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## MACROECONOMIC INDICATORS AND SUSTAINABLE ECONOMIC DEVELOPMENT IN SUB SAHARAN AFRICA

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### Abstract

The study examined the effect of macroeconomic indicators on Sustainable Economic Development in Sub Saharan Africa. Specifically, the study sought to examine the effect of unemployment rate on sustainable economic development in Sub Saharan Africa. Analyzed the effect of foreign direct investment on sustainable economic development in Sub Saharan Africa. Investigate the effect of broad money supply on sustainable economic development in Sub Saharan Africa and examined the effect of interest rate on sustainable economic development in Sub Saharan Africa. The study employed econometric techniques, including Descriptive Statistics, Augmented Dicker Fuller for Unit Root and the Autoregressive Distributive Lag (ARDL). The result of the study indicate that macroeconomic indicators have (69% long run and 77% short run) significant effects on sustainable economic development in sub Saharan Africa. The study therefore concludes that macroeconomic indicators have been effective short run and long run policy instruments that largely influenced sustainable economic development in sub Saharan Africa. Amongst the recommendations is that federal government through the monetary authorities should regulate the monetary policy rate downwardly to encourage foreign and private investment to improve sustainable economic development in sub Saharan Africa. Continuous fluctuations in interest rate may decrease the confidence of investors due to uncertainty about return on investment. Thus, government should control the interest rates charged by financial institutions to encourage investments and improve human capital development. Monetary authorities in Sub

Saharan Africa should reduce interest rate to attract low interest rates that can encourage credit and boost productivity across the sectors which will improve human capital development in Sub Saharan Africa. Government should take serious steps to control the inflation rate by reducing imports and increasing exports, reducing government expenditures, give priority to agriculture sector, take serious consideration to food prices, increase and utilize energy resources with low production cost and remove security threats.

**Key Words:** *Macroeconomic Indicators, Sustainable Economic Development, Sub Saharan Africa*

## Introduction

One of the major goals of macroeconomic policy is to achieve sustainable economic growth and developments. In sub Saharan Africa the government tries to influence the performance of the national economy through fiscal and monetary policies such as changing the level of taxation, government spending, or the supply of money or credit to the economy. Changing macroeconomic policies affect national income, prices, interest rates and exchange rates all of which influence economic development (Aroriode & Ogunbadejo, 2024).

Macroeconomics indicators is still an evolving science but the goals of macroeconomic policy have been uniform globally. These include price stability, foreign exchange stability, full employment, balance of payment equilibrium, economic growth and development. Although these policies are very important and necessary, they could not be pursued simultaneously because some of them conflict with each other. Therefore there is always a tradeoff between the various objectives hence a country pursues a policy which is relevant to its stage of development at different times

and in different circumstances (Ebikila, Agada, Lucky & Matthew, 2023).

Human capital development can be seen as a deliberate and continuous process of acquiring requisite knowledge, skills and experiences that are applied to produce economic value for driving sustainable national development. Among the generally agreed causal factors responsible for the impressive performance of the economy of most developed and newly industrializing countries is an impressive commitment to human capital development (Fatoumata, 2020).

Human capital is considered as the most valuable asset and needs to be mobilized (Ebikila, Agada, Lucky & Matthew, 2018). Human capital as an economic term encompasses health, education and other human capacities that can raise productivity (Nwoko, Ihemeji & Anumudu 2016). Capital and natural resources are passive factors of production while human resources are active factors of production. Human capital constitutes the most valuable resource of a country; in its absence there will be the non performance of physical capital (tools, machinery, and equipment) which will

impede economic growth (Ibok & Ibanga 2020).

Human capital development is an important factor used in converting all resources to benefit mankind. Human Capital Development is strategic to the socio-economic development of a nation and includes education, health, labour, employment and women affairs. Foreign portfolio investing in human capital development is therefore critical as it is targeted at ensuring that the nation's human resource endowment is knowledgeable, skilled, productive and healthy to enable the optimal exploitation and utilization of other resources to engender growth and development in Nigeria.

Macroeconomic variables are indicators or main signposts signaling the current trends in the economy. Government and policy makers have embarked on various macroeconomic policies to address the problem of human capital development in Nigeria. Some of the policies involved the use of monetary and fiscal policy, export promotion strategy, imports substitution strategy, national economic empowerment development strategy (NEEDS). The fundamental objectives of the policies include price stability, maintenance of balance of payments equilibrium, promotion of employment, growth and sustainable development. These objectives are necessary for the attainment of internal and external balance of value of money and promotion of human capital development in sub Saharan Africa (Nwoko, Ihemeji & Anumudu 2016).

The main causes of unsustainable human capital development include high inflation, rising foreign debt, currency exchange rate volatility, consume more and save less, poor governance and policy implications, trade imbalance, spend more earn less, energy and water shortages and political instability (Paul & Akindele, 2016). Against this backdrop, this study examined the effect of macroeconomic indicators on sustainable economic development in subSaharan Africa

### **Statement of Problems:**

Since the introduction of the Structural Adjustment Programme (SAP) in 1986, the Sub Saharan Africa economy has become more open to market forces and their attendant problems. All those while, the Sub Saharan Africa economy had to deal with problems of high inflation rate and unstable economic growth and development, high and increasing rate of unemployment, trade imbalances, unstable exchange rate and high interest rate which had adversely affected economic growth and development in Sub Saharan Africa (Abdul & Marwan, 2013).

Economists differ on which policies that could enhance for long-run growth and development. For example, Antwi, Mills and Zhao, (2013) argue that macroeconomic policies are necessary for long-term development. However, Anderson and Jodon (1968) postulated that monetary policy has greater and faster impact on economic activity thus suggesting that greater reliance be placed on monetary measures than fiscal measures in the conduct of stabilization policy.

Gatawa, Akinola, and Muftau (2017) asserted that monetary variable is more effective and dependable than fiscal variable in affecting changes in economic activities. Other scholars argue that the growth of human capital, that is, investment in education and training contributes significantly to long-run development (Barro, 1990).

Previous attempts to understand the effect of macroeconomic indicators on sustainable economic development in Sub Saharan Africa have resulted in conflicting opinions. The existing studies disagreed both in the line of significance and direction of relationship. A number of the findings highlight significant influence from macroeconomic indicators bales especially the moderating effect of money supply (Gatawa, Akinola, Muftau, 2017; Olawale, 2015; Muftadeen, Hussainatu, 2014; Ojede, Amin, Daigyo, 2013; Madito, Khumalo, 2014). Despite agreeing that economic performance responds to macroeconomic indicators, these studies are at variance as to the direction of the effects.

For instance Holden, Sparman, 2013; Pitia, Lado, 2015; Paul, Akindele, 2016, argued that all the macroeconomic variables they employed have a negative effect on development in both the long and short run suggesting that growing money supply, interest rate, exchange rate and credit extension will rather hamper development in Sub Saharan Africa as against the belief from studies like Onwanchukwu, (2015), Ozei, Sezgin, Topkaya, (2013), that macroeconomic variables enhance

development of the economy. A number of studies outrightly argued that macroeconomic variables have no effect on development (Onuorah, Osuji 2014; Olawunmi, Adedayo 2016). Aroriode and Ogunbadejo, (2014), noted that interest rate, exchange rate and inflation rate are not statistically significant tools for enhancing economic development.

These shortcomings have somehow contributed to the knowledge gap in the literature which this study will intends to close by using data from (1987-2024), a period of 37 years and increasing the number of macroeconomic indicators.

### **Purpose of the Study**

The main purpose of the study is to examine the effect of Macroeconomic Indicators on Sustainable Economic Development in Sub Saharan Africa. Specifically, the study sought to:

1. Examined the effect of unemployment rate on sustainable economic development in Sub Saharan Africa
2. Analyzed the effect of foreign direct investment on sustainable economic development in Sub Saharan Africa
3. Investigate the effect of broad money supply on sustainable economic development in Sub Saharan Africa
4. Examined the effect of interest rate on sustainable economic development in Sub Saharan Africa

## Scope of the Study

The study is on the effect of macroeconomic indicators on sustainable economic development in sub Saharan Africa. Specifically, the study examined the effect of unemployment rate, foreign direct investment, broad money supply and interest rate sustainable economic development in sub Saharan Africa. The time frame covered is between 1987 to 2024.

## Research Questions

The following research questions were formulated to guide this study:

1. To what extent is the effect of unemployment rate affect sustainable economic development in Sub Saharan Africa?
2. How far does foreign direct investment influence sustainable economic development in Sub Saharan Africa?
3. To what degree does broad money supply affect sustainable economic development in Sub Saharan Africa?
4. To what dimension does interest rate affect the sustainable economic development in Sub Saharan Africa?

## Methodology

### Research Design

An ex-post facto research design is adopted for this study because the data are time series data that were sourced from the Central Bank

of Nigeria Statistical Bulletin, CBN Annual Reports and Statement of Accounts. National Bureau of Statistics. Independent variables are gross domestic product, foreign direct investment, broad money supply and interest rate while human capita development is the dependent variable

### Model Specification

The models for this study was adopted and modified in line with each objective of the study

Macroeconomic Indicators on Sustainable Economic Development in sub Saharan Africa

The model which is adopted for the study is the model of Olawale (2015) who studied the impact of macroeconomic variables on economic development in Sub Saharan Africa using the vector autoregressive approach:

### The Model is Stated Thus:

$$HDI = f(FDI, GDP, M_2)$$

### Where:

HCD= Human Capital Development Index

FDI= Foreign Direct Investment

M<sub>2</sub>= Broad Money Supply

### The Model were Modified as Follows:

$$HDI = f(FDI, GDP, M_2, ITR)$$

### The Equation Form of the Model is:



$$\text{HDI} = \beta_0 + \beta_1 \text{GDP} + \beta_2 \text{FDI} + \beta_3 \text{M}_2 + \beta_4 \text{ITR} + \mu - - - - - 6$$

### Where:

HDI= Human Capital Development Index

GDP= Gross Domestic Product

FDI= Foreign Direct Investment

M<sub>2</sub>= Broad Money Supply

ITR = Interest Rate.

### Method of Analyses

The data were analyzed with econometric techniques involving Econometric techniques, including Descriptive Statistics, Augmented Dicker tests for unit roots, The Autoregressive Distributive Lag (ARDL)

**Table 1: Descriptive Statistics for Selected Macroeconomic Indicators on Sustainable Economic Development in sub Saharan Africa**

	HDI	FDI	M2	UPR	ITR
Mean	0.453000	1130.200	4873.760	5512.360	18.69000
Median	0.475000	615.4000	3217.910	5924.650	18.12000
Maximum	0.500000	3068.900	11525.53	10387.70	24.85000
Minimum	0.350000	132.4000	102.320	1744.200	15.14000
Std. Dev.	0.053759	1073.023	3881.098	3238.066	2.624322
Skewness	-1.241875	0.608589	0.777810	0.056149	1.213791
Kurtosis	2.913926	1.858316	2.026694	1.474176	4.244589
Jarque-Bera	2.573511	1.160402	1.403034	0.975312	3.100901

approach which is capable of handling both stationary at level I(0) and first difference I(1). The Autoregressive Distributive Lag (ARDL). Bounds test for cointegration. The nature of the Autoregressive Distributive Lag (ARDL) long run relationship and speed of correction to equilibrium and the Autoregressive Distributive Lag (ARDL) short run relationship were used for the data analysis using E-view

### Results

#### Descriptive Statistics

These measures the individual characteristics of the variables used in this study. The result of the descriptive statistics is presented in Table 1

Probability	0.276165	0.559786	0.495833	0.614064	0.212152
Sum	4.530000	11302.00	48737.60	55123.60	186.9000
Sum Sq. Dev.	0.026010	10362406	1.36E+08	94365652	61.98360
Observations	37	37	37	37	37

#### Source: Authors computation from Eviews 9.0

The descriptive statistics showed the mean and standard deviation. The mean is the average value of each variable over the years while the standard deviation shows the variability of the values. The descriptive statistics also showed the maximum and minimum values. The Jarque-Bera statistics is the test of normality of the time series variables.

The variables of the study shown on Table 1 above indicate that Human capital development index (HDI) had a mean of 0.4530% with standard deviation of 0.053 with minimum and maximum values of 0.350% and 0.500% respectively

Real gross domestic product (RGDP) had a mean of 27.28% with standard deviation of 15.72 with minimum and maximum values of 313.14% and 546.26% respectively foreign direct investment (FDI) had a mean of 113.20% with standard deviation of 107.023 with minimum and maximum values of 132.40% and 306.90% respectively

Money Supply (M2) had a mean of 487.76% with standard deviation of 38.09 with minimum and maximum values of 102.32% and 1152.53% respectively

#### Unit Root Test

**Table 2: Summary Unit Root test for Stationarity**

Variables	At Level 1(0)	At First Difference 1(1)	At Second Difference 1(2)	Order of Integration	Probability
HDI		-4.668720		1(1)	0.0008
M <sub>2</sub>	-3.839292			1(0)	0.0070

GDP	-4.000361	1(0)	0.0000
FDI	-6.657659	1(0)	0.0000
IFR	-5.128101	1(0)	0.0003
UPR	-5.673721	1(1)	0.0008
ITR	-5.324361	1(0)	0.0021

**Source: Eviews 9.0**

The variables were tested for stationarity. The test aimed to understand the state at which the variables can be held stable for regression analyses. This test becomes pertinent because time series variables are often prone to non-stationarity which is capable of distorting the reliability of regression results. The variables used in the analysis were subjected to Augmented Dicker Fuller (ADF) Tests, to determine whether they are stationary series or non-stationary series. From the analyses of stationarity of the variables, it was seen that the variables have mixed stationarity of level and first differences. The Autoregressive Distributive Lag (ARDL) approach which is capable of handling both stationary at level  $I(0)$  and first difference  $I(1)$  were used for the data analysis. Thus, the most suitable tool of analyses is the ARDL test that accommodates both the short and long run trends in testing the relationship between the dependent and independent variables.

**ARDL (Bounds) Test for Cointegration**

**Table 3. Result of the ARDL (Bounds) Test for Selected Macroeconomic Indicators and Sustainable Economic Development in Sub Saharan Africa**

ARDL Bounds Test

Date: 07/14/25 Time: 17:23

Sample: 1987 2024

Included observations: 37

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	6.48674	5



### Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: Eviews 9.0

The bound test is shown in Table 3. The result compared the F-statistics with the critical bound values. The F-statistics is 6.48674. The results showed that the F-statistic is higher than the lower bounds at 2.62 and upper bounds at 3.79 of the critical values at 0.05 level of significance. This means that there is a cointegration or long run relationship between selected macroeconomic variables and human capital development in Nigeria

### Nature of ARDL Long Run Relationship and Speed of Correction to Equilibrium

**Table 4: Model of the Long Run Relationship Between Selected Macroeconomic Indicators and Sustainable Economic Development in Sub Saharan Africa**

ARDL Cointegrating And Long Run Form

Dependent Variable: HDI

Selected Model: ARDL

Date: 07/14/25 Time: 17:23

Sample: 1987 2024

Included observations: 37

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HDI(-1))	8.587973	0.208800	4.815958	0.0380
D(HDI(-2))	0.237865	0.116746	2.037455	0.0213
D(HDI(-3))	-0.160533	0.155162	-1.034616	0.3593
D(UPR)	0.000002	0.000001	1.316227	0.2041
D(UPR (-1))	-0.000002	0.000002	-0.862785	0.4369
D(UPR(-2))	0.000007	0.000004	2.039678	0.1110
D(FDI)	-0.000002	0.000001	-2.188334	0.0939
D(FDI(-1))	0.000001	0.000000	2.354086	0.0782
D(FDI(-2))	0.000001	0.000000	2.931361	0.0428
D(M2)	0.000013	0.000004	2.986905	0.0405
D(M2(-1))	0.000003	0.000005	0.704552	0.5199
D(M2(-2))	-0.000002	0.000003	-0.771175	0.4836
D(ITR)	0.005315	0.002362	2.250231	0.0876
D(ITR(-1))	-0.003358	40.001743	2.926032	0.0047
CointEq(-1)	-6.904626	3.208291	-2.454298	0.0014

#### Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UPR	-1.360017	0.000046	1.275025	0.4657
FDI	3.671075	0.000149	2.502412	0.0418
M2	6.252043	0.000095	3.448792	0.0018
ITR	-0.227895	0.458045	-0.497539	0.6449

C 4.841141 9.032941 s2.535943 0.0104

Source: Eviews 9.0

Haven found presence of long run relationship between Selected Macroeconomic Indicators and Sustainable Economic Development in Sub Saharan Africa from result of the Bound Test, further analyses presented in Table 4 aimed at explaining the nature of the long run relationship. The results showed that the error correction term [CointEq(-1)] is rightly signed. The coefficient of the error term is -.904626 with probability value of 0.0014. Since the p.value is less than 0.05, it connotes that the error term is statistically significance. This indicates the changes in human capital development trend will eventually return on a growing normal trend over time. The coefficient indicates about 69% of the deviations in human capital development in Sub Saharan Africa due to selected macroeconomic indicators can be corrected within a year.

### Short Run Relationship

**Table 5: Short Run Model of the Relationship Between Selected Macroeconomic Indicators and Sustainable Economic Development in Sub Saharan Africa**

Dependent Variable: D(HDI)

Method: Least Squares

Date: 07/14/25 Time: 17:23

Sample: 1987 2025

Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HDI(-1))	3.587973	0.208800	2.815958	0.0480
D(HDI(-2))	0.237865	0.116746	2.037455	0.0013
D(HDI(-3))	-0.160533	0.155162	-1.034616	0.3593
D(UPR)	-1.926306	1.26E-06	-1.316227	0.4021
D(UPR(-1))	-5.287406	3.98E-06	-1.478911	0.2546
D(UPR(-2))	-7.312206	3.59E-06	-0.039678	0.9110

D(FDI)	2.125106	9.67E-07	2.188334	0.0539
D(FDI(-1))	1.979306	5.49E-07	3.594777	0.0229
D(FDI(-2))	9.98E-07	3.41E-07	2.931361	0.0428
D(IFR)	0.030672	0.000408	1.648477	0.1746
D(IFR(-1))	0.701086	0.000281	0.863149	0.4181
D(IFR(-2))	-0.000610	0.000291	-2.094034	0.1044
D(M2)	1.27E-05	4.27E-06	2.986905	0.0405
D(M2(-1))	9.80E-07	3.38E-06	4.290203	0.0016
D(M2(-2))	-2.25E-06	2.92E-06	-0.771175	0.4836
D(ITR)	0.005315	0.002362	2.250231	0.0276
D(ITR(-1))	-0.003358	0.001743	-1.926032	0.1264
C	-0.458100	0.166954	-2.743860	0.0517
UPR(-1)	-1.65E-06	3.74E-06	-0.440333	0.6824
FDI(-1)	-7.07E-06	1.61E-06	-4.395027	0.0117
IFR(-1)	0.000704	0.000607	1.159215	0.3109
M2(-1)	4.03E-06	2.40E-06	1.680173	0.1682
ITR(-1)	0.021565	0.005330	4.045732	0.0155
HDI(-1)	0.094626	0.208291	0.454298	0.6732

R-squared	0.799090	Mean dependent var	-0.001071
Adjusted squared	R-0.773055	S.D. dependent var	0.026295
S.E. of regression	0.007136	Akaike info criterion	-7.279042

Sum squared resid	0.000204	Schwarz criterion	-6.137152
Log likelihood	125.9066	Hannan-Quinn criter.	-6.929955
F-statistic	12.76635	Durbin-Watson stat	1.819650
Prob(F-statistic)	0.007927		

The short run effect of Selected Macroeconomic Indicators and Sustainable Economic Development in Sub Saharan Africa is explained in the result in Table5. The analyses are interpreted based on the coefficient of the explanatory variables, and the coefficient of determination (R<sup>2</sup>). The statistical significance was confirmed using the t-statistics for the coefficient of regression, and F-statistics for the coefficient of determination.

**Human Capital Development Index (HDI):** The results showed that the coefficient of human capital development index in the first year is positive at 3.587973 and after one year is positive at 0.237865 with t-Statistic of 2.815958 and 2.037455 with probability value of 0.0480 and 0.0013 which means that human capital development is an endogenous variable in the short run

**Unemployment Rate ( UPR):** The coefficient of employment rate in the first year is negative at -1.926306 and after one year is negative at -5.287406 with t-Statistic of -1.316227 and -1.478911 and probability value of 0.4021 and 0.2546 showing that unemployment rate has negative and

insignificant effect on human capital development in the short run

**Foreign Direct Investment (FDI):** The coefficient of foreign direct investment in the first year is positive at 2.125106 and after one year is positive at 1.979306 with t-Statistic of 2.188334 and 3.594777 with probability value of 0.0539 and 0.0229 this indicate that foreign direct investment has significant effect on human capital development in the short run

**Money Supply (M2):** The coefficient of money supply (M2) in the first year is positive at 1.27E-05 and after one year is positive at 9.80E-07 with t-Statistic of 2.986905 and 4.290203 with probability value of 0.0405 and 0.0016 indicating that money supply (M2) has positive and significant effect on human capital development in the short run

**Interest Rate (ITR):** The coefficient of interest rate (ITR) at level is positive at 0.005315 and after one year is negative at -0.003358 with t-Statistic of 2.250231 and -1.926032 and probability value of 0.0276 and 0.1264 which means that interest rate in the first year has positive and significant effect

on human capital development in the short run but after one year has positive and insignificant effect on human capital development in the short run

### Hypotheses Testing

The hypotheses testing are now carried out to determine the significance of selected macroeconomic indicators on sustainable economic development in Sub Saharan Africa. The hypotheses are tested separately for long run and short run effects. The short run effects are tested using the adjusted  $R^2$  and corresponding F-statistics.

### Decision Rules:

**For Long Run Effect:** If the bound values are less than the F-statistics value, reject the null hypothesis.

**For Short Run Effect:** At 5% level of significance, reject the null hypothesis, if the F-statistics p.value is less than 0.05.

### Stage One: Restatement of Hypothesis in Null and Alternate Form

$H_{01}$ : Selected Macroeconomic Indicators have no positive and significant effect on human capital development in Sub Saharan Africa

$H_i$ : Selected Macroeconomic Indicators have positive and significant effect on human capital development in Sub Saharan Africa

### Stage Two: Analysis of Results

Long Run Effect: F-statistics = 6.48674 (Lower and Upper Bounds = 2.62 and 3.79)

CointEq (-1) - 6.904626; p.value = 0.0014

Short Run Effect: Adj  $R^2$  = 0.773055; F-statistics = 12.76635; p.value 0.007927

The result compared the F-statistics with the critical bound values. The F-statistics is 6.48674. The results showed that the F-statistic is higher than the lower bounds at 2.62 and upper bounds at 3.79 of the critical values at 0.05 level of significance. This indicates that there is a cointegration or long run relationship between selected macroeconomic indicators on Sustainable Economic Development in Sub Saharan Africa

The results showed that the error correction term [CointEq(-1)] is rightly signed. The coefficient of the error term is -6.904626 with probability value of 0.0014. Since the p.value is less than 0.05, it connotes that the error term is statistically significance. This indicates the changes in human capital development trend will eventually return on a growing normal trend over time. The coefficient indicates about 69% of the deviations in human capital development in Sub Saharan Africa due to selected macroeconomic Indicators can be corrected within a year. This implies that increasing selected macroeconomic indicators can be used as a significant policy adjustment to stabilize human capital development in Sub



Saharan Africa within the period under review.

The hypothesis testing for short run effect showed that the computed F-statistics (12.76635) has a p.value of 0.007927 which is less than 0.05 for rejection of null hypothesis of short run effect. The study concludes that selected macroeconomic indicators have a short run significant

### Discussion of Findings

The discussion of findings was done in line with the objectives of the study

#### Selected Macroeconomic Indicators and Sustainable Economic Development in Sub Saharan Africa

Selected macroeconomic indicators have (69% long run and 77% short run) significant negative effects on human capital development in Sub Saharan Africa.

The findings agree with the Solow-Swan model. Solow's model which states that human capital acquired knowledge and skills of workers through education, training, and experience. Quality human capital will enhance the ability of a country to produce goods and services. The findings of this study disagree with the work of Orumie (2017) that showed that selected macroeconomic variables and population growth have negative effect on human capital development in Sub Saharan Africa

### Conclusion

negative effect on human capital development in Sub Saharan Africa. The adjusted coefficient of determination indicates 77% explanatory power.

**Decision:** Selected macroeconomic variables has (69% long run and 77% short run) significant negative effects on human capital development in Sub Saharan Africa

The study revealed that selected macroeconomic variables have (69% long run and 77% short run) significant effects on human capital development in Sub Saharan Africa.

The study therefore concludes that selected macroeconomic indicators have been effective short run policy instruments that largely influenced human capital development in Sub Saharan Africa but have not been effective long run policy instruments that largely influence economic development in Sub Saharan Africa.

### Recommendations

Amongst the recommendations is that federal government through the monetary authorities should regulate the monetary policy rate downwardly to encourage foreign and private investment and improve human capital development in Sub Saharan Africa. Continuous fluctuations in interest rate may decrease the confidence of investors due to uncertainty about return on investment. Thus, government should control the interest rates charged by financial institutions to encourage

investments and improve human capital development, Government should pursue policies and programmes aimed at sustenance of low interest rate regime. Such policies may include development of requisite infrastructure, maintenance of price stability and institutionalization of good governance practices to improve human capital development in Sub Saharan Africa. Monetary authorities should reduce interest rate to attract low interest rates that can encourage credit and boost productivity across the sectors which will improve human capital development in Sub Saharan Africa. Government should take serious steps to

control the inflation rate by reducing imports and increasing exports, reducing government expenditures, give priority to agriculture sector, take serious consideration to food prices, increase and utilize energy resources with low production cost and remove security threats. The main policy implication of this study is that government should embark on labour intensive technique of production as against capital intensive and also close the border to some extent which is the likely measure to reduce unemployment and improve human capital development in Sub Saharan Africa.

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