## INFLATION AND POVERTY REDUCTION HYPOTHESIS IN NIGERIA: A QUANTITATIVE EXAMINATION OF LONG-RUN STABILITY [1986 - 2022]

#### **AZUBUIKE ERNEST AGUGUA (PhD)**

+2348034269442 / <u>azubuike.agugua@komu.edu.ng</u> Department of Economics, K. O. Mbadiwe University, Ideato , Imo State, Nigeria

&

REV. CANON TIMOTHY C. NWACHUKWU (PhD)

+2348038659542 / <u>timnwachukwu@yahool.com</u> Department of Accountancy, Imo State Polytechnic,

Omuma, Imo State, Nigeria

#### ABSTRACT

This research investigated quantitatively, the impact of price stability (inflation)- a macroeconomic condition on poverty reduction in Nigeria for the period (1986 -2022), using a quantitative approach to examine the long-run stability. The main objective was to evaluate the impact of inflation on poverty reduction in Nigeria, through the maintenance of price stability. Basically, we investigated and analyzed the impact of macroeconomic condition of inflation on poverty reduction in Nigeria and established the level of stability of the variables over the period studied. For the achievement of these objectives, we put forward and specified models with variables such as, Interest rate (INTR), Money supply (MOS), Exchange Rate (EXRE) and poverty reduction proxied by gross domestic product per-capita (GDPPC). These variables were extracted from both the CBN and NBS statistical bulletin. The econometric methods of cointegration and error correction mechanism (ECM) and Chow Test of stability were applied to establish the extent of significant of the variables used by carrying out a Unit Root Non-stationary test based on Augmented Dickey Fuller Specification. Given the empirical results, it was established that some of the apriori expectations were inconsistent in the estimations. At the long-run, the results show to some extent that the level of impact of price stability on poverty reduction in Nigeria was high, appropriately signed and significant. This shows that GDPPC in Nigeria for the period under review does adjust fairly to changes in inflation, indicating the existence of longrun stability between them. To sum up therefore, based on our results, appropriate policy recommendations were made which include that, policy should be tailored towards reducing inflation, because it erodes the purchasing power of the individual and also reduce the level of the production of goods and services as a result of increase in cost.

# Keywords: Exchange rate, money supply, interest rate, gross domestic product per capita, price stability.

## INTRODUCTION

According to Bassey (2015), Nigeria is famous for her huge population of about 140 million people- the largest national population in the African continent and the largest group of black people on earth. The population is made up of about 250 pure ethnic groups. Three, of them;

Hausa, Igbo and Yoruba are the major groups and constitute over 40% of the population. The census in 1991 indicates a population that is 51% male and 49% female.

Economically, Nigeria is rich in resources. Nigeria produces more oil than any other African country. She produces cocoa, groundnuts, palm oil and palm kernel, rubber and timber and other agricultural products. Apart from oil, Nigeria also produces other minerals like gas, tin, bauxite, columbite and many others. (Afonja, et al 2020).

At the dawn of the twenty first century and in spite of the lavish endowments of nature; petroleum, gas, solid minerals, very large expanse of land and sea, different geographical belts conducive for a wide range of agricultural projects etc. Nigeria is still in the throes of grinding poverty.

#### **OBJECTIVE OF THE STUDY**

The main objective of this study is to evaluate the impact of inflationary conditions on poverty reduction in Nigeria.

To this specially, the study seeks to achieve the following:

- 1. To examine the trend and pattern of inflation conditions on poverty reduction in Nigeria.
- 2. To determine the relationship between inflationary conditions in Nigeria and poverty reduction.

#### STATEMENT OF THE HYPOTHESES

For the purpose of ensuring a detailed treatment of all relevant issues involved in the study area, the research will be guided by the following two (2) hypotheses:

- 1. H<sub>1</sub>: There is no significant relationship between inflation in Nigeria and Gross Domestic Product per Capita (GDPPC)
- **2.** H<sub>2</sub>: There is no significant relationship between some selected macroeconomic variables of inflation, Money Supply (MOS), Interest Rate (INTR) and Exchange Rate (EXR) and Gross Domestic Product per Capita (GDPPC).

#### **REVIEW OF RELATED LITERATURE/THEORITICAL FRAMEWORK**

Poverty affects many aspects of human conditions, hence there has been no universal consensus on the definitions of poverty. The concept of poverty which reflects its numerous visible attributes is multidimensional in nature. Attributes of poverty may be classified into structural, economic, social, cultural and social deprivations. The structural dimension appears more permanent and manifests a vicious cycle, reflecting limited productive resources, lack of skills for gainful employment, location disadvantage and inadequate income to obtain the basic necessities of life. The social dimension of poverty is largely a gender issue since the greatest weight of poverty is borne by women, household heads and children from poor homes. However, the conventional notion depicts poverty as a condition in which people are below a specific minimum income level and are unable to provide or satisfy the basic necessities of life needed for an acceptable standard of living. Often, the poor are known to have inadequate level of consumption. (Chuma, 2014)

#### **INCIDENCE OF POVERTY**

In discussing the incidence of poverty in Nigeria, the National Bureau of Statistics (NBS) in a survey in (2020), published by the World Bank under the auspices of the National Planning Commission (NPC) titled, "poverty and welfare in Nigeria" (2019); described Nigeria's festering poverty profile as "widespread and severe". In Comparative analysis welfare, the report ranked Nigeria below purchasing power of the people and the increasing income inequality in Nigeria which has made life unbearable for the citizenry despite improved inflation rate.

Poverty is more pronounced in rural areas when compared with urban areas, it exhibited an undulating pattern. Poverty in the rural areas showed that the proportion of people living below the national poverty line was 28.3% in 1985; it further rose to 51.4% in 1995. It fell to 46.0% in 2000 and rose to 63.3 in 2014 and declined to 59.4% in 2016. A critical look at the above analysis showed that the proportion of poor people is growing faster in the urban areas than in rural areas.

#### THEORIES OF INFLATION

When the supply of goods and services falls short of the demand we have excess demand. the excess demand leads to competitive bidding, the final result of which will be higher prices. Keynes (1936), based his argument on the fact that if the multiplier is relatively stable, changes in income can be predicated from the changes in investment. So long as there are unemployed resources in the economy, an increase in investment expenditure will lead to increase in employment, income and output. Once full employment is reached and bottlenecks appear, this is known as bottleneck inflation or "semi inflation", further increase in expenditure will lead to excess demand and to increase in prices. This is inflation according to Keynes. Sanwar S (2010), sums it up by saying "In sum, as inflation is creature of excess demand, there is no serious price level distortion until full employment is reached.

Several criticisms have been advanced against this type of analysis of the phenomenon of "inflation". First, monetary factors are ignored in the analysis of excess demand caused by inflation. The theory does not consider the effect that rising nominal income will have on money demand or interest rates.

Finally, the income expenditure approach to inflation only concentrates on excess demand in the commodity market but ignores the role of the factor markets (Aluko, 2012).

#### GROSS DOMESTIC PRODUCT PER CAPITA (GDPPC) LINKED WITH INFLATION

In Nigeria, there has been several studies for various time periods, on the causes of inflation for instance, Oyejide (2015), Akinfesi (2016), Adeyeye (2018), Osakwe (2020) and Asogu (2021), attempted empirically to ascertain the causes of inflation in Nigeria. Adeyeye (2019) made empirical enquiry into the impact of poverty reduction measures (proxied by per capita income) on inflation and capital formation. He related, domestic money supply to inflation using fisher's type of equation since there seems to exist a direct correlation between general price level and increases in per capita income over the 1957-1970-time period, he concluded that less emphasis in GDP may limit the growth of price inflation. In Ajakaiye et al (2017) factors such as changes in money supply, lagged changes in money supply, government deficit expenditure, industrial production and food price indices were variables captured,

while changes in the annual data for 1970-1993 were used in empirical estimation. The study showed that changes in the above factors jointly explained inflationary tendencies in Nigeria. The study, however, emphasized that increases in government expenditure financed by monetization of oil revenue and credit from banking system were responsible for the expansion of money supply, which in turn, with a lagged-in-effect contributed immensely to inflationary tendencies.

#### **REVIEW OF EMPIRICAL LITERATURE**

For the developing countries, Dandekar and Rath (2021) in their study of "Poverty in INDIA", observed that the elimination of influences of population growth and price stability (Inflation) did not negate the common belief about expenditures that government expenditure increases in a faster rate than the National Income. This belief has been upheld by the empirical results obtained in both USA and the UK as per above. Goncharov (1986), in his study of government expenditures and budgetary allocations to poverty reduction programmes in Hungary between 2018 and 2019 fiscal years, showed that, the government's expenditure on social services gulped, 26.6 percent in 2018 and 29.2 percent annually over the seven-year period.

As for Africa, Maryan et al (2010), carried out a study in Malawi, for a five-year period, 1980-1984, the result revealed impact of inflation on poverty reduction programmes for the period under review has been on the decline. It was 5.2 in 2017, 4.9 in 2018 and 3.76 and 3.0 in 2020 and 2021 respectively. This Marayan et al attributed rising inflation in the country's price reduction position, also, on the lack of political will on the part of the leadership to fight poverty headlong.

#### SUMMARY OF LITERATURE REVIEW

Excess demand theory of inflation (Keynesian theory) fits into this study. This is because the theory explains that when aggregate demand exceeds aggregate supply, this excess demands leads to competitive bidding, the final result of which will be higher prices.

#### **RESEARCH METHODOLOGY**

This chapter is designed to explain the methods which the researcher used in analyzing the various data that were collected for the work.

#### Data required

The data required for the study include:

1.	Poverty Reduction proxied by GDPPC	1986-2022
2.	Inflation Rate (INF)	1986-2022
3.	Money Supply (MOS)	1986-2022
4.	Exchange rate (EXRE)	1986-2022
5.	Interest Rate (INTR)	1986-2022
6.	Exchange Rate (EXRE)	1986-2022

#### **Model Specification**

In order to gauge the relationship that exists between inflation coupled with our stated objectives and hypotheses in section one above, the model shall be established as follows:

GDPPC	=	f (INF)	 (model 3.1)
GDPPC	=	f (INF, MOS, EXRE, INTR)	 (model 3.2)

The argument in equations 3.1 and 3.2 above were tried with both linear and log linear specifications and the Logarithmic equation suits our specification, judged in term of goodness of fit, precision of estimates and a tolerable level of multicollinearity was be chosen. Thus, transforming the argument in 3.1 and 3.2 into logarithmic equations, we have;

 $Log GDPPC = c + d log INF + \lambda_2$ 3.3  $Log GDPPC = \beta_0 + \beta_1 log INF + \beta_2 log MOS + \beta_3 log EXRE + \beta_4 log INTR + \lambda_5 - ---- 3.4$ The mathematical form of the model is as follows:  $= c + d \ln X_1 + \lambda_1$ In  $\phi_1$ 3.5  $=\beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \beta_4 \ln X_4 + \lambda_2$ 3.6 In  $\phi_2$ \_\_\_\_\_ **GDPPC** Where  $\phi_1$ = INF  $X_1$ =  $\chi_2$ MOS = X3 EXRE =

INTR

 $\lambda_1 - \lambda_2$ = Stochastic Disturbance term  $\phi_1$  and  $X_1 - X_4$  as stated above

 $X_4$ 

c - d = parameters for simple regression

 $\beta_0 - \beta_4$  = parameters for multiple regression.

=

It is believed that the stochastic regression term will capture the impact of the other variables that were not included in the models. Hence, the mathematical form of the model becomes; In  $\phi_2 = \beta_0 + \beta_0 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \beta_4 \ln X_4$  ----- 3.7

#### Methods of Data Analysis

This research shall employ:

- a) Unit Root Test
- b) Cointegration and Error Correction Model (ECM) techniques.

#### **Cointegration and Error Correction Model (ECM) Techniques**

The study adopted cointegration and error correction techniques to estimate the model. According to Johansen and Juselius (1990), most economic time series (variables) that exhibit strong trends are non-stationery, yet they are being treated as though they were stationary by most economists. Correct and appropriate specification and estimation of time series models require that we determine whether the time series are stationery or non-stationery, there is the need to analyse non-stationery time series, since this might lead to spurious relationship (Granger et al, 1979).

This leads to the coefficient of determination  $(R^2)$ , tending to unity (i.e. very high  $R^2$ ), or adjusted coefficient determination  $(R^2)$ , together with highly auto-correlated residuals as

INFLATION AND POVERTY REDUCTION HYPOTHESIS IN NIGERIA: A QUANTITATIVE EXAMINATION...

indicated by low Durbin-Watson (DW) statistic. In the same way, the standard significance test (measured by the traditional T-test) will reject the null hypothesis of no trend or no relationship between the series on approximately three quarters of all occasions. Hence, there is a danger of accepting a close relationship between the series when they are almost independent.

Consequent upon the above, inflation conditions was subjected to a Unit Root test to determine their time series characteristics. Unit Root is basically required to ascertain the number of times a variable has to be differenced to arrive at stationarity (Engle & Granger, 1977). According to Maddala (1992), testing for Unit Root is a formalization of the Box-Jenkins approach of differencing the time series after a visual inspection of the Correlogram.

The methods of testing for unit roots are by use of the Dickey-Fuller (DF) test and the Argumented Dickey-Fuller (ADF), but the ADF test is considered superior to the Dickey-Fuller Test because it adjusts appropriately for the occurrence of serial correlation.

The analysis of testing for Unit Roots naturally leads to the theory of Cointegration (Barat 22<sup>nd</sup> et tal 2017). This is because, basically, cointegration deals with the methodology of modelling nonstationary time series variables and the idea rests on the thesis that even though two-time series may not themselves be stationary, a linear combination of two nonstationary time series are said to be "cointegrated". Usually, for cointegration, (Ifeanyi 2012) the two-time series have to be of the same "order" i.e., they should be stationary after the same number of differencing.

The theory of cointegration according to Granger (1981) and Engle & Granger (1987), addresses the issue of cointegrating short-run dynamics with long-run equilibrium. Basically, the theory demonstrates that if two variables are cointegrated, it implies that there is a meaningful long-run relationship between them, the short-run dynamics can be described by the Error Correction Model (ECM). As this study, the first step to the ECM analysis is the estimation of the following models: 3.1 - 3.7

## Variables in the Model INFLATION (INF)

This refers to a persistent and continuous increase in general prices of goods and services throughout the country. Inflation is presented in this research as one of the independent variables as depicted by equations 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. it is used to the effect that the input, exchange rate (EXRE), money supply (MOS), and interest rate (INTR) on GDPPC will be determined. Inflation is a very serious macroeconomic problem. The desire of any government is to achieve an increase in output and reduce prices (inflation). The economic argument here is that increase in inflation, (not matched with increase in goods and services) will lead to reduction in the gross domestic product per capita (GDPPC).

Therefore, there exists a negative relationship between inflation and GDPPC. Also, increase in money supply will spur investment which will raise GDP and to a large extent raise GDPPC. However, increase in interest rate discourages investors from borrowing more money and therefore reduces the level of money in circulation. This reduces the pressure on the demand of goods and therefore reduces GDP and also gross domestic product per capita

(GDPPC). On the other hand, rise in exchange rate against the naira will invariably reduce gross domestic product per capita by lowering GDP.

It therefore expected from equations 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7 that regression coefficient of money supply is expected to be greater than zero while that of inflation, interest rate and exchange rate are expected to be negative. d,  $\beta_{2} > 0$  and  $\beta_{1},\beta_{3}, \beta_{4} < 0$ .

#### **MONEY SUPPLY (MOS)**

This is one of the regressors in inflation and unemployment models. Money supply or Money stock refers to the total value of money in the economy and this consists of currency (notes and coins) and deposits with deposits money banks. For purpose policy, there are two variants of money supply in Nigeria M<sub>1</sub> and M<sub>2</sub>. M<sub>1</sub> is the narrow measure of money supply while M<sub>2</sub> is the broad measure of Money supply and includes M<sub>1</sub>, savings and time deposits. Also M<sub>2</sub> measures total liquidity in the economy.

#### INTEREST RATE

This is also one of the explanatory variables in the inflation and agricultural output model. In this study, we used the rediscount rate. The rediscount rate is the rate of interest the monetary authorities charge the commercial banks on loans granted to them. If the CBN, wishes to increase liquidity investment, it reduces the discount rate, this in turn reduces the interest rates charged by the banks.

#### **EXCHANGE RATE (EXRE)**

This is one of the regressors in the inflation model. It is the rate at which the price of one money exchanges for another. Changes in the exchange rate affect the external balance (CBN 2021).

#### DATA PRESENTATION AND ANALYSIS

#### Introduction

In this article, we examined the various methods and estimation techniques adopted in evaluating and analyzing the data collected for the purpose of this study. In this chapter, we shall critically analyze and interpret the data.

#### Analysis of Data

The data were analysed using microfit 4.1 for windows PC software, Persaran and Persaran facility for performing DF and ADF test. Also econometrics software called E-views 5.1, which provides a sophisticated data analysis was used to analyze the data.

#### **Short-run Regression Model**

The result of the short-run regression model test carried out, therefore calls for unit Root test to determine their time series characteristics. The unit root test is basically required to ascertain the number of time a variable has to be differenced to arrive at stationarity (Data, 2018). For detailed result see Table 1A.

VARIABLE	ADF	ORDER OF
		INTEGRATION
INF	-4.052003	I (1)
MOS	-6.151857	I (1)
INTR	-6.581703	I (1)
GDPPC	-5.810827	I (1)
EXRE	-3.510540	I (1)
1% Critical values for th	e test is -3.6289	
5% Critical values for th	e test is -2.9472	
10% Critical values for the	e test is -2.6118	

## TABLE 1A: SUMMARY OF UNIT ROOT TEST RESULTSTATIONARITY TEST AT 1<sup>st</sup> DIFFERNECE (1986-2022)

#### Source: Authors Computation

The result from the stationarity test above therefore calls for long-run relationship.

#### **Unit Root for Test Results**

As stated in this article, Granger et tal (1987), argued that most times series variables are nonstationary and using non-stationary variables in a model might lead to spurious regression. The first or second differenced terms of most of the variables, will usually be stationary. The summarized result presented in each of the model (3.1-3.7) under the headline (Unit Root), shows that at various levels of significance (1%, 5% and 10%) all the variables were found to be integrated of order 1, and that is, they are 1 (1). For detailed result see Appendix A.

The result from the stationarity test above therefore calls for long-run relationship. The analysis of and testing for unit roots naturally leads to the theory of cointegration (Cocreft et al, 2012).

#### **Cointegration Test Results**

We now turn to determine the existence of long-run equilibrium relationship between our variables. Separate cointegration test are carried out on each of the variables to cover the eight (8), models of the work. As indicated earlier, non-stationary time series can be cointegrated if there is a linear combination of them that is stationary, that is, the combination does not have a stochastic trend. The linear combination is the cointegration equation.

From the result in appendix B & C, it shows that the variables in model (3.1-3.7) are cointegrated, that is there exists a long-run relationship among the variables. The cointegration test are based on the Johansen and Juselius (1990), test. See appendix B & C

## Summary of Major Findings

results for details.

The result from the study showed that, though inflation explained 89.4% change in GDPPC. This showed that the rate of adjustment parameter was high, appropriately signed and significant.

The result also indicates that the coefficient of determination was significantly high and the overall result was significant at 1%. In the inflation model, the apriori expectation was not met.

## **Recommendations/Policy Implication**

Based on the findings of the study, some policies that would be of help to government and policy makers in improvement of poverty reductions in Nigeria are made;

- 1. There is the need to stabilize the naira and make it more competitive in the global market. This is because with a valued high currency, it increases the productive capacity which leads to increase in economic growth and hence the GDPPC (all things being equal).
- 2. Policy should be tailored to reduce inflation, because it erodes the purchasing power of the individual and also reduces the level of production of goods and services as a result of increase in cost.
- 3. Provide funding to the organized private sector (OPS) to diversify the economic base of the country. The 10% profit after tax contribution by banks to small and medium scale enterprises and the establishment of Bank of Industry are good examples.
- 4. Ensure macroeconomic stability and growth with development which is the first means of reaching the poor. Since, without growth there can be no expansion which will create employment and increase income for distribution.

F	ł	p	p	en	ld	lix	A	L	
т	т		٠.	р					

ADF test Statistic	-4.148633	_	1% (	Critical Value*	-3.6353
			5% <b>C</b>	Critical Value	-2.9499
			10% 0	Critical Value	-2.6133
*MacKinnon critical va	alues for reject	ion of hy	pothes	sis of a unit root	-
Augmented Dickey-Fu	aller test equat	tion			
Dependent Variable: I	D(LOG(GDPP	C))			
Method: Least squares	3				
Date: 01/16/22 Time	e: 08:06				
Sample (adjusted): 198	86-2022				
Included observations	: 36 after adju	sting end	lpoints		
Variable	Coefficient	Std. E	rror	t-Statistic	Prob.
LOG (GDPPC(-1))	-1.039989	0.250	682	-4.148633	0.0002
D(LOG(GDPPC(-1)))	0.049764	0.180	043	0.276399	0.7841
С	-2.287276	0.633	083	-3.612915	0.0011
R-squared	0.499059	Me	ean dep	endent var	-0.017671
Adjusted R- squared	0.466740	S.I	D. depe	endent var	2.646841
S.E of regression	egression 1.932847 Akaike info criterion 4.239963			4.239963	
Sum squared	115.8128	Schwarz criterion		z criterion	4.374641
residual					
Log likelihood	-69.07936		F-sta	atistic	15.44174
Durbin-Watson stat	2.014722	]	Prob(F-	-statistic)	0.000022

## Unit Root Test result: Variables at Ordinary level

ADF statistic	-4.052003	1% Critic	al Value*	-3.6353		
		5% Critic	cal Value	-2.9499		
		10% Criti	cal Value	-2.6133		
*MacKinno	on critical valu	les for rejection o	of hypothesis of	a unit root.		
Augmented Dickey-Fi	uller Test Equa	ation		·		
Dependent Variable: I	D(LOG(INF))					
Method: Least Square	S					
Date: 01/16/22 Time	: 08:08					
Sample (adjusted): 198	36-2022					
Included observations	: 36 after adjus	sting endpoints				
Variable	Coefficient	Std. error	t-Static	Prob.		
LOG(INF(-1))	-0.733505	0.181023	-4.052003	0.0003		
D(LOG(INF(-1)))	0.308189	0.170905	1.803276	0.0811		
С	2.015547	0.510517	3.948049	0.0004		
R-squared	0.306441	Mean depe	endent var	0.003300		
Adjusted R-squared	0.306441	S.D. depe	ndent var	0.829798		
S.E. of regression	E. of regression 0.691057 Akaike info criterion 2.182908					
Sum squared reid	14.80435	Schwarz criterion		2.317587		
Log likelihood	-34.10944	F-statistic		8.290350		
Durbin-Watson stat	1.746515	Prob(F-s	statistic)	0.001306		

## Appendix B

## Johansen Co-Integration Test Result

Date: 01/16/22 Time: 08:12						
Sample: 1986-2022						
Included observation	on: 36					
Test assumption: li	near deterministic †	trend in the dat	a			
Series: D(LOG(GDI	PPC)) D(LOG(INF)	)				
Lags interval: 1 to 1						
	Likelihood	5 Percent	1 Percent	Hypothesized		
Eigenvalue	Ration	Critical	Critical Value	No. of CE(s)		
		Value				
0.698672	59.97837	15.41	20.04	None**		
0.460962	20.39298	3.76	6.65	At most 1**		
*(**) der	otes rejection of th	e hypothesis at	5% *1%) significa	ance level		
L.R. test	indicates 2 cointeg	rating equatior	n(s) at 5% signific	ance level		
	Unormalized	Cointegrating	Coefficients:			
LOG(GDPPC))	DL(LOG(INF))					
0.084764	-0.201216					
0.100371 0.236169						
Normalized Cointegrating Coefficients: 1 cointegrating equation(s)						

D(LOG(GDPPC))	D(LOG(INF))	С	
1.000000	-2.373842	0.075089	
	(0.63987)		
Log Likelihood	-115.7207		

## Appendix C

## Johansen Co-Integration Test Result

Date: 01/16/22 Time: 08:12								
Sample: 1986-20	)22							
Included observ	Included observation: 36							
Test assumption	n: linear determini	stic trend in the	data					
Series: D(GDPP	PC,2) D(INF,2) D(N	AOS,2) D(EXRE)	D(INTR,2)					
Lags interval: 1	to 1							
	Likelihood	5 Percent	1 Percent	Hypothesize	d			
Eigenvalue	Ratio	Critical	Critical Value	No. of CE(s)	)			
		Value						
0.949655	301.6339	68.52	76.07	None	**			
0.945483	205.9906	47.21	54.46	At mos	t 1**			
0.871629	112.8948	29.68	35.65	At most	t 2 **			
0.768609	47.20420	15.41	20.04	At most	t 3 **			
0.011420	0.367539	3.76	6.65	At most	t 4 **			
*(**)	) denotes rejection	of the hypothesi	is at 5% *1%) signi	ficance level				
L.R.	test indicates 2 coi	integrating equa	tion(s) at 5% signi	ficance level				
	Unorma	lized Cointegrat	ing Coefficients:					
D(GDPPC,2)	D(INF,2)	D(MOS,2)	D(EXRE)	D(INTR)				
-0.719491	0.001649	2.25E-07	-1.26E-07	0.019081				
0.028090	-0.004226	1.82E-07	1.65E-08	0.050703				
-0.388852	0.008725	-9.23E-08	-1.57E-07	0.029901				
1.147718	0.003770	9.95E-08	9.94E-08	-0.030920				
0.213233	-0.000191	7.14E-08	-1.84E-06	-0.017462				
No	rmalized Cointegr	ating Coefficien	ts: 1 cointegrating	equation(s)				
D(GDPPC,2)	D(INF,2)	D(MOS,2)	D(EXRE)	D(INTR)	С			
1.000000	-0.002292	-3.13E-07	1.75E-07	-0.026520	-			
					0.014083			
	(0.00062)	(3.1E-08)	(1.1E-07)	(0.00319)				
Log	-1247.756							
Likelihood								
Noi	rmalized Cointegra	ating Coefficient	s: 2 Cointegrating	Equation(s)				
D(GDPPC,2)	D(INF,2)	D(MOS,2)	D(EXRE)	D(INTR,2)	С			

1.000000	0.000000	-4.18E-07	1.69E-07	-0.054855	-
					0.014325
		(4.7E-08)	(1.2E-07)	(0.00873)	
0.000000	1.000000	-4.59E-05	-2.79E-06	-12.36112	-
					0.105242
		(7.8E-06)	(1.9E-05)	(1.43608)	
Log	-1168.363				
likelihood					
N	ormalized Cointeg	rating Coefficient	ts: 4 Cointegratin	g Equation(s)	
D(GDPPC,2)	D(INF,2)	D(MOS,2)	D(EXRE)	D(INTR,2)	С
1.000000	0.000000	0.000000	-2.26E-08	0.279746	0.009218
			(5.8E-07)	(0.15976)	
0.000000	1.000000	0.000000	-2.38E-05	24.36335	2.478746
			(5.1E-05)	(14.0844)	
0.000000	0.000000	1.000000	-0.457970	800807.3	56345.96
			(1.38335)	(383603)	
Log	-1168.363				
Likelihood					
N	ormalized Cointeg	rating Coefficien	ts: 4 Cointegratin	g equation(s)	
D(GDPPC,2)	D(INF,2)	D(MOS,2)	D(EXRE)	D(INTR,2)	С
1.000000	0.000000	0.000000	0.000000	0.234436	0.005459
				(0.98155)	
0.000000	1.000000	0.000000	0.000000	-23.42993	-1.486246
				(88.3626)	
0.000000	0.000000	1.000000	0.000000	-119098.7	-19970.61
				(1073915)	
0.00000	0.000000	0.000000	1.000000	-2008662	-166641.1
				(7671043)	
Log	-1144.945				
Likelihood					

## REFERENCES

- Adeyeye, V.A. (2019); "Designing and Managing poverty alleviation programme in Nigeria"; The Micro-project Option" paper presented at the workshop on Poverty Alleviation Policies and Strategies, organized by National Centre for Economic Management and Administration (NCEMA), Ibadan. P.15.
- Afonja, B. and F.O. Ogumike (2020); "Poverty; Meaning, Measurement and Causes". A paper delivered at the National Workshop on Integration of poverty Alleviation strategies into the Programmes of Nigeria, sponsored by the Worl bank and organized by the National Centre for Economic Management and Administration. (NCEMA), Nov. 29-Dec. 1, Ibadan.

- Ajakaiye D.O. and V.A. Adeyeye (2017); "The Nature of Poverty in Nigeria", Technical Report, NISER, Ibadan.
- Akpakpan, E.B. and P.N. Umoh (2018) ; Developing the Nigerian Economy for an Enduring Democracy, Lagos. CSA Productions Ltd.

Aluko S. (2021); The Role of Banks in Agricultural Financing; the Bullion, Vol.9. No. 4. P.21

- Baratzznd, M.S. and A.B. Grisby (2016); "*Thoughts of poverty and its Elimination*". Journal of social sciences. Vol. 6:1.2<sup>nd</sup> April.
- Baridam, D.M. (2021); "Research Methods in Administrative Science". Ed. Nigeria: Sherbrooke Associates.
- Bassey, E.B. (2015): "*The impact of Macroeconomic Conditions on Poverty Alleviation in Nigeria*". International Research journal for development, Vol. 7, No. 2, pp. 1-12.
- Chijoke, O and Akin, J. (2014): "*Nigeria: Warning Signals from UNDP Report*", The Guardian, July 8, p.9

Chuma, Ifedi (2014): "Reforms and Poverty Alleviation", Daily Champion, July 19, p.11

- Cocreft J.D., and F.G. Andre (2012): *Dependence and Under-development*, Anchor Books, New York.
- Daata A. (2008): *Perspective of Economic Development*, Macmillan Publishers Co. Ltd. London, vol. 1.8.
- Dandekar, V.M. and N.A Rath, (2021): Poverty in India, Pune: Indian School of Political economy, Vol.16
- Engle and C.W.J Granger, (1987); *Spurious Regression in Econometrics*, Journals of Economics, pp. 100-12.
- Ifeanyi, M. (2012): "The Challenge of Poverty", Daily Champion, September 30, p.11.
- Johansen & Julius (1990):" Maximum Likehood Estimation and Inference on Cointegration with application to the Demand for Money". Oxford Bulletin of Economics and Statistics, 52, Pp. 169-210
- Kapteyn A.P. Kooreman and R. Willemse (P. K. 2020];
- *"Some Methodological Issues in the Implementation of Subjective Poverty Definitions".* The Journal of Human Resources 23:22-241.
- Keynes, J.M (1936): General theory of Employment, Interest and Money, New York: Harcourt Bruce and World Inc.
- MDGs (2014): National Millennium Development Goals Report, Nigeria, Dec.

National Bureau of Statistics (NBS), (2018): Core welfare Indicator Questionnaire (CWIQ) Survey, June.

- (2015): Socioeconomic profiles of Nigeria, Dec.
- (2014): The Nigerian Statistical Fact Sheet on Economic and Social Development, Dec.
  NBS (2017); "Social-Economic Profile of Nigeria" Lagos, Dec.
- (2018); "Socio-economic Profile of Nigeria" Lagos, Dec.
- NDE (2019); NDE publication, Nigeria, Abuja, Dec. Vol. 10
- Nwosu N.J., (2020). "*The Political economic of Small enterprise Development*", In Nigerian Journal of Development Studies, vol. 1, No. 2.
  - (2000): The Challenge of Poverty in Africa. Owerri. Skillmark Media ltd.
- Nzenwa, O.E. (2000): Micro-Credit & Development: Poverty Alleviation in Nigeria (CECOPEC, Lagos). Pp 50-75.
- Ogwumike F.O. (2021): Poverty & Basic needs. An Approach to Development in Nigeria. Unpublished Ph.D. Thesis, Department of economics, university of Ibadan.

- Prisca, E. (2004); "Poverty Eradication in Nigeria Requires Multi-sectoral Approach", The Guardian, Sept. 21, p.33.
- Sanwar, S. (2010): The Development of a Developing Nation in Anyanwu (2009), Lagos Nigeria.
- United Nations Department of Economic and Social Affairs (1965): "Development Plans: Appraisal of Targets and Progress in Developing Countries", World Economic survey, 1964 – Part I, New York.
- United Nations Development Programme (UNDP), (2010); (2013); (2015): "Human Development Report", Oxford University Press, New York.
- United Nations Food and Agricultural Organization (1986): African Agriculture: The Next 25 years, Rome. P. 14, 15, 16.
- World Bank (2018); World development Report 2019, Washington D.C.
- (2019a); "Taking Action for Poverty Alleviation in Sub-Saharan Africa", Report of an African task Force, May 1, World Bank, Washington D.C.
- (2019b); "Poverty in the Midst of plenty. The Challenge of growth with inclusion". May 8, A World Bank Report Washington D.C.
- (2018); Poverty Reduction and World Bank Progress in operationalizing the WDR
  2017/2018. World Bank, Washington D.C.