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Human Capital Development and Economic Growth Nexus in Nigeria

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Abstract: Human capital development has long been touted as very critical imperative for growth in most developed and emerging economies across continents. However, Nigeria has remained a paradox in explaining the said growth induced hypotheses because of rising economic hardship amidst its levels of human capital development. Consequently, this study therefore examined human capital development as a catalyst for economic growth in Nigeria using a time series secondary data sourced from Central Bank of Nigeria (CBN) Statistical Bulletin of various issues. The method of analysis adopted for the study was Auto-regression Distributed Lag (ARDL) Model. From the result of the ARDL, it is observed that human capital development, per capital income and money supply has a positive and statistical significant impact on economic growth in the short run and long run in Nigeria while population growth showed a positive but insignificant impact on economic growth in the short run and the long run in Nigeria. The study therefore concluded that human capital development is one of the greatest catalysts of the improvement of the standard of living of the population which positively and significantly impact on economic growth in the short and long run in Nigeria. Based on the findings of this study, the study recommends that to enhance human capital development, the government should launch a sustainable skill development and apprenticeship programme. This will help improve knowledge, skills and capabilities that will be acquired through education and training. To enhance labour force productivity, the government should increase labor productivity of workers by direct investing in or creating incentives for increases in technology and human or physical capital. The government should introduce supervise credit scheme that will provide the needed funding to SMEs. This will help reduce poverty and unemployment and also enhance money supply to the economy. The government should put fiscal and monetary policies that

will product domestic industries that will provide employmeny for the teaming population.

Key words: Human Capital Development, Per Capital Income, Money Supply, Population.

1. INTRODUCTION

As far back as the medieval era and the period of industrial revolution, human resource development has been noted to play significant role in increasing competitiveness, improving quality of life of the population and in generating economic growth and development of a country as contained in the works of Adam Smith in 1776. Alfred Marshall (1890) also gave credence to human resource development by highlighting the importance of education as a national investment, and he regarded it as the most valuable of all capital invested in human beings (Abel, Mhaka & Roux, 2019). The quality and quantity of human resources domiciled in a nation have overtime been regarded as representing the differences in the level of socio-economic development across nations. Growth in every thriving economy has always been propelled by a combination of the collection of knowledge, skills and available individual characteristics that is innate in the populace that enhances their productivity. Consequently, governments across globe put in painstaking efforts in developing labour capabilities of its citizens including working capacity, education, skills, health, and intelligence (Anyanwu, Adam, Obi & Yelwa, 2015; Awogbemi, 2023; Keji, 2021).

Nigerias Vision 20: 2020 development programme agenda and NEEDS programme of 2004 were all governments effort to put the country on the global map of becoming one of the 20 most developed countries of the world thus suggesting that the need for human capital development that will trigger the needed growth induced activities that triggers higher productivity, increased income and accelerated economic growth and optimum development. Arguably, Nigeria has all the needed and expected indicators to champion these lofty development plans and ideas but unfortunately the year 2020 has come and gone yet little or nothing has been achieved with respect to the plan of becoming one of the twenty most developed countries in the world despite its rich material and human resources (Akaakohol & Ijirshar, 2018). This is explained by Nigeria low level of human development index compared to countries in emerging economies (UNDP, 2023).

Despite the low level of human development index in Nigeria, available statistics shows that with the right leadership and combination of available human development indicators in the country, it still stand the chance of becoming one of the 20 most developed countries in the world. This is assertion is corroborated by Krokeyi and Niyekpemi (2021) who argued that the country has all it takes to drive the economy on the part of prosperity in terms of the population that will provide the domestic market, institutions that will enhance its human development index, skilled labour to enhance productivity, budgetary allocation that propels money supply, foreign direct investment that enhance employment opportunities. In a rather sincere approach, the United Nations (UN) in September 2015 has launched the Sustainable Development Goals which aims to eradicate poverty “in all its forms everywhere by 2030” with focal emphasis on the human dimension of economic development. This is imperative as it provides countries like Nigeria that is still lagging behind in improving its human capital in the direction of accelerated economic growth (Imandojemu, Ekperiware & Babatunde, 2020; Eze, 2023).

Statement of the Problem

The Nigeria economy has in recent time been described as an ailing economy with very many poor and unemployed populations. The country has in 2018 been named as the poverty headquarters of the world overtaking Idea and Pakistan in the global poverty index. Human capital development or investment in

human capital remains an antidote for accelerated economic growth, employment generation and poverty reduction but the questions that remained unanswered are to what extent has the government invested in the critical areas that drive the economy on the part of prosperity in terms of the population that will provide the domestic market, institutions that will enhance its human development index, skilled labour to enhance productivity, budgetary allocation that propels money supply and of course attracting the needed foreign direct investment that enhances employment opportunities. This perceived uncertainty warrants an empirical investigation to examine human capital development and economic growth nexus in Nigeria by modeling the effect of Human Development Index, Labour force productivity, Money supply and Population on the nations Real Gross Domestic Product. Foreign Direct investment (FDI) was not included because some studies have included it as exogenous variable and the study intends to ascertain how government domestic investment I human capital can help propel growth in Nigeria.

Objectives of the Study

The major objective of this study is to examine human capital development and economic growth nexus in Nigeria. The specific objectives of the study are to:

1. Ascertain the extent to which human development index has influenced real gross domestic product in Nigeria
2. Determine the extent to which per capita income has influenced real gross domestic product in Nigeria
3. Evaluate the extent to which money supply has influenced real gross domestic product in Nigeria
4. Examine the extent to which population growth rate has influenced real gross domestic product in Nigeria.

Hypotheses of the Study

H_{O1}: Human development index has no significant influence on gross domestic product in Nigeria.

H_{O2}: Per capita income has no significant influence on real gross domestic product in Nigeria.

H_{O3}: Money supply has no significant influence on real gross domestic product in Nigeria.

H_{O4}: Population growth rate has no significant influence on real gross domestic product in Nigeria

2. METHODOLOGY

Model Specification

The empirical model used for this study was designed to investigate the effect of Human Capital Development on Economic Growth in Nigeria from 1999-2022. The period became imperative because it covers the period of Nigeria's return to democratic rule. Following the above premise, the model for this research study is expressed in the functional form of the model as:

$$RGDP = F(HMD, lFP, MS, POP) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (i)$$

The mathematical form of the model can be expressed as:

$$RGDP = \alpha_o + \alpha_1 HMD + \alpha_2 LFP + \alpha_3 MS + \alpha_4 POP \ldots\ldots\ldots\ldots\ldots\ldots (ii)$$

But equations (ii) above are exact or deterministic in nature. In order to allow for the inexact relationship and influence among the variables as in the case of most economic variables stochastic error term "μ_t" is added to both equations. Thus, we can express the econometric form of the models as:

$$RGDP = \alpha_o + \alpha_1 HMD + \alpha_2 LFP + \alpha_3 MS + \alpha_4 POP + \mu_i \ldots\ldots\ldots (iii)$$

The model is transformed into a semi log-linear model thus:

$$GDP = \alpha_0 + \alpha_1 LNHMC + \alpha_2 LNLFP + \alpha_3 MS + \alpha_4 POP + \mu_{i...} \quad (iv)$$

Where:

RGDP = Real Gross Domestic Product

HMD = Human capital development

LFP = Labour Force Productivity proxied by per capita income

MS = Money Supply

POP = Population

μ = the stochastic error term

A Priori Expectation

This evaluation is guided by economic theory. The aim of this test is to conform whether the parameter estimates conform to a priori expectation. The a priori expectations on the relationship between the variables employed to capture the purposes of our study are expressed below.

Table 1 – A Priori Expectation

Regressand	Relationship	Regressors
GDP	**+**	**HMD**
GDP	**+**	**LFP**
GDP	**+/-**	**MS**
GDP	**+/-**	**POP**

Note: The sign '+' means that the regressand and regressor move in the same direction simultaneously, while the sign '–' depicts that they move in opposite direction i.e., they do not move in the same direction simultaneously.

Evaluation Technique and Procedure

The model's parameters will be estimated using the Ordinary Least Square (OLS) estimating technique because it possesses the desirable properties of un-biasness, consistency, and efficiency, and is known as Best Linear Unbiased Estimator (BLUE),when compared to other estimating techniques. Also, the OLS is employed in this study because parameter estimates obtained by it have optimal properties, and it has been used in a wide range of economic analysis with satisfactory results. It is also noteworthy that the OLS is a major component of many other econometric techniques. The method of data analysis employed in this study is basically econometric.

The data collected will be subjected to Augmented Dickey-Fuller unit root tests, Ordinary Least Squares (OLS) and thereafter estimated using the Error Correction Method (ECM) while administering the White's Heteroskedasticity and Autocorrelation Consistent (HAC) Standard Errors & Covariance test. The application of the White's Heteroskedasticity and Autocorrelation Consistent (HAC) Standard Errors & Covariance test was necessary so as to neutralise the possible effects of heteroskedasticity and autocorrelation on the model estimates. Also, in order to avoid a spurious regression, we subject each of the variables used to unit root (or stationary) test so as to determine their orders of integration, since unit root problem is a common feature of most time-series data.

Nature and Sources of Data

Data utilized for this study are basically secondary in nature and were sourced from:

a) Central Bank of Nigeria Statistical Bulletin;

b) World Development Indicators –a publishing of the World Bank.

c) Nigeria Bureau of Statistics

d) Published and unpublished B.sc, M.sc, and Ph.D. Theses.

e) Economic journals, articles, and other relevant research materials.

3. DATA PRESENTATIONS AND ANALYSES OF EMPIRICAL RESULT

The data are analyzed by ARDL model using E-view version 10.0. The summary of this and other preliminary tests are presented in the tables below.

Descriptive Statistics

Table 2: Summary of Descriptive Statistics

	LNRGDP	LNHCD	LNPCI	LNMSS	LNPOP
Mean	6.618182	0.425152	11.18788	14.70515	2.581515
Median	4.300000	0.420000	9.600000	13.13000	2.600000
Maximum	48.00000	0.530000	15.80000	21.31000	2.680000
Minimum	0.500000	0.280000	8.800000	9.150000	2.490000
Std. Dev.	2.256668	0.079535	2.580910	3.976843	0.068151
Skewness	0.185552	0.256333	0.704073	0.388666	0.025133
Kurtosis	1.525740	1.828336	1.751376	1.630448	1.550987
Jarque-Bera	277.2941	3.248982	4.870168	3.409888	2.890478
Probability	0.000000	0.024818	0.087590	0.021783	0.035690
Sum	218.4000	14.03000	369.2000	485.2700	85.19000
Sum Sq. Dev.	2741.949	0.202424	213.1552	506.0890	0.148624
Observations	33	33	33	33	33

Source: Researcher computation using E-view 10.0

The summary statistics presented in Table 2 highlights generally high values of all variables on average while the standard deviations of respective variables indicate variability in the data employed for this study. While all variables are positively slope, all variables have peak distributions as evidenced by their kurtosis less than three since the kurtosis measures the peakness or flatness of the distribution. On the other hands, the skewness measures the degree of asymmetry of data in the series. The result shows that data are moderately skewed. This implies that they are asymmetrically skewed to the right. Hence, the distribution has a peaked curve. Furthermore, the descriptive statistics indicated that human capital development, per capita income, money supply and population growth during the period of analysis contribute to economic growth in Nigeria since there probability is less that 0.05 level of significance.

Correlational Matrix

The correlation coefficient is a statistical measure that calculates the strength of the relationship between the relative movements of two variables. The values range between -1.0 and 1.0. A calculated number greater than 1.0 or less than -1.0 means that there was an error in the correlation measurement. A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. A correlation of 0.0 shows no relationship between the movements of the two variables. The result is in Table 3 below.

Table 3: Summary of Correlational Matrix

Variables	Correlation Coefficients	Decision
HCD and PCI	0.654212	Perfect Positive Correlation
HCD and MSS	0.600269	Perfect Positive Correlation
HCD and POP	0.500098	Perfect Positive Correlation
PCI and MSS	0.605509	Perfect Positive Correlation
PCI and POP	0.602248	Perfect Positive Correlation
MSS and POP	0.603816	Perfect Positive Correlation

Source: Researcher computation using E-view 10.0

Stationary Test

Establishing stationarity is essential because if there is no stationarity, the processing of the data may produce biased result. The consequences are unreliable interpretation and conclusions. The study test for stationarity using Augmented Dickey-Fuller (ADF) tests on the data. The ADF tests are done on level series, first and second order differenced series. The decision rule is to reject null hypothesis if the ADF statistic value exceeds the critical value at a chosen level of significance (in absolute terms). The result of regression is summarized in Table 4 below.

Table 4: Summary of ADF Unit Root Test Results

	Level = *I*(0)		**1st Difference = *I*(1)**	
Variables	**No Trend**	-2.549146	**No Trend**	**With Trend & Intercept**
LNRGDP	-3.804901	-5.287226	-9.174941	-8.891065
LNHCD	4.266940	-1.877306	-3.634078	-5.921046
LNPCI	1.522811	-1.780013	-3.264782	-5.971060
LNMSS	0.528912		-5.194472	-5.147348
LNPOP	-0.899621	-2.701005	-3.537412	-5.550915
@1%	-2.639210	-4.273277	-2.641672	-4.284580
@5%	-1.951687	-3.557759	-1.952066	-3.562882
@10%	-1.610579	-3.212361	-1.610400	-3.215267

Source: Researcher computation using E-view 10.0

Evidence from unit root table above shows that gross domestic product and human capital development are stationary at level difference *I*(0) at 5% level of significance while per capita income, money supply and population growth are stationary at first difference *I*(1). This means that the study variables are integrated at *I*(0) and *I*(1). For instance, variables such as LNRGDP and LNHCD are *I*(0) variables, whereas LNPCI, LNMSS and LNPOP are *I*(1) variables. It could be noted that the study dependent variable (LNRGDP) is *I*(1), meaning that the proposed ARDL bound test for cointegration is valid and the fact that all the chosen variables are a combination of *I*(0) and *I*(1) but none is *I*(2).

Cointegration Test

The aim of cointegration test is to determine if some set of non-stationary time series variables have long-run equilibrium relationship or not. Thus, when cointegration is established, regression can proceed without generating spurious results. For cointegration test, the use of ARDL bound testing approach and the results are reported in table 5.

Table 5: ARDL Bound Test Results

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	24.94123	10%	2.2	3.09
K	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: Researcher computation using E-view 10.0

From table 5, the value of the F-statistic which shows the joint significance of the lagged level variables is 24.94123 and is significantly greater than the upper bond (I(1)) at the 1% and 5% level of significance. Therefore, the study rejects the null hypothesis of no-cointegration among the variables and concludes that there exists a long-run relationship between LNRGDP and the chosen explanatory variables. This means that the study can precede in estimating the long-run coefficients based on ARDL model.

Estimated Long run Coefficients

Having verified the existence of long run relationship among the study model, the study therefore subjects the model to Auto-regression Distributed Lag Models (ARDL) to generate the coefficients of the long run relation of the regression model. The estimated long-run coefficients are summarized in table 6 below.

Table 6 Summary of Long Run Coefficients

Dependent Variable: D(LNRGDP)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNHCD	22.52414	13.53371	4.664299	0.0024
LNPCI	6.238347	4.950403	3.260169	0.0053
LNMSS	0.414731	2.248819	5.006551	0.0009
LNPOP	44.59016	6.705485	0.664980	0.5227
C	80.39441	14.74841	8.545106	0.0000
EC = LNRGDP - (22.52414*LNHCD + 6.2383*LNPCI + 0.4147*LNMSS +				
44.5902*LNPOP + 80.3944)				

Source: Researcher computation using E-view 10.0

Table 6 shows the estimated long-run coefficients of the impact of human capital development on economic growth in Nigeria. The result shows that all the explanatory variables conform to theoretical expectation of the study. With the exception of population growth, all other variables are individually statistically significant at the 5% level of significance. Thus, this means that population growth is not statistically significant in the long run.

The estimate shows that the human capital development has positive and significant impact on economic growth in Nigeria. This means that increase in human capital development will increase economic growth in the long run in Nigeria. This implies that a percentage increase in human capital development will translate to about 22.52% increase in economic growth in the long run in Nigeria. Per capita income also revealed a positive and significant impact on economic growth in the long run in Nigeria. This means that increase in per capita income will increase economic growth in the long run in Nigeria. This implies that

a percentage increase in per capita income will cause about 6.24% increase in economic growth in the long run in Nigeria. On the other hands, money supply is also a significant determinant of economic growth in the long run in Nigeria given its significant coefficient which is positive. This means that increase in money supply will increase economic growth in the long run in Nigeria and vice versa. This implies that a 1% increase in money supply will account for 0.41% increase in economic growth in the long run in Nigeria.

Furthermore, population growth in the long run does not contribute significantly in the growth of the economy in Nigeria. This is as a result of population growth exhibiting a positive but insignificant impact on economic growth in the long run in Nigeria. This implies that population growth is unimportant in determining economic growth in the long run in Nigeria. Thus, this also implies that a percentage increase in population growth will increase economic growth by 44.59 but the increase is not significantly in the long run in Nigeria.

Error Correction Regression

The aim of error correction modeling is to reconcile the long-run behaviour of cointegrated variables with their short-run responses. It shows the dynamic error analysis of the cointegrated variables. In error correction model, we specify and estimate the differenced variables alongside one-period lag of the residuals from the cointegrating equation. This is to determine if a short-run disequilibrium can be corrected in the long-run. Thus, the error correction term which shows the speed of adjustment from one period to another is expected to have a negative sign and also significant at the 5% to show a strong convergence process to the long-run equilibrium. In this study, the result of ECM specification is discussed in table 7 below.

Table 7 Summary of Error Correction Regression

ARDL Error Correction Regression Dependent Variable: D(LNRGDP) Sample: 1999 2022 Included observations: 24 ECM Regression Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNRGDP(-1))	0.272946	1.187286	6.457375	0.0002
D(LNHCD)	2.349180	1.583929	4.400850	0.0059
D(LNHCD(-1))	6.107697	1.754758	3.155951	0.0099
D(LNPCI)	4.171936	6.383510	2.905841	0.0266
D(LNPCI(-1))	4.293737	6.514101	2.893083	0.0275
D(LNMSS)	3.828781	1.057273	3.621374	0.0056
D(LNMSS(-1))	-7.438198	1.031315	-5.845869	0.0002
D(LNPOP)	1.178618	2.016156	1.394528	0.1966
CointEq(-1)*	-0.449378	0.306763	-6.028694	0.0002
R-squared	0.875845			
Adjusted R-squared	0.796691			
F-statistic	24.94123			
Durbin-Watson stat	1.795594			

Source: Researcher computation using E-view 10.0

To discuss the short coefficients (ECM regression) results as presented in Table 7, the study employ economic a priori criteria, statistical criteria and econometric criteria.

Economic A Priori Criteria

This subsection is concerned with evaluating the regression results based on a priori (i.e., theoretical) expectations. The sign and magnitude of each variable coefficient is evaluated against theoretical expectations.

From table 7, it is observed that the economic growth has a positive value as 0.272946. This means that if all the variables are held constant or fixed (zero), economic growth will be valued at 0.27 (27%) in the next year.

From table 7, the study showed that human capital development, per capita income, money supply and population growth has a positive impact on economic growth in the short run in Nigeria. Thus, increase in human capital development, per capita income, money supply and population growth will also increase economic growth in the short run in Nigeria.

From the regression analysis, it is observed that all the variables conform to the a priori expectation of the study. Thus, Table 8 summarises the a priori test of this study.

Table 8: Summary of Economic A Priori Test

Parameters	Variables		Expected Relationships	Observed Relationships	Conclusion
	Regressand	Regressor			
β_0	LNRGDP	Intercept	+/-	-	Conform
β_1	LNRGDP	LNHCD	+	+	Conform
β_2	LNRGDP	LNPCI	+	+	Conform
β_3	LNRGDP	LNMSS	+	+	Conform
β_4	LNRGDP	LNPOP	+	+	Conform

Source: Researcher computation using E-views 10.0

Statistical Criteria

This subsection applies the R^2, adjusted R^2 and the F–test to determine the statistical reliability of the estimated parameters. These tests are performed as follows:

From the study regression result, Table 8 indicated that the coefficient of determination (R^2) is given as 0.875845, which shows that the explanatory power of the variables is extremely high and very strong. This implies that 88% of the variations in economic growth in Nigeria are being accounted for or explained by the variations in human capital development, per capita income, money supply and population growth in Nigeria. While other possible determinants of economic growth not captured in the model explain about 5% of the variation in inflation in Nigeria.

The adjusted R^2 in Table 6 supports the claim of the R^2 with a value of 0.796691 indicating that 80% of the total variation in the dependent variable (economic growth) is explained by the independent variables (the regressors)). Thus, this supports the statement that the explanatory power of the variables is extreme high and very strong.

The F-statistic: The F-test is applied to check the overall significance of the model. The F-statistic is instrumental in verifying the overall significance of an estimated model. The hypothesis tested is:

H_0: The model has no goodness of fit

H_1: The model has a goodness of fit

Decision rule: Reject H_0 if $F_{cal} > F_{\alpha}$ (k-1, n-k) at $\alpha = 5\%$, accept if otherwise.

Where

V_1 / V_2 Degree of freedom (d.f)

V_1 = k-1; V_2 = n-k:

Where; n (number of observation); k (number of parameters)

Where k-1 = 5-1= 4

Thus, n-k = 24-5 = 19

Therefore: $F_{0.05(4,24)}$ = 2.78 (From F-table) … …F-table

F-statistic = 24.94123 (From Regression Result) …F-calculated

Therefore, since the F-calculated > F-table as observed in Table 4.6, the study reject H_0 and accept H_1 that the model has goodness of fit and is statistically different from zero. In other words, there is significant impact between the dependent and independent variables of the study.

Econometric Criteria

In this subsection, the following econometric tests are used to evaluate the result obtained from the study model; autocorrelation, multicollinearity and heteroscedasticity.

Test for Autocorrelation

Using Durbin-Watson (DW) statistics which the study obtains from the regression result in table 6, it is observed that DW statistic is 1.795594 or approximately 2. This implies that there is no autocorrelation since d* is approximately equal to two. 1.795594 tends towards two more than it tends towards zero. Therefore, the variables in the models are not autocorrelated and that the models are reliable for predications.

Evaluation of Research Hypotheses

The t-test is used to know the statistical significance of the individual parameters. Two-tailed tests at 5% significance level are conducted. The result is shown on Table 9 below. Here, the study compare the estimated or calculated t-statistic with the tabulated t-statistic at $t_{\alpha/2} = t_{0.05/2} = t_{0.025}$ (two-tailed test).

Degree of freedom (df) = n-k = 29-5 = 24

So, the study has:

$T_{0.025(24)}$ = 2.064 … … … Tabulated t-statistic

In testing the working hypotheses, which partly satisfies the objectives of this study, the study employs a 0.05 level of significance. In so doing, the study is to reject the null hypothesis if the t-value is significant at the chosen level of significance; otherwise, the null hypothesis will be accepted. This is summarized in table 9 below.

Table 9: Summary of t-statistic

Variable	t-calculated (t_{cal})	t-tabulated ($t_{\alpha/2}$)	Conclusion
LNHCD	4.400850	2.064	Statistically Significant
LNPCI	2.905841	2.064	Statistically Significant
LNMSS	3.621374	2.064	Statistically Significant
LNPOP	1.394528	2.064	Statistically Insignificant

Source: Researcher computation using E-views 10.0

Decision Rule

1. If calculated t-value > tabulated t-value, we reject the null hypothesis and accept the alternative hypothesis
2. If calculated t-value < tabulated t-value, we accept the null hypothesis and reject the alternative hypothesis

The study begins by bringing the working hypothesis to focus in considering the individual hypothesis.

Hypothesis One

H_0: Human capital development has no significant impact on economic growth in Nigeria.

H_1: Human capital development has significant impact on economic growth in Nigeria.

Decision:

Applying the above decision rule to the first hypothesis, it showed that the calculated absolute t-value of 4.400850 is greater than tabulated absolute t-value of 2.064 which result to rejecting the null hypothesis that human capital development has no significant impact on economic growth in Nigeria and accepting the alternative hypothesis that human capital development has significant impact on economic growth in Nigeria.

Hypothesis Two

H_0: Per capita income has no significant impact on economic growth in Nigeria.

H_1: Per capita income has significant impact on economic growth in Nigeria.

Decision:

Applying the above decision rule to the second hypothesis, it showed that the calculated absolute t-value of 2.905841 is greater than tabulated absolute t-value of 2.064 which result to rejecting the null hypothesis that per capita income has no significant impact on economic growth in Nigeria and accepting the alternative hypothesis that per capita income has significant impact on economic growth in Nigeria.

Hypothesis Three

H_0: Money supply has no significant impact on economic growth in Nigeria.

H_1: Money supply has significant impact on economic growth in Nigeria.

Decision:

Applying the above decision rule to the third hypothesis, it showed that the calculated absolute t-value of 3.621374 is greater than tabulated absolute t-value of 2.064 which result to rejecting the null hypothesis that money supply has no significant impact on economic growth in Nigeria and accepting the alternative hypothesis that money supply has significant impact on economic growth in Nigeria.

Hypothesis Four

H_0: Population growth has no significant impact on economic growth in Nigeria.

H_1: Population growth has significant impact on economic growth in Nigeria.

Decision:

Applying the above decision rule to the third hypothesis, it showed that the calculated absolute t-value of 1.394528 is less than tabulated absolute t-value of 2.064 which result to accepting the null hypothesis that population growth has no significant impact on economic growth in Nigeria

CONCLUSION AND RECOMMENDATIONS

The study empirically investigated examine human capital development and economic growth nexus in Nigeria from 1999-2022 using Auto-regression Distributed Lag (ARDL) Model. From the result of the ARDL, the study showed that

1. Human capital development has a positive and statistical significant impact on economic growth in the short run and long run in Nigeria.
2. Per capital income showed a positive and significant impact on economic growth in the short run and long run in Nigeria.
3. Money supply exhibits a positive and statistical significant impact on economic growth in the short run and long run in Nigeria.
4. Population growth showed a positive and insignificant impact on economic growth in the short run and the long run in Nigeria.

From the regression analysis, it is observed that all the variables conform to the a priori expectation of the study. The Error Correction Model (CointEq(-1)*) for this cointegrating relationship was negative as expected and significant which showed that about 0.45% of short run deviations would be corrected for annually. This implies that about 34% of disequilibrium in inflation is corrected in each period (annually), meaning that it takes an average of 5 years for equilibrium to be fully restored after any short run distortion of equilibrium. Also, from the ARDL regression result, the various tests (R^2, Adjusted R^2, F-statistic, and p-value) of significance on the model showed good result. The R^2 of 0.88 indicated high explanatory power of the independent variables. The adjusted R^2 value of the model also supported this fact with 0.80. F-statistic which measures the overall significance of the model suggests that all estimated regression model is statistically significant.

Based on the findings of the study, the following recommendations are made:

1. To enhance human capital development, the government should launch a sustainable skill development and apprenticeship programme. This will help improve knowledge, skills and capabilities that will be acquired through education and training.
2. To enhance labour force productivity, the government should increase labor productivity of workers by direct investing in or creating incentives for increases in technology and human or physical capital.
3. The government should introduce supervise credit scheme that will provide the needed funding to SMEs. This will help reduce poverty and unemployment and also enhance money supply to the economy.
4. The government should put fiscal and monetary policies that will product domestic industries that will provide employmeny for the teaming population.

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