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Human Capital Development and Economic Growth in Nigeria

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Abstract

The study looks at the relationship between economic growth and human capital development in Nigeria using time series data from 1986 to 2020. By using the endogenous modeling technique cast within the autoregressive distributed lag (ARDL) framework, the bounds testing investigation demonstrated the existence of co-integration between economic growth and human capital development indicators. The findings also show that during the studied years, Nigeria's economic growth was positively impacted by indices of human capital development, though these benefits were typically statistically negligible. Additional information indicates that any temporary disruption totally restores balance. According to the study's conclusions, the government should give funds for the development of human capital priority treatment, paying particular attention to Nigeria's health and education sectors since they have the greatest room for expansion. Similar to this, government officials need to try to pay attention to the school enrollment issue.

Keywords:
Bounds Test, Economic Growth, Endogeneity, Human Capital Development, Nigeria

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Background to the Study

It is impossible to overstate the importance of human capital for economic development. Economists have acknowledged that one of the essential conditions for a nation's socioeconomic and political transition is the development of human capital. An amazing commitment to human capital formation is one of the commonly accepted causative variables responsible for the impressive performance of the economies of the majority of industrialized and newly industrializing countries (Adedeji and Bamidele, 2003; World Bank, 2009). This has mostly been accomplished through improved knowledge, skills, and capabilities that all of the citizens of these countries have acquired through education and training. Both variants of the neoclassical and endogenous growth models emphasize the importance of human capital (Sianesi and van Reenen, 2003).

The crucial distinction is that in the first group, external technical progress continues to be the primary driver of economic growth, whereas in the second group, no more explanation is required, and human capital is significantly more significant. According to endogenous growth models, the growth rate of an economy may permanently alter because of a change in a particular policy variable. The data for many developing economies first appear to be largely compatible with this assumption (Jones, 1995), exhibiting increased development after 1945, in contrast to time series evidence for the US. The neoclassical model's exogenous technical development is subject to alter in reaction to policy.

Parente and Prescott (1999, 2000) contend that each nation's population make decisions that affect how quickly production increases by allocating time away from routine tasks and toward activities that increase productivity. By doing this, they can access the global knowledge pool and borrow money on international markets. Even when the supply of usable knowledge is the same across all nations, policy-induced restrictions like taxes or entrance barriers at the plant level led to disparities in global aggregate productivity. It has been emphasized that the quality and quantity of human resources, rather than natural resources, endowments, and the stock of physical capital, is what accounts for the variances in the level of socio-economic development among countries.

Oladeji and Adebayo (1996), assert that human resources are an important factor in growth and should be developed. They act as both methods and, more crucially, aims that must be achieved to advance the economy. Harbinson (1973), who asserted that "human resources constitute the ultimate basis for the wealth of nations," underlines this point. Humans are the active agents who amass capital, exploit natural resources, create social, economic, and political systems, and advance national development. Capital and natural resources are passive components of production. It goes without saying that a nation will not be able to develop anything else if its citizens are unable to develop their skills and knowledge and use them successfully in the national economy.

Investment in human capital is crucial for raising competitiveness, enhancing population quality of life, and fostering economic growth and national development. The country's

human resource development needs to be strengthened and stabilized in accordance with the development policies in order to speed up economic activity and spark higher productivity, income, and economic growth and development. Nigeria is well-endowed with both human and material resources, which puts her in a strong position to attain greatness. However, when compared to other emerging economies, Nigeria continues to have a poor level of human development, according to the UNDP's 2008 Human Development Report. The only way to determine the number, availability, and quality of human resources and their effects on economic growth is through education (Benhabib and Spiegel, 1994). For many people, capital consists of physical assets that provide income, such as bank accounts, investments, and other forms of money.

Jhingan (2005), notes that it is conventional to place more value on the formation of physical capital than human capital during the process of economic progress. These material assets are examples of capital. Human capital resources, which are comprised of education or schooling, training, and the provision of healthcare, stand apart from these tangible capital resources. In addition to boosting productivity and income, these human resource development initiatives can also help people establish positive habits like dependability and responsibility. Therefore, the most crucial elements in the development of human resources are education and training. Education, health, and other human characteristics that can increase production are frequently referred to as human capital by economists (Todaro and Smith, 2003). As a result, the quality of human resources refers to the level of education, health, and other human qualities that, when improved, can increase productivity.

Empirical Review

Using time series data ranging from 1980 to 2013, Adeyemi and Ogunsola (2016) investigated the effect of human capital development on economic growth in Nigeria. To determine the link between the variables included in the investigation, ARDL Co-integration analysis was performed in the study. The research discovered that the variables had long-run co-integration. The study's results also showed a long-term positive association between secondary school enrollment, public education spending, life expectancy rate, gross capital formation, and economic growth, however this relationship was statistically insignificant. A negative long-term association between enrollment in primary and secondary schools, public health spending, and economic growth was also demonstrated by the results. The study so advised that the government implement the necessary education and training policies that would provide high-quality primary and tertiary education, and that it should also allocate more resources to the health sector to improve human capital development.

Using time series data from 1982 to 2011, Jaiyeoba (2015), investigated the connection between human capital investment and economic growth in Nigeria. Trend analysis, Johansen cointegration, and the ordinary least squares method were all used in the study. However, empirical results suggest a long-term connection between government spending on health, education, and economic expansion. The variables gross fixed capital

formation, secondary and tertiary enrollment rates, and health and education spending all show the anticipated positive trends and are statistically significant (except government expenditure on education and primary enrolment rate). The results of this study have significant consequences for health and education policies, which are hotly contested throughout the nation. Therefore, this study suggests that the government implement policies focused on significant investment in the health and education sectors in order to accelerate growth and free Nigerians from the cycle of poverty.

Eigbiremolen and Anaduaka (2014), used quarterly time series data from 1999 to 2012 to explore the effect of human capital development on national output in Nigeria. They used the augmented Solow human capital-growth model. Johansen cointegration test was utilized in the investigation. The findings demonstrated that, in accordance with theory, human capital development has a strong positive impact on output level. The study also showed a rather inelastic relationship between output level and human capital development. According to the report, the government and policy makers should make honest and concentrated efforts to promote and enhance human capability by providing enough funds for education at all levels.

Oluwatoyin (2013), investigated Nigeria's economic development and human capital investment. According to the study, which employed Augmented Dickey Fuller (ADF) tests, there is a positive correlation between government spending on education and economic growth, but a negative correlation between spending on health care and economic growth. The report consequently advised the government to boost not only the amount spent on the health and education sectors, but also the share of its overall spending that is given to these sectors.

According to Mba, Mba, Ogbuabor, and Ikpegbu (2013), the development of human capital is important for the expansion of the Nigerian economy. The Ordinary Least Square (OLS) approach was employed in the investigation. The study also employed the GDP as a stand-in for economic growth, as well as the per capita real gross domestic product, the enrollment in primary schools, public spending on health and education, life expectancy, and the stock of physical capital as a stand-in for human capital. According to research, economic growth and the development of human capital are strongly positively correlated. The study thus suggested revisiting the labor requirements of the various economic sectors, putting in place practical policies to promote overall economic growth, and making effective and efficient use of public education and health spending so that the nation would have high-quality healthcare and educational systems.

The contribution of various metrics of human capital development to economic growth in Nigeria was assessed by Isola and Alani (2012). It employed the growth account paradigm and used data from Nigeria, which defines GDP growth as a function of labor and capital. In the model, there was also a component for policy changes. Based on the estimated regression and a descriptive statistical analysis of trends in government commitment to human capital development, it was discovered that, despite health

receiving less commitment than education, both the education and health components of human capital development are essential for Nigerian economic growth.

Using a Vector Error Correction (VEC) and Pairwise Granger causality techniques, Amassoma and Nwosa (2011) investigated the relationship between human capital investment and economic growth in Nigeria for sustainable development in Africa as a whole between 1970 and 2009. The study's findings indicate that there is no connection between the rise of human capital and economic expansion. In order to create the necessary increase in human capital that can spur economic growth, the study advised increasing budgetary allocation to the education and health sectors and establishing high-quality, well-functioning vocational institutions. The study also found that in order to spur and sustain economic growth, the government must address the problem of labor mismatch.

Johnson (2011) looked at the relationship between economic growth and human capital development in Nigeria and said that human capital is a key element in transforming all resources for the benefit of humanity. In order to analyze the relationship between GDP as a proxy for economic growth, total government spending on health and education, and the enrolment pattern of tertiary, secondary, and primary schools as a proxy for human capital, the study used a conceptual analytical framework that employs the theoretical and ordinary least square (OLS). The concluded that there is a strong positive relationship between the development of human capital and economic growth and advised stakeholders to devise more practical methods of developing human capabilities because they are viewed as a key tool for economic growth in Nigeria. They also suggested that appropriate institutional frameworks be put in place to examine the manpower needs of the various sectors and implement policies that will promote the country's overall growth.

Uduh and Benedict (2017), investigated the relationship between Nomadic education spending and Nigerian economic growth. Utilizing Ordinary Least Square (OLS), which sheds light on the long-term relationship between the variables, the study used time series data on real domestic product and total government spending on Nomadi education from 1986 to 2012. Additionally, it was discovered that total government spending on nomadic education has a considerable impact on Nigeria's economic development. Because proper investment in this area will improve educational outcomes and spur the country's economic growth, it was advised that the government raise her budgetary allocation to the Normadic education and other educational sectors.

Using annual time series data from 1981 to 2005, Ogunleye, Owolabi, Sanyaolu, and Lawal (2017) used the Ordinary Least Square (OLS) regression technique to investigate the effect of human capital development on economic growth in Nigeria. The empirical finding demonstrated that, as measured by the gross domestic product, the development of human capital had a considerable impact on economic growth. And in accordance with theory, Nigeria's economic growth is positively and statistically significantly impacted

by indices of human capital development, such as secondary and tertiary school enrollment, total government spending on health, and education. The results also showed that life expectancy and enrollment in elementary schools had a negative and statistically negligible effect on Nigeria's economic growth. As a result, the study made the recommendation that the government devote sufficient funds for the creation of human capital in Nigeria.

Adeyemi and Ogunsola (2016), used time series data from 1980 to 2013 gathered from the National Bureau of Statistics and World Bank Indicators to investigate the effect of human capital development on economic growth in Nigeria. The link between the variables used was estimated by the study using ARDL co-integration analysis. The findings showed a long-term positive association between secondary school enrollment, public health spending, life expectancy rate, gross capital creation, and economic growth, however this relationship was statistically insignificant. The findings also showed a long-term inverse association between enrollment in elementary and secondary schools, public health spending, and economic growth. The study so advised that the government implement the necessary education and training policies that would provide high-quality primary and postsecondary education, as well as increase funding for the health sector to promote the development of human capital.

Theoretical Framework and Methodology

The endogenous growth model, which forms the foundation of this study's theoretical framework, stipulates that continued economic progress must be accompanied by an increase in human capital (see Lucas, 1988; Romer, 1990; and Romer, 1994). The growth rate of output, according to advocates of endogenous growth models, is endogenously dictated by the economic environment. These theories suggest that human capital is the engine that propels an economy's expansion. The generalization of human capital production technology as growth-determinants and the accessible channels of human capital investment in developing nations, where associated consensus is still debatable in literature, forms the theoretical foundation of this work. According to Park (2004), decisions about investments in human capital are made by individuals based on market incentives and government subsidies. It is unclear how the social incentives for human capital should be structured across different education levels, even though endogenous growth models suggest that a society with higher incentives for human capital investments would yield higher growth.

This is a significant issue since alternative structures will result in varied demographic compositions of human capital, which may or may not have different effects on the increase of productivity. In this study, we claimed that while governments have social or welfare incentives on investment and consumption on human capital development, private investors have economic incentives in terms of profit and asset growth. Our suggested arguments suggest that the process of developing human capital, which is essential for sustaining economic growth over time, involves both the public and private sectors. Ram (1986), Josephat et al. (2000), Niloy et al. (2003), and Adesoye et al. (2010)

made similar arguments in the past but with less focus and a different methodology. From the foregoing, we study an economy in which physical capital and labor, two separate components of production, determine final output. For a Cobb-Douglass production function using a technology with a constant return to scale:

$$Y_t = A_t K_t^{\beta} L_t^{1-\beta} \qquad (0 < \beta < 1 \qquad 1$$

Where Y_t, K_t and L_t denote gross domestic product, physical capital stock, and total labour force at time *t*. Time-variant technological level (A_t) is influenced by elements that improve efficiency and the knowledge environment. In line with Park (2004), the endogenous growth models of Lucas (1988), Romer (1990), and Jones (1995) offer conceptual frameworks where productivity growth is boosted by human capital. A number of other research, such as those by Bartel and Lichtenberg (1987), Foster and Rosenzweig (1996), and Berman et al. (1998), have suggested that human capital either facilitates or complements the application of technology. Models are introduced by Benhabib and Spiegel (1994), Bils and Klenow (2000), and show how the average level of human capital in the population affects productivity growth. Following these empirical studies, this research examines how human capital per worker may affect the rate of technological advancement. The following chart illustrates the relationship between the human capital effect and productivity growth:

$$A_t/A_t = \tau + \frac{\varphi H_t}{L_t} \qquad 2$$

Where $A_t = \frac{dA_t}{A_t}, \tau$, is the continuous growth rate of technical advancement, H_t is the total amount of capital in the economy, $L_t$is the labor force (or labor supply in the economy), and h_t is the impact of human capital on growth productivity. Given that aggregate human (H_t) is the total of all the human capital that individuals have invested in the economy, h it is the human capital of an individual i at time t

$$H_t = \sum_{i=1}^{\eta} h_{it} \qquad 3$$

Where η the population of the nation is. Thus, adding equation (3) to equation (1), taking the natural logarithm, and adding the stochastic factor results in the expression:

$$LogY_t = LogA_t + \beta LogK_t + (1-\beta)L_T + \gamma H_t + \mu_t \qquad 4$$

Model Specification

The theoretical model that describes the impact of human capital on economic growth is expressed in expression (4). In this investigation, equation (4) was changed as follows:

$$GDP_t = f\,(GCF_t,\ GEE_t, GEH_t, LBF_t, PSE_t, SSE_t, TER_t) \qquad 5$$

As a result, the theoretically described model for this investigation is represented by equation (5). Gross domestic product (GDP), gross capital formation (GCF), government total expenditure on education (GEE), government total expenditure on health (GEH), labor force (LBF), primary school enrollment (PSE), secondary school enrollment (SSE), tertiary enrollment (TER), and time (t) are used in this example. The variables in equation 5's right side stand in for the indices of human capital development. The autoregressive distributed lag (ARDL) framework is used to analyze the long- and short-term effects of human capital development on economic growth in line with the study's goal. A relatively new method called the autoregressive distributed lag model (ARDL) has recently gained significant significance. Pesaran and Shin (1999) created the ARDL approach to cointegration testing, often known as the limits testing approach, which was further expanded by Pesaran et al (2001). The Wald or F-statistic in a generalized Dickey-Fuller type regression, which is used to test the significance of the variables under consideration in a conditional unconstrained equilibrium correction model, serves as the procedure's underlying statistic (UECM). The ARDL strategy has a number of benefits over other conventional methods. Bounds test approach basically consists of two parts. The first stage is to look into if there is a long-term relationship between the variables that are included. The following is the formulation of the ARDL framework for this study:

$$\Delta GDP_t = \delta_0 + \pi_1 GDP_{t-1} + \pi_2 GCF_{t-1} + \pi_3 GEE_{t-1} + \pi_4 GEH_{t-1} + \pi_5 LBS_{t-1} + \pi_6 PSE_{t-1} + \pi_7 SSE_{t-1} + \pi_8 TER_{t-1} + \sum_{i=1}^{a} \sigma_i \Delta GDP_{t-1} + \sum_{i=0}^{b} \alpha_{i\Delta} GCF_{t-1} + \sum_{i=0}^{c} \emptyset_i \Delta GEE_{t-1} + \sum_{i=0}^{d} \gamma_i \Delta GEH_{t-1} + \sum_{i=0}^{e} \delta_i \Delta LBS_{t-1} + \sum_{i=0}^{f} \vartheta_i \Delta PSE_{T-1} + \sum_{i=0}^{g} \varphi_i \Delta SSE_{t-1} + \sum_{i=0}^{h} \omega_i \Delta TER_{t-1} + \varepsilon_t \quad 6$$

Where a, b, c, d, e, f, g and h are the ideal lag lengths for each included series, and $\delta_0$is the drift component. It should be noted that the lag-length terms are not equal for any reason. The short-run dynamic multipliers of the model are represented by the second portion of the equation with,$\sigma, \alpha, \emptyset, \gamma, \delta, \vartheta, \varphi$ *and* ω and the long-run dynamic multipliers are represented by the parameters π_i. To represent the short-run dynamic structure, take note that terms with summation sings are employed. Before the chosen model is estimated using the ordinary least squares (OLS) approach, the proper lag duration is chosen based on the Akaike Information Criterion (AIC). Pesaran and Shin (1999), suggested selecting the lag length that minimizes the criterion from a maximum of two lags for annual data. The conditional ARDL (a, b, c, d, e, f, g and h) long-run model is estimated in the second step.

$$GDP_t = \delta_0 + + \sum_{i=1}^{a} \sigma_i \Delta\, GDP_{t-1} + \sum_{i=0}^{b} \alpha_{i\Delta}\, GCF_{t-1} + \sum_{i=0}^{c} \emptyset_i \Delta\, GEE_{t-1} + \sum_{i=0}^{d} \gamma_i\, \Delta GEH_{t-1} + \sum_{i=0}^{e} \delta_i\, \Delta LBS_{t-1} + \sum_{i=0}^{f} \vartheta_i \Delta\, PSE_{T-1} + \sum_{i=0}^{g} \varphi_i \Delta\, SSE_{t-1} + \sum_{i=0}^{h} \omega_i\, \Delta TER_{t-1} + \varepsilon_t \quad 7$$

Where each variable is defined as before. The best lag orders for the ARDL are chosen in the estimation of equations (7). (*a, b, c, d, e*). Finally, by estimating the following error correction model given as: it is possible to derive the short-run dynamic parameters of the model associated with the long-run estimations.

$$GDP_t = \delta_0 + + \sum_{i=1}^{a} \sigma_i \Delta\, GDP_{t-1} + \sum_{i=0}^{b} \alpha_{i\Delta}\, GCF_{t-1} + \sum_{i=0}^{c} \emptyset_i \Delta\, GEE_{t-1} + \sum_{i=0}^{d} \gamma_i\, \Delta GEH_{t-1} + \sum_{i=0}^{e} \delta_i\, \Delta LBS_{t-1} + \sum_{i=0}^{f} \vartheta_i \Delta\, PSE_{T-1} + \sum_{i=0}^{g} \varphi_i \Delta\, SSE_{t-1} + \sum_{i=0}^{h} \omega_i\, \Delta TER_{t-1} + \eta ECM_{t-1} + \varepsilon_t \quad 8$$

Where denotes the coefficient of the error correction term, which indicates the rate of adjustment, and ECM denotes the error correction term (representing the residual of the co-integrating equation). The pace of adjustment back to long-run equilibrium following a short-run disruption is indicated by the error correction coefficient, which should be statistically significant and negatively signed.

Data Requirements and Sources

Gross domestic product, gross capital formation, the human capital development index, health care spending, and labour supply are the time series data needed for this investigation (proxied by labour force). These data are from the National Bureau of Statistics (NBS) and the Statistical Bulletin of the Central Bank of Nigeria (CBN).

Unit Root Test Results

Table 1 shows the outcomes of the DF-GLS unit root test. All of the series were non-stationary at level but became stationary at the first difference, according to the DF-GLS test statistics. This suggests that at the first difference of each series, the null hypothesis of non-stationarity for all the variables is rejected. What's more, the outcomes demonstrate that we can reliably use the ARDL methodology on our model.

Table 1: Summary of DF-GLS Unit Root Test Results

	DF-GLS Statistics		
Variables	**Level**	**First Difference**	**Conclusion**
GDP	2.199037	-1.742624***	I(1)
GCF	1.689638	-1.961778**(***)	I(1)
GEE	2.424084	-2.558877**(***)	I(1)
GEH	-0.127809	-5.659167*(**)***	I(1)
LBF	-2.177673	-8.397562*(**)***	I(1)
PSE	-1.148339	-7.019421*(**)***	I(1)
SSE	-1.450823	-6.313047*(**)***	I(1)
TER	-1.229154	-6.660005*(**)***	I(1)

Note: At 1%, 5%, and 10% significance levels, respectively, superscripts *, **, and *** signify rejection of the null hypothesis of the presence of a unit root. Model only comprises intercept, with lag chosen in accordance with the Akaike Information Criteria (SIC).
Source: Authors' computation using E-Views 10

Table 2 reports the results of the ARDL limits test for the existence of long-run relationships in equation 3.2.2. Evidence of a long-term link between economic growth and human capital development indicators is provided by the limits F-test for co-integration testing. The 1% critical values are exceeded by the computed F statistic, C. =8.74, which leads to the rejection of the null hypothesis of a long-term association between the studied variables. This data eliminates the chance that the calculated link is fictitious.

Table 2: Bounds Test Results for Co-integration

Relationship						
Critical Bounds Value of the F-statistic						
K	1% level		5% level		10% level	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
7PS	2.96	4.26	2.32	3.5	2.03	3.13
7N	3.49	5.15	2.56	3.9	2.21	3.42
Calculated F-statistics						
FC(GDP/GCF, GEE, GEH, LBS, PSE, SSE, TER)= 8.74023***						

Note: The lag structure was selected based on the Schwartz Information Criterion. K is the number of regressors. PS Pesaran et al. (2001:300), Table CI (iii), Case III: Unrestricted intercept and no trend, NNarayan (2004),

The estimated long-term link between economic growth and indices of human capital development is shown in Table 2. According to the long-run estimated model, government spending on health and education, the labor force, and primary and tertiary enrollments all had a small but favorable impact on economic growth. Government gross

capital formation and secondary enrollment were found to have a statistically insignificant and detrimental effect on economic growth. Only tertiary enrollment at lag one has a long-term, significant effect on economic growth. According to the results of the diagnostic test, the residual derived from the long-run estimates and utilized as an error correction term in the short-run model estimates shown in Table 4 is normally distributed, not serially correlated, and the error term's variance is homoskedasticity. As a result, it may be concluded that the predicted long-run model is structurally sound and offers accurate estimates for simulating policy.

Table 3: Estimated Long-run ARDL Model

Dependent Variable: GDP_{t-1}				
Variable	**Coefficient**	**Standard Error**	**t-Statistic**	**Probability**
C	155.7202	17720.27	0.008788	0.9931
GDP_{t-1}	0.681849	0.1706	3.996767	0.0009
GCF_{t-1}	-0.01055	0.009289	-1.135764	0.2718
GEE_{t-1}	0.02046	0.20364	0.100469	0.9211
GEE_{t-2}	0.312445	0.174117	1.794451	0.0905
GEH_{t-1}	0.021044	0.224776	0.093623	0.9265
LBF_{t-1}	0.000128	0.000235	0.544023	0.5935
PSE_{t-1}	0.656048	1.641715	0.399612	0.6944
SSE_{t-1}	-0.008474	0.006329	-1.338926	0.1982
TER_{t-1}	0.066389	0.019942	3.329089	0.004
TER_{t-2}	0.010329	0.044987	0.229606	0.8211
R-Squared	0.99	D.W Statistic		2.08
Adjusted R^2	0.98	F-Statistic		173.747
Wald F-Statistic	8.74023	Prob(F-statistic)		0.0000
Residual Normality Test				
Jarque-Bera	1.5967		Prob(J.B)	0.4501
Breusch-Godfrey Serial Correlation LM Test				
F-Statistic	1.851691		Prob. F(2, 15)	0.1742
Obs*R-Squared	5.544169		Prob. Chi-Square(2)	0.0625
Heteroskedasticity Test: Breusch-Pagan-Godfrey				
F-statistic	3.781786		Prob. F(10,17)	0.0078
Obs*R-squared	19.3167		Prob. Chi-Square(10)	0.0364

Source: Authors' computation using E-Views 10

Similar to this, Table 4 shows the short-term projections of the impact of human capital development on economic growth in Nigeria from 1986 to 2020. The ideal latency of one was established using the Akiake and Schwarz information criteria after iterating the

short-run estimations at various lag lengths. The error correction term co-efficient, which describes how quickly a distortion in the short run may be adjusted to its long-run equilibrium, was -0.1245. This suggests that within the first year, 12.45% of any disequilibrium is recovered.

Table 4: Estimated Short-Run ARDL Model

	Dependent Variable: ΔGDP_{t-1}			
Variable	**Coefficient**	**Standard Error**	**t-Statistic**	**Probability**
C	3056.269	2364.520	1.292554	0.5623
ΔGDP_{t-1}	0.194677	0.289098	0.673395	NA
ΔGCF_{t-1}	0.006941	0.011979	0.579423	0.5695
ΔGEE_{t-1}	-0.073844	0.217979	-0.338768	0.7387
ΔGEH_{t-1}	0.324775	0.211541	1.535278	0.1421
ΔLBF_{t-1}	6.54E-05	0.000195	0.335473	0.7411
ΔPSE_{t-1}	1.253071	1.893515	0.661770	0.5165
ΔSSE_{t-1}	-0.010893	0.006711	-1.623134	0.1219
ΔTER_{t-1}	0.050654	0.018411	2.751321	0.0131
ΔECM_{t-1}	-0.124947	0.056782	-2.200467	0.0402
S.E. of Regression	7856.078	Durbin-Watson Statistic		1.849332
Akaike Criterion	21.50620	Hannan-Quinn Criterion		21.65166
Schwarz Criterion	21.98199			

Source: Authors' computation using E-Views 10

Conclusion and Recommendations

The effect of developing human capital on economic growth in Nigeria has been established and critically examined in this article. The accepted theoretical framework is derived from the endogenous growth model, which postulated that technology production based on human capital is a substantial economic growth driver. Using this technique, the effect of human capital development indicators on economic growth in Nigeria was dynamically examined.

The long-run model showed that the majority of the human capital development indicators had a positive impact on economic growth in Nigeria within the reviewed periods, but their impacts were largely statistically insignificant. The bounds testing analysis showed existence of co-integration between the considered set of variables in the ARDL model. According to additional data, equilibrium is completely restored for any short-term disruption. Based on the study's findings, the government should prioritize funding for the development of human capital, giving special attention to the health and education sectors in Nigeria, since these sectors have the most potential for growth. Like this, authorities should make an effort to pay attention to the enrollment in school issue.

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