Human Capital Development and Economic Growth in Nigeria

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ABSTRACT:

This study examines human capital development and economic growth in Nigeria. The specific objectives of the study were to measure the impact of the components of human development index [life expectancy, education index and Gross National Income (GNI) index] on economic growth in Nigeria with the aid of secondary macroeconomic data sourced from World Bank Development Indicators (WDI) covering a period of 32 years (1990-2022). The method of analysis employed was the Ordinary Least Squares (OLS) technique using Life Expectancy, Adult Literacy, Primary School Enrollment, Gross National Income, Population Growth, and Gross Fixed Capital Formation as independent variables independent variables with Gross Domestic Product as the dependent variable. The estimated model shows that Life Expectancy and Adult Literacy have positive and insignificant impact on economic growth while School Enrollment Primary, Gross National Income and Gross Fixed Capital Formation have significant impact on economic growth in Nigeria. The study recommends that Nigeria government should ensure structural reforms on health and education through training and proper education to enable individuals to have the skills, knowledge and experience that will improve their productivity and in turn have a positive impact on economic growth in Nigeria.

Keywords: Human Development Index, Economic Growth, OLS.

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1.   INTRODUCTION

Economic Growth can be defined as the increase or improvement in the inflation adjusted market value of the goods and services produced by an economy in a financial year Jhingan (2010). Statisticians conventionally measure such growth as the percent rate increase in the real and nominal gross domestic product (GDP). Adeyemi and Ogunsola (2015) postulates that growth is a steady process which involves raising the level of output of goods and services in the country.

Human capital development on the other hand is the process of obtaining and expanding the number of people with the skills, education, and experience that are essential for a country's economic progress (Eigbiremolen and Anaduaka, 2014). Ijaiya (2004) sees Human Capital Development as a process of acquiring and increasing the number of people who have the skills, education and experience which is critical for the economic and the political development of a country. Also Akaakohol and Ijirshar (2018) sees Human Capital Development as a process that relates to training, education and other professional initiatives in order to increase the level of knowledge, skills, abilities, values and social assets of an employee which will lead to an employee, satisfaction, high performance, and eventually increase in organizational productivity.

The concept of human capital refers to the abilities and skills of human resources of a country, while human capital development refers to the process of acquiring and increasing the number of persons who have the skills, education and experience that are critical for economic growth and development of a country's economy (Okojie, 2005). Economists often use the term human capital for education, health and other human capabilities that can enhance productivity (Todaro and Smith, 2011). Therefore, education and training are the most important factors in human resource development. These aggregate of human capital resources can further improve productivity, income, improve health and fitness, good habits in individuals such as being trustworthy and responsible. Even though government expenditure in these sectors have been on the increase over the years, this is not adequate to satisfy the demand for these facilities thereby creating a gap in the infrastructural development process of the country (Okoli, Nwokoye and Ezedebego, 2023).

In summary, based on the definitions by different writers, human capital development is essential for the economy to grow and it can be achieved by the government and the society through the employment of different measures and policies which will include the improvement of health, education and standard of living. The government can increase funding for education and provide facilities for school especially federal institutions and they can also provide more technology for learning to be able to move with the digital world. Another measure is through the employment of social safety nets which will help to improve economic wellbeing of the people by providing essential needs that will provide basic means of livelihood for them. Human capital development talks about the investment of resources on education, optimizing skills and health and other attributes that help to improve the labor force for better productivity and it also entails improving the overall wellbeing of individuals in the society. Human capital is crucial for organizations to build a motivated workforce, maintain a competitive edge in the market and so on. By investing in their employee's development, they can create a positive work environment and achieve long term success. Human development index of a country's development is measured through three indexes which are the education index, health index (life expectancy) and GNI index (standard of living). The quality of human capital is reflected in the index value of health, education, and expenditure. These three indices are components of the human development index (HDI). Thus the quality of human capital is indicated by the value of the human development index (HDI).

The Human Development Index (HDI) is a statistical composite index of life expectancy (Quality of life), Education (Gross enrollment on education and adult literacy), and GNI index, which is used to rank countries into four tiers of human development. A country scores a higher level of HDI when the lifespan is higher, the education level is higher, and the gross national income GNI (PPP) per capita is higher. The United Nations' Human Development index seeks to quantify a country's level of prosperity based on economic factors and non-economic factors. The non-economic factors include life expectancy and educational achievement, while the economic factors are measured by gross national income (GNI) per capita. The higher the HDI, the better that means the country in question has higher standard of living, decent healthcare and education. This research will be studying the components of the HDI in details.

Quality of life is measured using Life Expectancy, which is the average number of years a person will live. This can demonstrate the quality of healthcare in a country. Higher Life Expectancy indicates a higher human development rate. According to United Nations Revisions of world population the current average life expectancy for Nigeria in 2023 is 53.8708 years of age. A 0.44% increase from 2022, when the average life expectancy was 53.6326 years, from birth to death. In the future, Nigeria's average life expectancy is projected to increase to 67.3113 years of age, by the year 2100. A total

increase of the average life expectancy for people living in Nigeria in 24.95% from this year. As at 2010 it was 50.9448 years of age and was at 52.887 years of age as of 2019. The increase in life expectancy can be attributed to technological advancements, a better standard of living, and an increase in healthcare availability.

Another index which is the education index in which school enrollment, primary and adult literacy is under. Isola and Alani (2012) wrote that despite the continuous size increase of the system, investment in the educational system has been limited and inefficient which is evident in the human development rank of Nigeria. Nigeria produces graduates yearly who are majorly deficient and lack the requisite skills, know-how needed to gain employment which in turn is needed for economic growth. Education is widely regarded as a major driveway to economic development, therefore any nation hoping to achieve meaningful growth and development must invest efficiently in this basic component of Human capital that is why it was included by the United Nations that Universal primary education was the goal number two in the millennium development goals. The rate of adult literacy as share of the country's population 15 years and above in Nigeria increased by 10.9 % in 2018. In total, the rate of adult literacy amounted to 62% in 2018. Over the observed period, the rate of adult literacy has been subject to fluctuation. The adult literacy rate refers to the share of individuals aged 15 years and older who can read and write as well as understand simple expressions about their daily lives.

Another index is standard of living and it is measured using Gross National Income (GNI). This is the total value of goods and services produced within a country together with the balance of income and payments from or to other countries. The fluctuation of the GNI per capita income is a direct representation of the level of growth of the economy. This indicator is quantitative, making it easier to compare countries and to assess the growth of the nation's economy. However, these goods and services can be distributed unevenly and it does not truly indicate the quality of life in a country. According to World Bank Nigeria's GNI was at $423.39B in 2019 and it later increased by 1.36% in 2020 and was at $429.15B and at 2022 it had increased to $468.65B which was a 3.66% increase from 2021 (CBN, 2020). In 2018 According to Vanguard News, Nigeria was ranked by the World Bank 152nd out of 157 countries in the Human Development Index. The United Nations Development Programme (UNDP) which has been producing human development reports on human capital index since 1990, against a national human development indicator (HDI) of 0.521, HDI figures for Nigeria's northern states are significantly lower than for southern states (UNDP, 2018).

The role of human capital development on economic growth has been recognized by the state, local and federal government of Nigeria. In 2018 for instance, the government of Nigeria launched the human capital development vision, in recognition of the need to improve human capital to drive sustained economic growth and productivity. According to the Tribune News there was also a decision made by the national economic council that each state should have a technical group that would be used to oversee the human capital development and they will compile fundamental data on the human capital development index that would be used as a yardstick for the government to guide their progress. This decision was as a result of observation of low human capital development index in various sectors throughout the states. Human capital development was also one of the goals that was present in the administration of Goodluck Ebele Jonathan where he promised a policy called the Transformation Agenda. In this agenda there were policies to improve human capital and enhance economic growth. Even after all the efforts, economic growth in Nigeria has been declining.

The government in a bid to improve the level of human capital development in Nigeria, the government introduced a programme called the universal basic education. According to Universal

Basic Education, this programme was introduced in 1999 by the federal government that aimed at providing better access to quality basic education. The objective of the programme are mainly to provide formal education for young children that are in primary and junior secondary age that will be free and compulsory. This will help to reduce the illiteracy and will enable them to acquire skills that will become a medium for useful living. Another government policy, that was used as way to improve the level of human capital development was a programme called national health insurance scheme (NHIS). National health insurance scheme is a corporate body that was established to improve the health of all Nigerians at an affordable rate. It aimed at providing quality and easy access to healthcare system at an affordable cost through various prepayment. The provision of NHIS by the government helps Nigerians to have easy and quality healthy that will prevent them from having any health issues or diseases and also being able to treat them and it will improve the overall health and will lead to economic growth.

In the literature, the impact of human capital development on economic growth in Nigeria is mixed with some studies finding a positive impact while some not finding a significant impact. Akaakohol and Ijirshar (2018) found that government investment in human capital development process and prioritizing health and education will lead to economic growth. Although a number of studies have been carried out the examine the impact of human capital development most of the time emphasis are being laid on education index, that is life expectancy and healthcare index, that is adult literacy and school enrollment primary but gross national income was mostly left out. Researchers like Ogunleye, Owolabi, Sanyaolu and Lawal (2017); Yesufu T. M. (2000), used variables like life expectancy, school enrollment rate but fail to mention national income as a variable. Also, Imide and Dana (2019); Ogunniyi, M.B. (2017); Mba, Mba, Oguabor and Ikpegbu, (2013), used health expenditure and education expenditure, negative gross national income as a proxy for human capital development. This is why this research seeks to examine the impact of human capital development on economic growth in Nigeria by providing answers to the following questions;

What is the impact of life expectancy on economic growth in Nigeria?
What is the impact of education index on economic growth in Nigeria?
What is the impact of GNI index on economic growth in Nigeria?

This study will serve as a contribution to the existing literature. It will also throw more light specifically on how human capital development impacts on economic growth in Nigeria. The hypotheses for the variables were tested in null form. Thus, the rest of the paper is structured into literature review, research methodology, data analysis and interpretation or results and conclusion and recommendations.

2.   LITERATURE REVIEW

2.1   Conceptual Review of Literature

According to Adelakun (2011) human capital development refers to increasing skills, knowledge, productivity and resourcefulness of citizens through process of human capital formation. Aluko (2015) defined Human capital development as the process that enhances the skills, knowledge, efficiency and resourcefulness of citizens through a process of human capital formation generally conceived. Thus, human capital development is a citizen's centered stratagem, and not goods centered or production centered tactic of growth. Human capital development also refers to the procedure of acquiring and raising the number of people who have the skills, good health, education and experience that are critical for economic development. Therefore, human capital development talks about the improvement of skills that are being acquired or that are gifted and the enhancing of knowledge

through training and practical activities that will enable one to possess problem solving skills and be able to provide solutions when needed.

Economic growth on the other hand is described as the positive and sustained increase in aggregate goods and services produced in an economy within a given time period and can be compared from one period to another (Jhingan, 2010). Todaro and smith (2011) defined economic growth as the increase in the market value of goods and services produced by an economy over time. Ijaiya, (2004) see economic growth as a rise in the productive capacity of a country on a per capita basis. It involves the expansion of the economy through a simple widening process. Economic growth is commonly measured by the rise in a nation's GDP (Gross Domestic Product) reflecting higher income and improved standard of living for the citizens. It can be measured in nominal or real terms, the latter of which is adjusted for inflation. Economic growth must be sustained for a developing economy to break the circle of poverty. Economic growth is conventionally measured as per cent rate of increase in real gross domestic product (IMF, 2012).

Finally, Human development index (HDI) is the measurement of human development that includes health, education, and income (Eigbiremolen and Anaduaka, 2014). This places an emphasis on three key dimensions of human development: a long and healthy life, decent standards of living and being knowledgeable. The health dimension is measured by life expectancy at birth, education by mean of years of schooling for adults aged above 25 years and expected years of schooling for children of school entering age, whereas standards of living is measured by gross national income per capita. The scores for each of these indices are combined into a composite index. If the score is closer to 1, it indicates a high level of economic development, with 0 indicating a very low level.

2.2 Theoretical Review of Literature

This study is anchored on The Classical Growth Theory postulates that a country's economic growth will decrease with an increasing population and limited resources. Such a postulation is an implication of the belief of classical growth theory economists who think that a temporary increase in real GDP per person inevitably leads to a population explosion, which would limit a nation's resources, consequently lowering real GDP. As a result, the country's economic growth will start to slow.

Classical economists assume that the market will naturally reach full employment over time. They believed that there was no unemployment and if they were it was temporary and would be resolved by market forces. Another assumption of the classical economists is that wages and prices are flexible and adjust to changes in demand and supply. Classical economists also believe that minimal interference from the government will cause the economy to grow and that if the market is left to manage this on its own it will lead to efficient resource allocation. The division of labor, the gains from trade, and the accumulation of capital were seen as the main driving forces of economic growth. Productive investment and the reinvestment of profits were the mechanisms that produced continuous economic growth, so changes in the rate of profit were a decisive reference point for an analysis of the long-term evolution of the economy. It is argued that in a competitive economy a reduction in the money wages reduces the cost of production and prices of products thereby raising their demand. In order to meet the increased demand for the products, more workers are employed to produce them. As employment increases, total output also increases till full employment is reached. But when the economy is at the full employment level total output becomes stable. Thus given the stock of capital, technological knowledge and resources, a precise relation exists between total output and the amount of employment. Total output is an increasing function of the number of workers.

2.3 Empirical review of literature

Isola and Alani (2012) analyzed the relevance of human capital development and economic growth in Nigeria. They used the unit root test and regression analysis to examine the contribution of different measures of human capital development to economic growth in Nigeria. Time series data on Nigeria from 1980 to 2005 was used for the analysis and estimation. Using the ordinary least square method of data analysis, they discovered that both health (measured by life expectancy) and education (measured by adult literacy) were necessary for economic growth. Yet, it was discovered that little investment had been made by the federal government in the health sector compared to education.

Ogujiuba (2013) studied the impact of human capital development on economic growth in Nigeria. He made use of secondary data from 1970 to 2010 and used the OLS, co-integration and error correction model for his analysis. The variables used were real GDP growth rate, capital expenditure on education, recurrent expenditure on education, real gross capital formation, primary education enrollment, post-primary education enrollment and tertiary education enrollment. His findings revealed that recurrent expenditure on education as well as capacity building impacted significantly on economic growth, while capital expenditure on education was insignificant to the growth process. Maku, Ajike and Chinedu (2019), investigated impact of human capital development on economic growth in Nigeria using ARDL approach. They use annual time series data on GDP per capita, government education and health expenditures, and secondary and tertiary school enrollment rate for the period 1986 to 2015. Using GDP per capita as a proxy for economic growth, human capital development was proxies by government expenditure on education, government expenditure on health, secondary school enrollment and tertiary school enrollment. Their results showed that human capital development has a negative and insignificant impact on macroeconomic performance in the short run, while only TER has a positive and significant impact on GDP per capita. Their study concluded that human capital development has not been an efficient determinant of the rate of growth in the macroeconomic performance in Nigeria.

Imide and Dania, (2019) examined the impact of human capital development on economic growth in Nigeria. The specific objectives of the study are to; identify the impact of government education expenditure on economic growth in Nigeria and verify the impact of government education expenditure on economic growth in Nigeria. The study spans from 1991 to 2017. The study was ex post facto research design. The data analytical technique was Autoregressive Distributive Lag model. The unit root test showed that apart from the interaction of health & education expenditure which was stationary at level others were stationary at first difference. The result of the co-integration test showed that there is a long term relationship between the dependent and independents variables. The empirical result shows that expenditure on health has a negative and insignificant impact on the economic growth of Nigeria. Again, the empirical result shows that while expenditure on education and expenditure on the interaction (mix) of education & health have positive and significant impact on Nigeria economic growth. The empirical result shows that expenditure on education has positive impact on Nigeria economic growth but not as much when the expenditure is on the interaction/proper mix of health and education. The study recommended that investment in human capital (proper mix of health & education) is the best form of investment for any economy and also, high level of human capital development holds the key to the nation's socioeconomic development.

The impact of human capital development on economic growth in Nigeria as examined by Bachama, Hassan, and Ibrahim (2021) used time series data spanning the years 1970–2019. Their research demonstrated a positive and significant relationship between economic growth and spending on health and education, both in the short- and long-term. However, it was shown that labor had a major

negative impact on economic growth. They advise the Nigerian government to concentrate on enhancing the health and education sectors. Meaning that a significant portion of government spending should go toward the health and education sectors, and that more job possibilities should be created through skill development/vocational training, in order to lower the unemployment rate in the nation. The method of analysis for the research was OLS (ordinary least square) method.

Ojima and Anyanwu (2021) conducted a study to examine the human capital development and economic growth in Nigeria from 1989-2019. Specifically, this study aims to examine impact of life expectancy, public expenditure on education, public expenditure on health, primary school enrolment, Human Development Index, used as proxy for Human Capital Development on economic growth in Nigeria between the period 1989 – 2019. Data were obtained within the scope of the study and the variables were within the period of investigation. The study adopted the unit root, the dynamic ordinary least squares, as well as the Error Correction Model (ECM) to test the short and long run relationship of the variables selected for the study. The findings showed positive correlation except Human Development Index and Primary school enrollment that were found to have negative relationship with the Nigeria economic growth. Thus far, it is proper to conclude that life expectancy, primary school enrollment, human development index and public expenditure on education majorly determines economic growth in the long run in Nigeria. This therefore proves that human capital investment is a determinant in the economic growth of Nigeria. The study recommended that government at all tiers should increase annual budgetary allocation to these sectors and also intensify efforts in economic and social orientation to mobilize and inculcate sanitary and health culture in the people.

Adeleke and Anuolam (2023) empirically examined the impact of human capital development on economic growth in Nigeria using secondary data from Central Bank of Nigeria Statistical Bulletin to cover the period 1999 and 2022. Autoregressive Distributed Lag Regression Estimate (ARDL) was the method of analysis employed. Findings from the study revealed that government expenditure on education have positive and statistically significant impact on RGDP, government expenditure on health have statistically significant impact on RGDP, life span have positive and statistically insignificant impact on RGDP and lastly school enrollments (SER) have positive and statistically insignificant impact on RGDP. The study concludes that human capital development has statistically significant short run and long run relationship with economic growth in Nigeria. Nigeria government at all levels was enjoined to ensure that priority should be placed on all the components or indicators of human capital development of the Nigerian citizens as this if well implemented will ensure the economic growth.

Okeke and Elegbede (2024) investigated the effect of human capital development, employee coaching, and career support on organisational commitment among employees at Union Bank Plc, Lagos, Nigeria. Employing a cross-sectional design with random sampling responses from 169 respondents were analysed using descriptive statistics while multiple regression analysis through SPSS was used to test the formulated hypotheses. The study found that human capital development and employee coaching do not significantly affect organisational commitment while employees' career development significantly affect organisational commitment. The study, therefore, recommends that the management of banks should not only invest adequately in developing their human capital to enhance their skills and competence in work operations but also ensure their conversion to full-time or permanent employees status so as to increase their productivity within the organization and thereafter improve national productivity and growth.

3. METHOD OF THE STUDY

The theoretical framework for this study is the endogenous growth model. It is an economic theory that posits that economic growth driven by internal factors such as human capital, innovations and knowledge accumulation and so on are sustainable over a long term. The endogenous growth theory sees investment in education and training is crucial for enhancing human capital which in turn leads to higher productivity and economic growth. The growth theory also emphasizes the role of government in the process of improving the economic growth and human capital by implementing policies that support the investment in education and health and can create a conducive environment for a sustained economic growth. OLS is used to conduct the analysis Pesaran, Shin, and Smith (2001). The model for the analysis is stated thus:

$$Y= f (A, L, K) \qquad\qquad 1$$

where

A= technology

L=Labor

K= stock of capital

However, this study modifies the model thus:

$$GDP= f (HDI, L, K) \qquad\qquad 2$$

HDI= Life expectancy (LER), adult literacy (AL), school enrollment in primary (SEP), gross national income (GNI)

L= population growth (PG)

K= gross fixed capital formation (GFCF)

$$GDP = f (LER, AL, SEP, GNI, PG, GFCF) \qquad\qquad 3$$

The model is expressed in its mathematical form as

$$GDP = \beta 0 + \beta 1LER + \beta 2AL + \beta 3SEP + \beta 4\ GNI + \beta 5PG + \beta 6GFCF$$

The model is expressed in its econometric form as

$$GDP = \beta_0 + \beta_1 LER + \beta_2 AL + \beta_3 SEP + \beta_4 GNI + \beta_5 PG + \beta_6 GFCF + \mu t$$

B_0 – the intercept otherwise known as the component term

$\beta_1 - \beta_6$ = slope coefficient of the explanatory variables (regressors).

μ = Error term

t =Time trend

4. Result Presentation, Analysis, and Discussion of Results

This section centers on the presentation and analysis of data used, interpretation of the result and discussion of the findings from the analysis conducted.

4.1 Unit root properties of the variables

Table 1   Unit root test results

Variables	Critical Value	ADF statistics	Order of Integration	Remarks
GDP	-2.960411	-4.463163	1(1)	Stationary
LER	-2.960411	-3.436417	1(1)	Stationary
AL	-3.568379	-6.162282	1(1)	Stationary
GEE	-2.960411	-4.469285	1(1)	Stationary
GNI_PER CAPITA	-3.562882	-4.498661	1(1)	Stationary
PG	-3.568379	-4.102271	1(1)	Stationary
GFCF	-2.971853	-3.864632	1(1)	Stationary

Source: Researcher's Computation using E-views 10

The result shows that the ADF test statistics is greater than the critical values which means that all the variables are stationary at first difference, hence we reject the null hypothesis and now the Johansen co-integration was conducted as this meets the condition under which the test could be applied and the summary of the result is shown in Table below.

4.2 Short Run Analysis

Table 4.2 Summary of Short Run Analysis Model

Variable	Coefficient	Standard Error	t-statistics	Prob.
ΔLER	-1.74E+10	3.44E+10	-0.506458	0.6176
ΔAL	5.58E+09	1.70E+09	3.290018	0.0033
ΔSEP	-2.02E+09	1.54E+09	-1.305641	0.2052
ΔGNI	825109.2	390780.9	2.111437	0.0463
ΔPG	7.52E+11	2.38E+11	3.164939	0.0045
ΔGFCF	-0.003145	0.001912	-1.644860	0.1142
ECT(-1)	-0.822197	0.173260	-4.745449	0.0001
R^2	0.907819			
Adjusted R^2	0.886547			
F-statistics	42.67571			
Prob(F-statistic)	0.000000			

Source: Researcher's computation (2024)

From the ECM analysis, it is evident there exists short run relationship between adult literacy, gross national income per capita, population growth and gross domestic product. This deviation in the short run from long run equilibrium is corrected by about 82% within a given year. This 82% is denoted by the Error Correction Term which is 0.822.

From the table 4.2, the independent variable life expectancy (LER) has a negative coefficient of -1.74. This implies that a one percent increase in life expectancy will lead to a decrease in gross domestic product (GDP) by 1.74 percent and it therefore conforms to a prior expectancy. Adult literacy (AL) has a coefficient of 5.58 which is a positive relationship, meaning that, a one percent increase in adult literacy will lead to a 5.58 percent increase in gross domestic product. Also, school enrollment, primary has a negative coefficient of -2.02 which means that a one percent increase in school enrollment will lead to a decrease in gross domestic product. Gross national income (GNI) has a positive coefficient of 825109.2 which means that a one percent increase in gross national income will lead to a 825109.2 percent increase in gross domestic product. Population growth (PG) has a coefficient of 7.52 which is a positive relationship, meaning that a one percent increase in population growth will lead to a 7.52 percent increase in gross domestic product. Lastly, gross fixed capital formation has a coefficient of -0.003145 which means that a one percent increase in gross fixed capital formation will lead to a 3.15 percent decrease in gross fixed capital formation.

From the table also, the coefficient of determination obtained shows that R^2 is 0.907819. This means that the independent variables used in the study explain 90% of the variations in the dependent variable (GDP) the other 10% of the variations are explained by other factors that are not present in the model. This implies that the variables have a high explanatory power. The adjusted R^2 is 0.886547 indicating that 88% of the variations in the dependent variable is explained by the independent variable. Thus, it implies that the explanatory power of the variables is very high.

F-statistics

The F-test is applied to check the overall significance of the model. With the p-value 0.000000, the F-statistics is 42.67571, indicating statistical significance.

H0: The model has no goodness of fit

H1: The model has goodness of fit

Decision rule: Reject H0 if the F-calculated > F-tab (k-1, n-k) at 5% level of significance.

V1= k-1; V2= n-k

k-1= 7-1=6

n-k = 32-7=25

Therefore, the F-test is;

F0.05(6,25) = 2.49

F-statistics = 42.67571

Therefore, since the F-calculated > F-table, the study rejects H0 and accepts H1 that the model has goodness of fit and is statistically different from zero. In other words, there's a significant impact between the dependent and independent variable.

4.3 Economic Aprior expectations

Table 4.3   Summary of Economic a Prior Test

Parameters	Regressand	Regressor	Expected Sign	Observed Sign	Remark
β_0	GDP	C	+/-	-	Conform
β_1	GDP	LER	+	+	Conform
β_2	GDP	AL	+	+	Conform
β_3	GDP	SEP	+	-	Not conform
β_4	GDP	GNI	+	+	Conform
β_5	GDP	PG	-	+	Not conform
β_6	GDP	GFCF	+	-	Not conform

Source: Researcher's Computation (2024)

From Table 4.3, LER, AL and GNI conformed with economic theory whereas the outcome of the other independent variables did not.

4.4 Evaluation of Research Hypothesis

We can use the t-statistics from the OLS results to evaluate the research hypothesis for the study.

Hypothesis 1

H_0: There is no significant impact of life expectancy on economic growth in Nigeria.

H_1: There is significant impact of life expectancy on economic growth in Nigeria.

Decision rule: Reject H_0 if t-calculated > t-critical

In the study, it shows that the t-calculated for life expectancy is less than the t-critical, also the p-value for the variable is higher than the chosen level of significance, this implies that we fail to reject the null hypothesis and we conclude that life expectancy has no significant impact on economic growth in Nigeria. This implies that an increase in life expectancy does not necessarily have a major effect on the economic growth of the country that is there are other factors that have a bigger impact on economic growth or offsets the impact of life expectancy on economic growth. This means that an effect of an increase in life expectancy which is to lower the cost of healthcare services and decrease in mortality rate does not directly impact the economic growth of the country and that other factors will have to follow to have an impact on the economy.

Hypothesis 2

H_0: There is no significant impact of education index on economic growth in Nigeria.

H_1: There is significant impact of education index on economic growth in Nigeria.

From the study, under the education index the t-calculated for the adult literacy is more than the t-critical which means that we reject the null hypothesis and conclude that adult literacy has impact on economic growth in Nigeria. This explains that the impact of adult literacy on economic growth is major criteria for economic growth. Adult literacy solely cannot have a full impact on the economic growth of the country without the help of other factors like government policies and so, this makes it an important factor to economic growth

Hypothesis 3

H_0: There is no significant impact of GNI index on economic growth in Nigeria.

H_1: There is significant impact of GNI index on economic growth in Nigeria.

The table shows that t-calculated for GNI is greater than the t-critical, thus indicating that we have enough evidence to reject the null hypothesis. Therefore, we infer that GNI has a significant impact on economic growth in Nigeria. This implies that an increase in gross national income will leads to an increase in the overall output

of the country. This is because gross national income is a measure of the average income of the people in a country, and when this increases, it means that more money is generated overall. In turn, this can lead to a higher level of economic activity and higher level of investment and consumption, which can boost economic growth.

4.5 Discussion of Findings

The purpose of this study is examine the impact of human capital development on economic growth through the use of decomposed human development indices to find out if the variables have a statistical significance or insignificance on the dependent variable which is economic growth.

Firstly, the variable life expectancy shows a negative and statistically insignificant impact on economic growth in Nigeria. When life expectancy increases individuals have more time to learn skills and gain more experience and it will also give them more time to work in the labor force because of they have better health and less mortality rates and this will increase the productivity of these individuals and it will increase the economic growth of the country. This according to the outcome of the research is not obtainable in Nigeria.

Also, Adult literacy has a positive and statistically significant impact on economic growth in Nigeria. When adult literacy increases there is an increase in knowledge and access to learning and this will increase the individuals with more education, skills and experience to be able to perform some tasks that will cause individuals to be more productive and foster economic growth in the country. School enrollment on the other hand has a negative and statistically insignificant impact on economic growth in Nigeria. This means that an increase in school enrollment leads to decrease in GDP.

Gross National Income however, has a positive and statistically significant impact on economic growth in Nigeria. An increase in gross national income has a very strong impact on economic growth. GNI talks about the increase in total income earned by a country's residents and from foreign sources, therefore with an increase in GNI will enable individuals to want to work more and cause the investment in skills and education and also to improve their experiences in certain areas and it will lead to a more skilled, educated and healthy workforce which will increase productivity and the economic growth of the country.

In summary, these results show us the impact of human capital development on economic growth in Nigeria, using life expectancy, adult literacy, primary school enrollment and GNI impact on economic growth. The study applauds the encouragement on the investment of citizens in education and health care services and also the improvement of national income and standard of living of individuals that will enable them to be more productive and in turn cause a positive impact on economic growth.

5.   Conclusion and Recommendation

The study showed the impact of life expectancy rate, adult literacy, school enrollment, gross national income, population growth and gross fixed capital formation on economic growth. All the variables expect school enrollment primary, population growth and gross fixed capital formation conform to a priori expectation. Unlike the other variables, gross national income has a strong significant impact on the growth of the economy. Thus, the general conclusion that emerged from this study is that during the period under review, Gross national income is important for the economic growth of the country and Nigeria should invest more in its education system to increase its national income.

The study therefore recommends thus:

1.   The government and policy makers should make more provision for the improvement of education at the primary school level by increasing the budgetary allocation set aside for investment in primary education. The data of the number of children eligible for primary education should be collected and collated in order to identify the number of children who do not have access to education and make provision for them to attend school as well as monitor the progress of children attending primary school education.

2.   The government should ensure structural reforms on health and education sectors in order to improve critical skills in both sectors and enforce technological learning process with the use of internet, artificial intelligence and programs that will boost critical thinking in order to equip the workforce in these sectors on

problem solving skills, training programs and activities that will improve their skills and widen their overall knowledge.

3.   The government should investment in the improvement of life expectancy in order to foster economic growth. Government should provide universal access to quality healthcare services and should also reduce the financial barriers to enables individuals receive health services.

4.   They should also provide infrastructural facilities that can make healthcare easier for people. The government should also implement public health policies that will protect the citizens from epidermic/diseases and will have positive impact on health of citizens in order to foster the growth of the economy.

5.   The government and policy makers should increase the investment in infrastructure in order to enable citizens and businesses to operate efficiently and increase productivity so as to stimulate economic growth. This will boost the gross national income of the country.

6.   The government should also implement supporting policies and regulations to encourage and create an environment for entrepreneurship by organizing seminars to educate individuals on its benefits and also to encourage small scale businesses by providing incentives and financial support and also fostering startup businesses. This will also boost the gross national income of the country.

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