Sectoral Performance and Human Capital Development in Nigeria

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Abstract

This study examined the impact of sectoral performance on human capital development, with specific focus on human development index between 1986 and 2020. The study was anchored on the Fisher-Clark's (1940) three sector theory and the endogenous theory by Lucas (1988).The time series data for the variables were obtained from the Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics, World Development Indicator and United Nations Development Programme Human Development Report. The data analysis techniques include descriptive statistics, unit root test, bounds cointegration and autoregressive distributed lag estimation method. The unit root tests results showed that while agriculture and industrial sector growth rates are integrated of order zero, the other variables are integrated of order one. Evidence of cointegration was established in the model from the bounds test result. The ARDL results showed that agriculture sector growth has a significant positive effect on HDI given that the probability value (0.0084) of the t-statistic for its coefficient is less than 0.05. Similarly, the results further showed that the service sector growth has a significant positive effect on HDI in the short run given that the probability value (0.0237) of the t-statistic for its coefficient is less than 0.05. Furthermore, the industrial sector growth does not significantly affect HDI. Government expenditure has a significant positive effect on HDI at 5 percent significant level. Given the findings, this study recommends among others that government expenditure should prioritize economic, social and community services with potentials for economic development. This will provide a roadmap for sustainable improvement in human development.

Keywords: Human capital development, Agriculture, Industry, Service, Performance, Nigeria.

1. Introduction

The importance of human capital development in the growth and development process of any nation has increasingly gained popularity.This is because it has been observed that physical capital alone cannot be said to bring about the much-needed development. For an economy to develop, there has to be a balance in the development of both physical and human capital such as improvement in both education, health and per capita income aggregately.

Reliable interest in human capital with change in proficiency is the paramount to drive one out of destitution circle. Capital interest in individuals can help the way of life by raising efficiency, drawing in capital speculation, extending openings and expanding procuring power.The importance of education in human capital development cannot be overemphasized. Accordingly,

ill-health limits human capital, diminishes return to learning, blocks entrepreneurial exercises and withholds development and monetary exercises. Great wellbeing is the premise of human welfare and is essential to financial improvement.

Per capita income (PCI) or "average income" is the measurement of average income per person in a specific country, city, or region within a definitive time period. PCI utilizes average income to calculate and present the standard of living. Although standard of living is a term used to describe the level of income, necessities, luxury, and other goods and services,and quality of life for a population,however one of the drawbacks of per capita income as a measurement of living standard arises when considering per capita income is a mean value.Thefigure does not accurately reflect proper income distribution. In most cases, income distribution is heavily skewed due to the wide differences between households making below-average income and households that are considered "economically rich."Human capital development in this study is proxied by human development index. The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The HDI can also be used to question national policy choices, asking how two countries with the same level of Gross National Income per capita can end up with different human development outcomes.

The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.The health dimension is assessed by life expectancy at birth, the education dimension is measured by mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age. The standard of living dimension is measured by gross national income per capita. The HDI uses the logarithm of income, to reflect the diminishing importance of income with increasing GNI. The scores for the three HDI dimension indices are then aggregated into a composite index using geometric mean.

In addition, human development index (HDI) within the period under study has witnessed a steady but slow increase. As observed from the availabledata on UNDP Human Development Index, HDI trended upward and maintained a steady increase up till 2002, declined marginally in 2003. It increased further in 2004 and reached all-time high level in 2019. The increase in HDI could be attributed to the improvements in healthcare, educational attainment and standard of living during

the period. However, it is important to note that the HDI simplifies and captures only part of what human development entails. It does not reflect on inequalities, poverty, human security, empowerment, etcetera.

The significance of a study of this nature stems from the acknowledgement of the role of the agricultural, industrial and service sector to the development of the Nigerian economy given its potential, size as well as prospects in reversing negative trends in development indicators. In view of this, attaining a significant level of economic development would rather be elusive without improving the performance of these sectors. The study therefore contributed largely to the existing theoretical and empirical body of knowledge on the relationship between the agricultural, industrial and service sector's performance and economic development with particular reference on human development index in Nigeria. This is based on the composite index of education, health and per capita income. The objective of the study is hence to examine the effect of the agricultural, industrial and service sectors on human capital development in Nigeria.

2.Literature Review

The Fisher-Clark's Services, often referred to as three sector theory was first developed by Fisher (1939). Fisher, in trying to understand the process of economic transformation and new aspects of consumer demand that goes beyond basic agricultural and manufactured goods, came about the idea of the tertiary sector also known as service sector that deals with intangible goods and its role in economic progress and development. However, it was the broader definition developed by Clark (1940) in his treatise "The Conditions of Economic Progress" that became an established component of the economic lexicon. In it, Clark described a tripartite economic structure consisting of primary, secondary and tertiary economic activities. Primary activities are agricultural or extractive in nature and are limited by natural growth factors. Secondary activities are primarily composed of manufacturing and production activities, in this case the industrial sector. While the tertiary activities are service based and are dependent on, and limited by, human skill and expertise. Primary and secondary activities can be further distinguished from tertiary activities by the nature of their output, which is tangible in nature, whereas tertiary activities produce intangible outcomes.

The service sector, which was what they referred to as tertiary, for Clark is also a repository for activities that do not fit under the narrower and much more traditional understandings of the first

two (agricultural and industrial) sectors. Clark's intervention became particularly influential as a means of tracking economic progress and structural change. The central thesis is that technological progress parallels a decline in primary and secondary activities and an increase in tertiary activities. As outlined by Clark, the parameters of the economic model states that over time the tertiary sector would become the dominant economic sector within a nation. Structural change or transformation is therefore, the reallocation of economic activity and capital across the primary (agricultural), secondary (industrial) and tertiary (service) sectors. Clark's work became part of a long tradition attempting to understand national economic growth and development through the lens of sectoral structures.

Specifically with regards to human development, Lucas (1988) propounded an endogenous growth theory or model based on investment in human capital which he defined as investment in education. According to this theory, policy measures can have impact on the long run growth rate of an economy. To him, enhancement in productivity can be in connection to improvement in human capital development. The theory emphasized the importance for government and private sector institutions to direct policies towards the enhancement in education. According to the theory, knowledge can play a central role as a determinant of economic growth. In Lucas model, human capital is in the production function just as technology is in the Solow model. Lucas argued that it is education or the internal effect of human capital where the individual worker undergoes training and becomes more productive rather than the external (physical capital) that has a spillover effect on increased productivity in capital and other workers in the economy. In view of the forgoing, this present study adopted the Fish-Clark's (1940) sectoral theory as it looks at the tripartite sectors of agricultural, industrial and services holistically and the human capital development theory by Lucas (1988) to capture the role human capital development plays in the development process.

Empirically, several studies have been carried out with regards to the agricultural. Industrial and service sector. Some of them include the study by Ibe and Obodoechi (2019) examined the impact of agricultural output on the economic growth of Nigeria using Real Goss Domestic Product as proxy for economic growth with agricultural output, gross capital formation, interest rate and exchange rate as explanatory variables. Vector Error Correction Method and variance decomposition was adopted to arrive at the finding that agricultural output positively but

insignificantly impacted on economic growth.Similarly, Afolabi, Ogundele, Olusegun, and Owoseni (2017) researched on the impact of agricultural sector using agricultural output on economic growth in Nigeria, using granger causality. The result revealed that there was a positive and long run impact of agricultural output on economic growth in Nigeria. Oburota and Ifere (2017) also examined the effect of manufacturing output on economic growth in Nigeria. the relationship between manufacturing output and economic growth with the use of regression. The study adopted the Endogenous growth model and Kaldor's first law of growth model. The result revealed that output from the manufacturing sector as well as technology and capital greatly determined the rate of growth in the county.More so, Fatai (2018) analyzed correlation between manufacturing output and economic growth using cointegration, error correction mechanism and granger causality approach. The result from the causality test revealed a unidirectional correlation between the manufacturing output and economic growth in Nigeria.

Furthermore, Uchechukwu and Ibiok (2015) studied the service output and real gross domestic product. The study adopted a vector autoregressive distributive lag framework and granger causality and the result revealed that service sector does not granger cause GDP. Similarly, Antai, Udo, and Effiong (2016) examined the contributions of the service and agricultural sectors and economic growth in Nigeria. The study utilized pairwise granger causality approach and a vector autoregressive distributive lag framework and their results showed that the service sector contributes to the economic growth of Nigeria and transcends to other sectors of the economy. However, the gross domestic product does not lead to growth of the service sector as reported by their findings, though the agricultural sector output was seen to be directly related to economic growth. Olusoji and Odeleye (2018) examined the relationship between the service sector and economic growth in Nigeria using quarterly on multiple regression analysis. The study found out that the service sector contributed significantly to the economic growth of Nigeria during the rebase period but was lower than that of the agricultural sector. However, when analyzed during post rebase period, the service sector seems to have fared better in contributing to economic growth. More so, Adetokunbo and Edioye (2020) examined the effect of the service sector on the economic growth of Nigeria with the utilization of the endogenous and autoregressive distributed lag framework. Their findings revealed that the service sector significantly impacted on the economic growth of Nigeria.

The empirical literature reviewed indicates that the agricultural, industrial and service sectors have a great impact on economic growth. Therefore, most of the studies reviewed concentrated more on these sectors' output and economic growth (Ibe &Obodoechi, 2019). However, little or no study to the best of the researchers' knowledge, has been able to study the relationship between the performance of these sectors using their growth rates on human development index.

3. Methodology

3.1 Research Design

The study adopted a quasi-experimental research design. The appeal for this research design was necessitated given that the study relied on secondary data that dealing with dependent and independent variables of which time series data is involved (Belli, 2008).

3.2 Data Collection Methods and Sources

The study utilized the secondary data. The data frequency was on a yearly basis, comprising five time series variables (human development index as the dependent variables and growth rates of agricultural, industrial and service sector as independent variables capturing their performance during the period of study). The inclusion of government expenditure as a fourth independent variable was to serve as check variable. This is in a bid to capture the policy environment in Nigeria, since government decisions has a way of affecting other sectors of the economy and development in general. The data covered the period 1986 to 2020 and sourced from World Bank: World Development Indicator, UNDP Human Development Report (2019), and Central Bank of Nigeria statistical bulletin (2020). The choice of timeframe and frequency of data was based on the intention of the researcher to capture the post sap trends as well as the need to capture past and current trends in these sectors vis-à-vis trends in economic development in the study country. The growth rate of the respective sectoral data was chosen for the study because it is best suited to capture the performance of the sectors during the intended period of study.

3.3 Model Specification

The model specification for this study followed the work of Uchechukwu and Ibiok (2015). Thus, HDI was introduced in the model as dependent variable, agricultural, industrial and service sector growth rates as well as government expenditure are the independent variables. The model specification is provided as follows:

The functional form of the model is given as:

$$HDI = f(AGR, IND, SERV, GEX) \quad - - - - - - - - - - - - 1)$$

Stated in linear form gives;

$$HDI = d_{\circ} + d_1 AGR + d_2 IND + d_3 SERV + d_4 GEX + \mu \quad - - - - - (2)$$

Formulating the Autoregressive Distributed Lag (ARDL) long-run model gives;

$$\Delta(\mathrm{HDI})\mathrm{t} = d_0 + d_1(\mathrm{HDI})\mathrm{t} + d_2(\mathrm{AGR})\mathrm{t} + d_3(\mathrm{IND})\mathrm{t} + d_4(\mathrm{SERV})\mathrm{t} + d_5(\mathrm{GEX})\mathrm{t} + \sum_{i=1}^{n} \square$$
$$+ \Delta d_1(HDI)t_{-1} + \sum_{i=1}^{n} \square \Delta d_2(AGR)t_{-1} + \sum_{i=1}^{n} \square \Delta d_3(IND)t_{-1}$$
$$+ \sum_{i=1}^{n} \square \Delta d_4(SERV)t_{-1} + \sum_{i=1}^{n} \square \Delta d_5 .(GEX)\, t_{-1} + \mu_{4t} \quad - - - (3)$$

While the short-run Error Correction Model derived from the ARDL model yields;

$$\Delta(\mathrm{HDI})\mathrm{t} = \Omega_0 + \Omega_1(\mathrm{HDI})\mathrm{t} + \Omega_2(\mathrm{AGR})\mathrm{t} + \Omega_3(\mathrm{IND})\mathrm{t} + \Omega_4(\mathrm{SERV})\mathrm{t} + \Omega_5(\mathrm{GEX})\mathrm{t} + \sum_{i=1}^{n} \square$$
$$+ \Delta\Omega_1(HDI)t_{-1} + \sum_{i=1}^{n} \square \Delta\Omega_2(AGR)t_{-1} + \sum_{i=1}^{n} \square \Delta\Omega_3(IND)t_{-1}$$
$$+ \sum_{i=1}^{n} \square \Delta\Omega_4(SERV)t_{-1} + \sum_{i=1}^{n} \square \Delta\Omega_5 .(GEX)\, t_{-1} + \Pi ECM + \mu_{4t} \quad - - - (4)$$

Where;

$HDI = Human\ Development\ Index$

$\mathrm{AGR, IND, SERV} = \mathrm{Agriculture, Industry, and\ Service\ Sector\ Growth\ Rates\ (\ \%)}$

$\mathrm{GEX} = \mathrm{Government\ Expenditure(\ \%)}$

$\beta_0, \Omega_0 = \mathrm{respective\ intercept\ of\ the\ model}$

$d_1 - d_5 =$ Slopes and long − run dynamic coefficient of the model respectively.

$\Omega_1 - \Omega_5 =$ Short − run dynamic coefficients.

$\mu_{1t} - \mu_{4t} =$ Disturbance or error term

$\Delta =$ First difference operator.

$n =$ Maximum lag lenght.

$\Pi =$ Error correction coefficient.

$ECM =$ Error correction term with one period lag.

$f =$ Functional Notaton

$In =$ Natural Log Notation

Method of Data Analysis

The study adopted autoregressive distributed lag (ARDL)/Bound model of co-integration by Pesaran et al (2001), given its flexibility properties in allowing for mixed order of integration with exception of l(2). Error Correction Mechanism (ECM) was also utilized to reconcile long run disequilibrum with short run. More so, descriptive statistics was conducted as well as unit Root test by Augmented Dickey-Fuller (1984) and Phillip and Perron (1988) for stationarity to stabilize the time series data accustomed with irregularities.

4. Results and Discussions

Descriptive Statistics

The descriptive statistics for the variables are presented in Table 1:

Table 1: Summary of descriptive statistics for the variables

	HDI	AGR	IND	SERV	GEX
Mean	0.48	5.89	1.91	5.77	3.02
Median	0.46	4.11	1.89	4.00	2.60
Maximum	0.54	55.58	18.05	19.99	9.08
Minimum	0.44	-3.19	-8.85	-0.91	0.64
Std. Dev.	0.03	8.97	5.47	4.70	1.93
Jarque-Bera	5.20	1095.15	2.67	7.52	7.78
Probability	0.07	0.00	0.26	0.02	0.02
Observations	35	35	35	35	35

Source: Author's computation from E-views software, 2020.

The descriptive statistics showed a mean value of 0.48 percent for HDI. The mean values further showed that agriculture, industrial and service sectors performance and government expenditure

are 5.89, 1.91, 5.77 and 3.02 percent respectively. This finding indicates that, on the average, the performance of the agriculture sector surpassed the industrial and service sectors' performance over the study period. The standard deviation showed that the observations for all the variables clustered around their respective mean values with the exception of agriculture (8.97) and industrial (5.47) sectors' performance that were higher than their mean value. Additionally, the probability values of the Jarque-Bera statistics showed that all the variables for the investigation were normally distributed at 5 percent level except agriculture and service sector performance, and government expenditure. This is because their probability values (0.00, 0.02 and 0.02 percent respectively) are lower than the conventional 5 percent level of significance.

2 Unit Root

The unit root test was conducted using the augmented Dickey-Fuller (ADF) method. The results were evaluated with the Phillips-Perron method. The outcomes of the unit root tests are presented in Table 2 and 3

Table 2: ADF unit root test results

Variable	ADF statistic at levels	ADF statistic at first difference	Order of integration
HDI	-0.279	-6.710	I(1)
AGR	-5.563	NA	I(0)
IND	-5.939	NA	I(0)
SERV	-1.463	-10.122	I(1)
GEX	-3.197	-8.866	I(1)
Critical value	***-3.55***	***-3.55***	

Source: Author's computation from E-views software, 2020.

Note: NA denotes not applicable given that the associated variables are stationary at levels

The ADF unit root tests results showed that agriculture and industrial sectors' growth rates are stationary at levels given that their ADF statistics (-5.563 and -5.939) are greater than the critical value (-3.55) in absolute terms. Consequently, the null hypothesis of unit root is rejected at levels. This implies that the observations for the agriculture and industrial sectors' growth rates are integrated of order zero [I(0)]. However, the other variables for investigation were not stationary at levels; they become stationary at first difference. This implies that they are integrated of order one [I(1)]. The outcomes of the ADF unit root tests showed that the variables are mixed integrated, which prompted the test for cointegration using the bounds ARDL method.

Table 3: PP unit root test results

Variable	PP statistic at levels	PP statistic at first difference	Order of integration
HDI	-1.739	-7.303	I(1)
AGR	-5.565	NA	I(0)
IND	-5.932	NA	I(0)
SERV	-2.881	-11.183	I(1)
GEX	-2.962	-8.854	I(1)
Critical value	***-3.55***	***-3.55***	

Source: Author's computation from E-views software, 2020.

Note: NA denotes not applicable given that the associated variables are stationary at levels

The PP unit tests results showed that agriculture and industrial sectors' growth rates are stationary at levels. This is because their PP statistics (-5.565 and -5.932) are greater than the critical value (-3.55) in absolute terms. This finding is synonymous with the ADF unit root tests results, which provided the basis for rejecting the null hypothesis of unit root for the two variables. Thus, agriculture and industrial sectors' growth rates are integrated of order zero. The results further showed that the other variables in the models were stationary at first difference. The evidence of difference stationary in these variables are pointers that the variables are integrated of order one. It, therefore, followed from the results that the variables are mixed integrated in orders zero and one [I(0) and I(1)]. The evidence of mixed integration in the variables is in accordance with the findings of Abdul and Atteqqa (2015) and Darwati (2018). The findings further authenticated the outcomes of the ADF unit root tests and made the application of the bounds cointegration ideal for determining if the variables in of the modelhave long run relationship.

3 Cointegration Test

Co-integration test was conducted in order to test for the presence of long-run relationship. It is very important to consider the possible presence of co-integration when one is choosing a technique to test the relationships between economic time series variables that have unit root. Given the evidence of mixed integration in the variables, the ARDL bounds cointegration test method was applied. The result is presented in Table 4.

Table 4: Bounds cointegration test results for the HDI model

Series: HDI AGR IND SERV GEX		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	7.578	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: Author's computation from E-views software, 2020.
Note: K denotes number of explanatory variables

The results showed that the computed F-statistic (7.578) is greater than the upper bound critical value (4.01) at 5 percent significance level. This finding indicates that the variables are cointegrated, meaning that the null hypothesis is rejected. This implies that HDI has long run relationship with the sectoral performance indicators and government expenditure. The finding is good as it corroborates with the previous findings by Khan, Ju and Hassan (2019) among others, justifying the choice of the ARDL estimation method for this study.

4.4 Long and Short Run Model

This study relied on the ARDL method for estimating the dynamic long and short run parameters of the explanatory variables for the model.

Table 5: ARDL long and short run for the HDI model

Dependent Variable: HDI				
		Short run results		
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AGR)	-0.000076	0.000138	-0.549064	0.5873
D(IND)	-0.000323	0.000223	-1.447448	0.1589
D(SERV)	0.000726	0.000304	2.391759	0.0237
D(GEX)	-0.000104	0.000914	-0.113298	0.9106
CointEq(-1)	-0.135298	0.055110	-2.455053	0.0160
		Longrun results		
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AGR	0.002147	0.005739	2.905277	0.0084
IND	0.009148	0.019097	0.479026	0.6356
SERV	-0.020572	0.034608	-0.594423	0.5570
GEX	0.002935	0.001123	2.613535	0.0251
C	0.498926	0.094396	5.285446	0.0000

Adj R-squared	0.9478	Prob(F-statistic)	0.0000

Source: Author's computation from E-views software, 2020.

The results showed that the service sector growth has a significant positive effect on HDI in the short run given that the probability value (0.0237) of the t-statistic (2.3917) for its coefficient is less than 0.05. This suggests that the improved performance of the service sector creates opportunity for human development through improved healthcare, educational development and standard of living. The short run results further showed agriculture and industrial sector growth as well as government expenditure have negative, but insignificant effects on HDI. These findings indicate that the intended and desired short-term benefits of these variables for human development seem not to hold sway.

The long run results showed that agriculture sector growth has a significant positive effect on HDI. This is because the probability value (0.0084) of the t-statistic (2.9052) for its coefficient is less than 0.05. This finding is impressive as it highlights the important contribution of the performance of the agriculture sector to human development in Nigeria. Similarly, the long-term effect of government spending is positive and significant at 5 percent level. This is evident in the probability value (0.0251) of the t-statistic (2.613) which is less than 0.05.

This finding provides appreciable empirical evidence for the long-term effectiveness of government expenditure in promoting human development in Nigeria. The error correction coefficient (-0.1353) is negative and significant at 5 percent level, which indicates that the model can adjusts to long run equilibrium position at a speed of 13.53 percent. The R-squared (0.9557) and adjusted R-square of 0.9478 showed that 94.78 percent of the total variations in HDI are jointly explained by changes in the explanatory variables. Additionally, the highly significant probability value (0.0000) of the F-statistic suggests that the explanatory variables are collectively significant in influencing HDI, which implies that the entire model is statistically reliable at 5 percent level.

Discussion of Findings

Sectoral Performance and HDI

The results showed that service sector growth has a significant positive effect on HDI in the short run. This finding is consistent with the theoretical expectations. The implication of this finding is that the performance of the service sector in terms of more and inclusive access to education,

improve healthcare delivery and quality transportation and telecommunication services has the potential of increasing the life expectancy, school enrolment and standard of living which are the key components of HDI. The significant positive contribution of the service sector to HDI corroborates with the findings of Hakim, Suryantoro and Rahardjo (2021) and Kalim, Arshed, and Ahmad (2021). The short run results further showed agriculture and industrial sector growth as well as government expenditure have negative, but insignificant effects on HDI.

However, it was found that agriculture sector has a significant positive effect on HDI in the long run. This finding is in accordance with the *a priori* expectations which identifies the agriculture sector as important source of human development. The implication of this finding is that agriculture performance in terms of improved food production, livestock, fishing and forestry provides opportunity for food security which is essential for human development. In addition to agriculture sector growth, government expenditure contributed significantly to improvements in HDI. This finding is consistent with the work of Linhartova (2021) and Fadilah, Ananda and Kaluge (2018), which showed evidence of contributions of government expenditure to human development. The implication of this finding is that growth in government expenditure creates opportunity for human development.

Diagnostic Test

The post-estimation tests focused mainly on the residual's diagnostics and model stability tests. The result is presented in Table 4.13.

Table 6: Post-estimation tests results

HDI model		
Test type	Test statistic	Prob.
Breusch-Godfrey serial correlation LM test	Chi-square (1.382)	0.5010
Breusch-Pagan-Godfrey Heteroskedasticity test	Chi-square (8.052)	0.1534
Ramsey RESET Test	F-statistic (1.558)	0.2295

Source: Author's computation from E-views software, 2020.

The results of the residual diagnostics tests (Breusch-Godfrey serial correlation LM test and Breusch-Pagan-Godfrey Heteroskedasticity test) showed that there is no evidence of serial correlation and heteroscedasticity in the model at 5 percent significance level. This is because the probability values of the Chi-square statistics for the Breusch-Godfrey serial correlation LM test and Breusch-Pagan-Godfrey Heteroskedasticity test results are greater than 0.05. Consequently,

the null hypotheses of no serial correlation and homoscedasticity were accepted. This finding indicates that the residuals are serially independent and do not pose any problem in the estimated model. In addition to the residual diagnostics tests, the model stability test (Ramsey RESET Test) showed that the estimated parameters are stable at 5 percent level given that the probability value of the F-statistic is greater than 0.05. This provided the basis for accepting the null hypothesis that the model is stable. It, therefore, followed from the post-estimation tests results that the model is reliable for long term forecast and policy prescription.

5. Conclusion

The studyconcludes that agricultural sector performance offers opportunity for improved human development in Nigeria. In addition, the performance of the service sector such as increase in education and health services as well as improved telecommunication and transportation services is important for improving HDI in Nigeria. On the contrary, the industrial sector performance has no significant effect on HDI. However, government expenditure creates opportunity for meaningful improvement in HDI in Nigeria.

Hence, agriculture and service sectors growth are the channels through which sectoral performance promote human capital development in Nigeria. More so,government expenditure proved to be an important enabler of economic development in Nigeria in terms of long-termimprovements in human development outcomes.

6. Recommendations

From the findings, the following recommendations were made:

1. Concerted efforts should be made by the relevant keyholders to encourage the development of the agricultural sector by promoting mechanized farming, provide post-harvest facilities, lands and mobilize private investments to the sector. This will boost its performance and sustain its contribution to the HDI outlook; improved performance of the industrial sector and its contribution to the economic development can be encouraged by broad-based structural reforms, improve infrastructure development and reduction in multiple taxation for businesses including SMEs. This will play a substantial role in improving the effectiveness of the industrial sector contributions to human development; development of the service sector through increased investments in education, health, real estate, transportation and telecommunication serviceswill maintain the

performance of the service sector with greater opportunities for sustained human capital development; and lastly,

2. Government expenditure should prioritize economic, social and community services with high potentials for economic development. This will provide a roadmap for sustainable improvement in human development.

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