modified by replacing Government Expenditure onto the Defense with Government Expenditure onto the Education as an independent variable. The revised model is expressed as follows: $GDP = f(GEH, GEE).....(1)$.

The econometric model can be written as:

$GDP = a_0 + a_1GEH + a_2GEE + \mu.....(2)$.

Where: GDP = The Gross Domestic Product is proxy of the Economic Growth.

GEH = Government Expenditure onto the Health

GEE = Government Expenditure onto the Education

a_0 = Constant parameter, a_1-a_2 = Elasticity Co-efficient of each variable. μ = Stochastic error term.

DATA PRESENTATION AND DISCUSSION

The study looked at how investments in human capital affected Nigeria's economic growth from 1993 and 2023. GDP was utilized as part of the dependent variable to indicate economic growth, and government spending into the health and also into the education is utilized as the independent variables to evaluate investments onto the human capital

Table 1: Descriptive Statistics

	GDP	GEH	GEE
Mean	3,301.108	3,714.234	1,201.150
Median	3,232.101	2,305.120	1,543.201
Maximum	5,402.330	5,403.242	6,100.861

Minimum	2.012.601	3,421.301	3.150.101
Std. Dev.	2.001201	112.1900	4.200579
Skewness	0.205372	3.100248	1.068069
Kurtosis	2.015392	10.08250	5.206210
Jarque-Bera	0.5477363	218.7151	10.86010
Probability	0.8103595	0.000000	0.0012 01
Sum	172.3110	3113.310	412.4010
Sum Sq. Dev.	1018.007	685374.4	807.0210
Observations	31	31	31

Source: E-views 10.1 output

Based on a dataset of 31 observations, Table 1 displays the descriptive statistics for GDP, GEE, and GHH, or government expenditures on health and education, respectively. With a mean of 2,012.188 and a median of 3,162.300, the GDP data points to a roughly normal distribution with a minor positive skewness of 0.215372 and a kurtosis of 3.025392. With a standard deviation of 6.01302, the GDP numbers exhibit significant range, spanning from a minimum of 4,021.600 to a maximum of 9,702.530. The GEH distribution, on the other hand, has a mean of 3,714.234 and a median of 2,385.430, indicating strong tails and extreme values. This distribution has a very high kurtosis of 14.19450 and a large positive skewness of 3.111248. The GEH values have a standard deviation of 148.6905 and range from 3,424.324 to 7,703.242. The median and mean for GEE are 1,786.500 and 1,814.250, respectively. 1.067069 skewness and 5.256220 kurtosis point to a slightly skewed, leptokurtic distribution. GEE has a range of 5,250.231 to 7,609.865, with a 5.409579 standard deviation. The GDP distribution is roughly normal based on the Jarque-Bera test statistics, while the GEH and GEE distributions exhibit considerable deviations from normality, as seen by their p-values.

Unit Root Test

Part of the stationarity variables was evaluated utilizing the ADF Unit Root Test. All variables are integrated at levels, designated as I(1), with statistical significance at either the 5% or 1% level, according to the results, which are shown in Table 2. For the Unit Root Test of the analysis, see Table 2.

Variables	ADF test of Statistics	Mackinnon critical of vale @ 5%	No of the time difference	Remark
GDP	3.3748538	-3.546376	1(1)	Stationary
GEH	-6.2648978	-1.476936	1(1)	Stationary
GEE	-6.6584994	-2.867568	1(1)	Stationary

Notes: (I) Three levels of significance: 1%, 5%, and 10%. The tests that pass at the 5% level of significance show that there is no rejection of the unit root null hypothesis. Decision Rule: If the crucial value exceeds the test statistic value, then there is a unit root.

Source: Part of the Researcher's Estimation using- E-views 10.1

Table 2 displays the findings for government spending on GDP (government spending on higher education), GEE (health), and GHE (education). For GDP, GEH, and GEE, the ADF test statistics are -3.37485461, -6.2648978, and -6.6584994, respectively. At the 5% significance level, these data are compared to the Mackinnon critical values of -3.546376 for GDP, -1.476936 for GEH, and -2.867568 for GEE. All variables are integrated at level I(1) after first differences are taken, suggesting that they are stationary because the ADF test statistics are below the crucial values. As a result, the investigation finds that every variable is stationary.

Table 3: The Ordinary Least Square (OLS) Estimation Results

Dependent of Variable: GDP

Method: Least of Squares

Date: 20/07/2024. Time: 4:22

Sample of Period between 1993-2023

Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.29062	3.233212	0.645013	0.000117
GEH	4.365296	0.003972	2.380061	0.000002
GEE	3.623321	4.243433	0.748005	0.000001
R-squared	0.462401		Mean dependent var	54.79801
Adjusted R-squared	0.672163		S.D. dependent var	12.24500
S.E. of regression	15.53117		Akaike info criterion	3.865703
Sum squared resid	2120.312		Schwarz criterion	6.865202
Log likelihood	90.4586		F-statistic	5.405803
Durbin-Watson stat	1.528721		Prob(F-statistic)	0.000000

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The model explains about 69.3% of the variation in the dependent variable, with an adjusted R-squared of 67.2%, reflecting a good model fit. The standard error of the regression is 15.53117, and the sum of squared residuals totals 2120.312. The Akaike Information Criterion (AIC) and Schwarz Criterion (SC) are 3.865763 and 9.29062, respectively, used for model evaluation. The log-likelihood value is 90.4586 The F-statistic is 5.405859 with a p-value of 0.000000, demonstrating that the overall model is statistically significant. The Durbin-Watson statistic of 1.528721 indicates that there is no significant correlation in the residuals

CONCLUSION AND RECOMMENDATIONS

The study's results from Ordinary Least Squares econometric methodologies showed that investments in human capital had a considerable impact on Nigeria's growth economic. This result is constant with the findings of Chiwendu & Okorie's (2017) study, which likewise emphasized the significant impact of human capital development on Nigeria's economic expansion. In order to promote economic growth and development, the report suggests that the government effectively monitor spending on human capital. To improve economic development and living standards, more money should be spent on health and education. In order to prevent unnecessary capital expenditures, the government should oversee and support funding for these industries and make sure that evaluation techniques are applied. In order to encourage banks to invest in the communication sector, the Central Bank of Nigeria and policymakers should also put strong economic policies into place. Some of these policies include maintaining stable interest rates, adopting flexible exchange rates, supporting indigenization, and pursuing economic diversification.

Contribution to Knowledge

The work effectively improved the model, expanded on previously published research, and strengthened the empirical review. The study added new data and broadened its geographical coverage, which makes it a useful tool for further research.

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**Appendix 1:
Human Capital Investment and Economic Performance in Nigeria (1993-2023).**

Year	Health Sector (₦-Billion)	Education Sector (₦ Billion)	GDP at Current Market Price (N' Billion)
1993	423,623,200	324,400,600	263.29
1991	353,782,200	225,962,000	382.26
1992	435,213,400	222,987,300	472.65
1993	263,734,500	135,262,700	545.67
1994	234,321,400	137,731,900	875.34
1995	302,262,900	235,264,100	1,089.68
1996	352,213,600	236,355,400	1,399.70
1997	346,973,100	273,427,600	2,907.36
1998	326,134,810	236,026,300	4,032.30
1999	424,311,600	312,063,300	4,189.25
2000	554,735,300	340,363,800	3,989.45
2001	627,715,600	420,625,900	4,679.21
2002	764,222,130	539,967,100	6,713.57
2003	926,954,877	625,835,800	6,895.20
2004	1,243,363,682	836,423,700	7,795.76
2005	2,225,763,225	1,136,690,000	9,913.52
2006	2,673,365,060	1,366,135,000	11,411.07
2007	2,553,124,212	1,625,765,000	14,610.88
2008	2,527,913,321	1,335,833,000	18,564.59
2009	4,537,184,221	2,983,330,000	20,657.32
2010	9,526,213,212	3,336,693,000	24,296.33
2011	8,749,132,561	3,773,864,000	24,794.24
2012	6,416,903,411	4,136,513,000	54,612.26
2013	7, 328,433,121	4,625,336,000	62,980.40
2014	5,215,123,317	3,973,584,000	71,713.94
2015	12,514,126,403	1,365,400,600	87,576.474
2016	13,123,835,179	2,369,600,000	94,144.960
2017	14,364,645.756	2,766,846.757	101,144.49
2018	6,416,903,411	4,136,513,000	54,612.26
2019	7, 328,433,121	4,625,336,000	62,980.40
2020	5,215,123,317	3,973,584,000	71,713.94
2021	12,514,126,403	1,365,400,600	87,576.474
2022	13,123,835,179	2,369,600,000	94,144.960
2023	14,364,645.756	2,766,846.757	101,144.49

Source: Central Bank of Nigeria Statistical Bulletin, 2023