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An Empirical Analysis of the impact of Macroeconomic Policies, Unemployment on Poverty in Nigeria: 1990-2016

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Abstract

The study analysed the impact of macroeconomic policies, unemployment on poverty in Nigeria and employed Ordinary least Squares (OLS) method. The variables used are: Unemployment rate (UNM), Poverty Rate (POR), Exchange rate (EXC), Interest rate (INR), Government Expenditure (GXP) and Money Supply (MS). The variables underwent unit root test using the Augmented Dickey-Fuller (ADF) test. POR, INR and MS were stationary at first difference I(1) while UNM, EXC and GXP were stationary at second difference I(2). The Johansson cointegration indicates five cointegrating equations and this implies POV, INR, MS, EXC GEX and UNM have longrun relationship i.e. they all move in the same direction in the longrun. The results revealed that unemployment rate causes poverty in Nigeria and increases in unemployment will lead to increases in poverty level. Also, government expenditure reduces poverty incidence in Nigeria but money supply increases poverty level in Nigeria which may occur as result of the economy not being able to absorb money in circulation and leads to inflation, thereby making the incidence of poverty inevitable. In the case of interest rate, there is a significant relationship between interest rate and poverty. The study concludes that macroeconomic policies such as money supply, government expenditure, exchange rate, unemployment rate and interest rate have statistically significant impacts on poverty level in Nigeria. Hence, recommend that macroeconomic policies such as expansionary fiscal and contractionary monetary policy should be pursued to regulate money supply and reduce poverty level in Nigeria.

Key words: Macroeconomic Policies, Unemployment, Government Expenditure, Poverty

INTRODUCTION

Macroeconomic policies are designed to maintain price stability, balance of payment equilibrium, equitable distribution of income, attainment full employment and rapid and sustainable economic growth. Unemployment and poverty have been regarded as the major problems facing the Nigerian economy. These problems are persistently complex and cause economic and social dilemma to the society as a whole. The inability of government to provide a lasting solution to these challenges has contributed to serious problems on the economic life, political system and the entire society (Patterson, Okafor and Williams, 2006).

Economic growth, which is one of the major macroeconomic objectives, is regarded as crucial – indeed, the driving force of conquering unemployment and poverty (Obadan, 1997). Although economic growth is necessary for reduction in unemployment and poverty alleviation, it is not sufficient, because growth alone cannot overcome all the crucial factors that contribute to unemployment and poverty. The foregoing appears to be the case with Nigeria; economic growth in Nigeria appears not to have provided the expected panacea for unemployment and poverty.
Successive Governments at all levels (Federal, State and Local) had initiated several programmes aimed at reducing and alleviating poverty, but the poverty situation in Nigeria keeps worsening day-by-day. The prevailing high rate of poverty in Nigeria may be attributed to some factors which include perceived corruption in all tiers of government, private sector, mismanagement of human and material resources, inordinate ambition of Nigerian politicians to amass wealth and resources at the expense of the masses, poor implementation of economic policies that could alleviate poverty.

Poverty, in all its complex dimensions, is a condition within a social and economic context and poverty reduction (or the lack thereof) always occurs within a macroeconomic context. It can be seen as a paradox that Nigeria claims to be experiencing economic growth annually; yet, the number of Nigerians living in poverty seems to be rising geometrically. It was reported that GDP per capita is $2400 and over 50% of Nigerians live on less than $1.25 a day (Aghedo, 2013 in Omoyibo, 2013).

World Bank (1978) reported that high rates of economic growth sustained over a period of time are necessary for poverty reduction, while the distribution of the benefits of growth determines the impact on poverty. The macroeconomic policy framework often sets the parameters for social policies by defining the policy and fiscal space for government action. For two and a half decades starting from the end of the Second World War, governments of the industrialized countries, through active reflationary macroeconomic management, achieved rapid reconstruction and prosperity underpinned by full employment and low inflation. Governments in developing countries also played a very active role in promoting economic growth and structural change after independence from colonial powers was gained. Developing countries as a group experienced impressive economic growth and structural change within their economies (World Bank, 1978). However, there were variations among developing countries; growth and structural change in most low-income countries in Africa and Asia, where the majority of the world's poor live, were slow.

Despite having the largest economy in Africa and 26th in the world, unemployment rate have been rising in Nigeria (Oduro and Aryee, 2015). The Nigerian economy has remained largely underdeveloped despite the huge human and natural resources. Poverty level is high, unemployment and inflation rates are also high with many socio-economic challenges. The economy has continued to witness economic recovery which is immediately followed by economic recession and depression (Balami, 2006).

According to Bakare (2012) the situation in Nigeria is disturbing; the various macroeconomic policies by government have been unable to achieve sustained price stability, reduction in unemployment and sustained growth. The fluctuations in the economy have confirmed the need to manage the economy effectively.

The Keynesians believe that monetary policy should be directed towards interest rates rather than money supply and that it should be subsidiary to fiscal policy, while the monetarist argues that the control of money supply should be the main concern of the monetary authorities (Sullivan and Steven, 2003). Following the Great Depression era, Keynesian economists and another school of thought, the Hayek economists, also have sharply contrasting views relating to monetary policy and unemployment. Keynes's first proposition was that total income depends upon the volume of total employment, which depends upon effective demand (D), which in turn, depends upon consumption expenditure (D_1) and investment expenditure (D_2). Therefore, effective Demand $D = D_1 + D_2$. Consumption depends upon the size of income and the propensity to consume while investment depends upon marginal efficiency of capital and the rate of interest. The rate of interest depends upon the quantity of money and liquidity preference while the marginal efficiency of capital depends upon the expected profitability (M.E.C.) and replacement cost of capital assets. These propositions contain the essentials of the general theory of employment.

Broadly, classical theory typically assumes that the outcomes of the exchanges taking place in the marketplace are efficient, and hence wages faithfully reflect individual productivity. Accordingly, poverty is mainly seen as a consequence of poor individual choices (e.g. the poor lack "self-control") that affect productivity negatively, although it is also acknowledged that pure differences in underlying genetic abilities are also potential causes of poverty. Beyond a minimum level to prevent destitution, state intervention is generally viewed adversely as a source of economic inefficiency; by generating incentives that are misaligned between poor individuals and society as a whole, welfare programs are perceived as a potential cause for or reinforcement of poverty (through welfare dependence). The government is, at most, justified to intervene whenever poor people need supportive activities or threats to correct for perverse economic incentives. A large majority of the policy prescriptions under this view focus on efforts to raise the productivity of deprived individuals in order for them to join the labour force as soon as possible (although it is acknowledged that some individuals – the young, the sick, the old - cannot participate and will need alternative support). Notwithstanding the fact that employment is generally perceived as an anti-poverty tool, in practice employment may conceivably cause poverty under some specific circumstances.

The essence of macroeconomic management underlines the rationale of the government as a vital economic agent. However, it appears that government intervention has not been able to cure the ills in the economy. For several decades, economic performance has not been impressive. The continued economic crisis, with the associated problems of high inflationary pressure, high exchange rate, debt overhang, adverse balance of payment and high inflation rates is difficult to explain (Bakare, 2012). Consequently, the full potentials of labour-surplus economy have not been fully exploited. Hence, this paper is set to examine the analysis of the impact of macroeconomics policies, unemployment on poverty level in Nigeria. The paper is dived into five sections; introduction, literature review, methodology, data presentation and analysis and conclusion and recommendations.

LITERATURE REVIEW

Conceptual Issues

Macroeconomics (derived from the Greek prefix *makro-* meaning "large") is a branch of economics that deals with the performance, structure, behavior, and decision-making of an economy as a whole. This includes regional, national, and global economies (Blanchard, 2000, 2001). Macroeconomists study aggregated indicators such as GDP, unemployment rates, national income, price indices, and the interrelations among the different sectors of the economy to better understand how the whole economy functions.

Macroeconomic policy is usually implemented through two sets of tools: fiscal and monetary policies. Both forms of policies are used to stabilise and boost the economy to the level of GDP consistent with full employment. Macroeconomic policy focuses on limiting the effects of the business cycle to achieve the economic goals of price stability, full employment and growth (Mayer, 2002).

According to Balami (2006), unemployment is conceptualised as a situation whereby workers are involuntarily out of work. This means that workers are willing and able to work, but cannot find any work. Unemployment is often defined by the classical economists as the excess supply of labour over the demand for labour which is cause by adjustment in real wage. The Classical or real-wage unemployment occurs when real wages for job are set above the market-clearing level, causing number of job-seekers to exceed the number of vacancies. Unemployment as defined by International Labour Organization (2009) is a state of joblessness which occurs when people are without jobs and they have actively sought work within the past four weeks. It is a measure of the prevalence of unemployment and it is calculated as a percentage by dividing the number of unemployed individuals by individuals currently in the labour force. Economists distinguish between various overlapping types of and theories of unemployment, including cyclical or Keynesian unemployment, frictional unemployment, structural unemployment and classical unemployment. Some additional types of unemployment that are occasionally mentioned are seasonal unemployment, hardcore unemployment and hidden unemployment.

Frictional unemployment is the time period between jobs when a worker is searching for or transitioning from one job to another. It is sometimes called search unemployment and can be voluntary based on the circumstances of the unemployed individual. Frictional unemployment is always present in an economy, so the level of involuntary unemployment is properly the unemployment rate minus the rate of frictional unemployment. Cyclical or Keynesian unemployment, also known as deficient-demand unemployment, occurs when there is not enough aggregate demand in the economy to provide jobs for everyone who wants to work. Structural unemployment occurs when a labour market is unable to provide jobs for everyone who wants one because there is a mismatch between the skills of the unemployed workers and the skills needed for the available jobs. Technological unemployment is due to the replacement of workers by machines, might be counted as structural. Alternatively, technological unemployment might refer to the way in which steady increases in labour productivity mean that fewer workers are needed to produce the same level of output every year.

Hidden or covered unemployment is the unemployment of potential workers that is not reflected in official unemployment statistics, due to the way the statistics are collected. In many countries only those who have no work but are actively looking for work (and qualifying for social security benefits) are counted as unemployed.

Townsend (2006) defines poverty as lack of materials and resources that affect an individual's living condition. In a similar vein, poverty is the degree of difficulty encountered in making ends meet. People can be said to be in poverty when they are deprived of income and other resources needed to obtain the conditions of life the diets, material goods, amenities, standards and services that enable them to play the roles, meet the obligations and participate in the relationships and customs of their society. World Bank (2011) defined poverty as deprivation in well-being, and comprises many dimensions. It includes low incomes and the inability to acquire the basic goods and services necessary for survival with dignity. Poverty also encompasses low levels of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice, and insufficient capacity and opportunity to better one's life.

Yekini, Rufai, Adetoba, Akinwole and Ojo (2012) defined poverty as the opposite of wellbeing. Just like other authors cited in the literature review section, poverty goes beyond lack of income, but stretches now to include disadvantages in access to land, credit and services, vulnerability, powerlessness and social exclusion. Since poverty is not restricted to material deprivation, other intangible aspects such as poor access to schooling, healthcare and exclusion from decision making processes. Poverty can also be measured by drawing poverty line. Poverty line is a value of income or consumption necessary to purchase the minimum standard of nutrition and other necessities of life. Therefore, people are counted poor when their measured standard of living in terms of income or consumption is below the poverty line.

Empirical Review

Gideon and Thaddeaus (2016) examined the effectiveness of indirect monetary policy instruments in reducing poverty in Nigeria using a multiple regression model as well as time series data covering the period 1986 to 2012. The Ordinary Least Squares (OLS) technique was used in the estimation of the regression model. The OLS regression result revealed that interest rate (INTR), banking sector's credit to the economy (BSCE), bank reserve requirement (BARR), bank liquidity ratio (BLQR), central bank discount rate (CBDR) and inflation rate (INFR) could not significantly impact on poverty rate except money supply (MS), real gross domestic product (RGDP), unemployment rate (UNEMPR) and balance of payment (BOP). A major implication of this result is that indirect monetary policy instruments alone were grossly inadequate measure/policy to reduce poverty in Nigeria during the period under review.

Nwosa (2014) examined the impact of government expenditure on unemployment and poverty rates in Nigeria for the period spanning 1981 to 2011. The study employed an Ordinary Least square (OLS) estimation technique. From the empirical analysis, the study observed that government expenditure had positive and significant impact on unemployment rate while government expenditure had a negative and insignificant impact on poverty rate. Based on the findings, this study recommended that urgent attention should be accorded to rising unemployment and high poverty rates in order to achieve objective 20-2020 and of halving poverty rate by 2015.

Quartey (2013) put forward that the aim of the policy of price stability is to provide a stable environment for real sector activities to flourish but the outcome of the policy on real sector activities in Ghana has not been subjected to any empirical investigation. He studied stagflation and macroeconomic performance in Ghana using time series data. The study finds that economic performance is higher under low inflation era than when inflation is high. The results are robust and show that the revenue maximizing rate of growth for Ghana is 9.14 per cent using quarterly data over the period 1990-2011 with least square multiple regression analysis. It is also deduced

from the study that the single digit inflation target set by the Central Bank Ghana is not growth maximizing.

Fielding (2013) uses monthly time-series data on the prices of 96 individual products in the 37 states of Nigeria to analyze the factors that drive inflation volatility and poverty incidence with VAR. Among the significant determinants of volatility are average inflation rates, transport and communication infrastructure, consumer access to credit markets and urbanization. Analysis of the data reveals that there is substantial heterogeneity across products in relative importance of these non-monetary factors that drive inflation volatility and poverty incidence. Accordingly, better transport and communication infrastructure, as captured by road length, literacy and linguistic homogeneity, are associated with lower inflation volatility and poverty rate in a state. However, more extensive access to credit facilities is associated with higher inflation volatility, as is urbanization. Since most changes in inflation are unanticipated, these results apply equally to conditional and unconditional poverty incidence.

Gordon (2013) examined poverty situation in Nigeria by employing the data of economic growth and millennium development goals (MDGs) expenditure. The methodology employed was panel data analysis consisting of pooled model, fixed-effects, random-effects and weighted least square. The results revealed that, a unit increase in per capita GDP led to 0.6 percent increase in poverty. Similarly, a unit increase in MDG expenditure resulted in 11.56 units increase in relative poverty in the pooled model. The study concluded that economic growth and MDG spending has not substantially reduced poverty over the sample period.

Khan and Senhadji (2011) examined the issue of the existence of threshold effects in the relationship between inflation, unemployment and poverty, using SVAR econometric techniques that provide procedures for estimation and inference for 140 developed and developing countries covering 1995-2013. They estimated a threshold level of inflation above which inflation and unemployment significantly increases poverty rate at 1–3 percent for developed countries and 11–12 percent for developing countries. The positive and significant relationship between inflation, unemployment and poverty, for inflation rates above the threshold level, is quite robust with respect to the estimation method, perturbations in the location of the threshold level, the exclusion of high-inflation observations, data frequency, and alternative specifications.

Obamuyi (2009) investigated the relationship between interest rate and economic growth in Nigeria using time series data covering 1970-2006. He applied cointegration and error correction model to capture both the long run and short run dynamics of variables in the model. The result indicated that real lending rates have significant effect on economic growth.

Onwiodiokit (2005) studied fiscal deficits, inflation and output growth in Nigeria by adopting a vector error correction model approach. The result showed monotonically decreasing relationship with prices some lags. The result is at variance with the popular view in the literature that seems to suggest that fiscal deficit is necessarily inflationary. While, Oosterbaan et al., (2000) estimated the relationship between the annual rate of economic growth and the real rate of interest .The study shows the effect of a rising real interest rate on growth and claimed that growth is maximized when the real rate of interest lies within the normal range of say, -5 to +15%.

Theoretical Framework

The theoretical framework adopted for this study is monetarist theory. Monetarism is an economic theory which focuses on the macroeconomic effects of a nation's money supply and its central banking institution. It focuses on the supply and demand for money as the primary means by which economic activity is regulated. Formulated by Milton Friedman, it argued that

excessive expansion of the money supply will inherently lead to price inflation, and that monetary authorities should focus solely on maintaining price stability to maintain general economic health. Monetarism proposes that the growth of the money supply should be regulated to increase parallel to the potential growth of the Gross Domestic Product (GDP), and that this will stabilize prices, ensuring healthy economic growth with low inflation, interest rate, reduction in poverty level and promote exchange rate stability. These are the key variables under consideration.

Monetarist theory regards a nation's economic growth as fostered by changes in its money supply. Therefore, any and all changes within a set economic system, such as a change in interest rates, are believed to be a direct result of changes in the money supply. Monetarist policy, which is enacted to regulate and promote growth within a nation's economy, ultimately seeks to increase a nation's domestic money supply moderately and steadily over time.

The popularity of monetarism in political circles increased as Keynesian economics seemed unable to explain or cure the seemingly contradictory problems of rising unemployment and price inflation which erupted after the collapse of the Bretton Woods system gold standard in 1972 and the oil crisis shocks of 1973. Though higher unemployment levels seemed to call for Keynesian inflationary policy, rising inflation levels seemed to call for Keynesian deflation. The result was a significant disillusionment with Keynesian demand management. Many monetarists resurrected the former view that market economies prove inherently stable in the absence of major unexpected fluctuations in the money supply. This belief in the stability of free-market economies also asserted that active demand management, in particular fiscal policy, is unnecessary and in fact likely to be economically harmful. The basis of this argument centered on equilibrium formed between "stimulus" fiscal spending and future interest rates. In effect, Friedman's model argued that current fiscal spending creates as much of a drag on the economy by increasing interest rates as it does to create consumption. According to monetarists, fiscal policy was shown to have no real effect on total demand, but merely shifted demand from the investment sector to the consumer sector.

However, the monetarists (Monetarist theory) belief that "money matters" and for economic stabilization, monetary policy is a powerful tool in an economy. The argument of the monetarist becomes important in this study because monetarism believes that monetary policy is assumed to have more influence on aggregate expenditure, output, employment and income and hence poverty reduction(Gideon and Thaddeaus, 2016).

METHODOLOGY

The relationship among the variables is analyzed with Ordinary Least Squares (OLS) method. OLS estimator is efficient and possesses the BLUE (Best Linear Unbiased Estimator) properties among other classes of estimators (Davidson and Mackinnon, 2004 and Greene 2003). The stationarity test is carried out.

To test for stationarity, the unit root method will be used and will take the form of an Autoregressive model process, with each variable regressed on its own lagged value and deterministic variable. The ADF unit root test is applied and the model is specified as:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-i} + \varepsilon_t \qquad 3.1$$

Where:

Y represents all the variables under consideration.
δ represents the coefficient of the lagged value of Y.
Δ is the first difference operator.

Y_{t-i} represents the lagged terms included
$\mu_t$represents pure white noise error term.

The null hypothesis to be tested is such that the variable possess unit root, and as such is non-stationary. In the case of non-stationarity of any variable, the Johansen Cointegration test will be carried out. The null hypothesis for the Johansen's cointegration test is such that there is no cointegration equation.

Model Specification

In the study, the relationship among the variables is established through model specification. The monetarists (Monetarist theory) believe that "money matters" and for economic stabilization, monetary policy is a powerful tool in an economy (Gideon and Thaddeaus, 2016). Therefore, the study adapted Gideon and Thaddeaus (2016). The changes were carried out to reflect the objectives of this study in order to incorporate macroeconomic variable such as exchange rate and government.

POR = f (UNM, INR, MS, EXC, GXP).....(3.2)
$POR = \alpha_0 + \alpha_1 UNM + \alpha_2 INR + \alpha_3 MS + \alpha_4 EXC\ \alpha_5 GXP + U$.....(3.3)
Where:
POR= Poverty rate
UNM = unemployment rate
INR= Interest Rate
MS = Money Supply
EXC = Exchange Rate
GXP = Government Expenditure
U = Error term

The secondary sources of data are employed. The data are sourced from Central Bank of Nigeria (CBN) Statistical Bulletin and Annual Report and the National Bureau of Statistics (NBS). The data used are unemployment rate, poverty rate and interest rate are measured in percentage while government expenditure and money supply are measured in Naira and exchange rate is measured in US dollars.

Evaluation Criteria

The t-test will explain the statistical significance of each independent variable. This test will form the basis for either accepting or rejecting the stated hypothesis. Coefficient of Determination (R^2) will explain the rate at which the independent variables explain changes in the dependent variables. It measures Goodness of fit of the model. F-Statistic will show the explanatory power of the independent variables, i.e. whether all the independent variables are significant in explaining changes in the dependent variables.

DATA PRESENTATION

The results presented in this section are based on all tests stated in Section Three. They were analyzed using E-views 8.0 statistical software package. The variables used are: Unemployment rate (UNM), Poverty Rate (POR), Exchange rate (EXC), Interest rate (INR), Government Expenditure (GXP) and Money Supply (MS).

Summary Statistics

Table 4.1 Summary Statistics of Data

	POR	INR	UNM	EXC	MS	GXP
Mean	59.28148	18.66556	13.28519	101.3211	6008.450	2059.050
Median	65.60000	12.00000	12.70000	120.9702	1985.190	1225.970
Maximum	72.00000	72.80000	35.00000	253.4923	23388.33	5894.540
Minimum	42.70000	5.400000	1.800000	8.037800	68.66000	60.27000
Std. Dev.	10.05301	17.78737	9.513662	66.66268	7340.081	1945.583
Skewness	-0.529525	1.914665	0.491788	0.022722	1.019093	0.625838
Kurtosis	1.779379	5.417291	2.247274	2.213480	2.635217	1.865833
Jarque-Bera	2.937941	23.07046	1.725773	0.698264	4.823177	3.209658
Probability	0.230162	0.000010	0.421942	0.705300	0.089673	0.200924
Sum	1600.600	503.9700	358.7000	2735.669	162228.2	55594.35
Sum Sq. Dev.	2627.641	8226.157	2353.254	115541.7	1.40E+09	98417653
Observations	27	27	27	27	27	27

Source: *Authors' Computation, (2018)*

The results in table 4.1 show the mean, media and standard deviation of each data used in the study. The probability level of each data was also revealed.

Data Analysis

Table 4.2: Unit Root Stationarity Result

Time Series	ADF Statistics	Critical Value	Stationary Status
POR	-4.812081	-4.374307 (1%) -3.603202 (5%) -3.238054 (10%)	I(1)
INR	-4.222023	-2.660720 (1%) -1.955020 (5%) -1.609070 (10%)	I(1)
UNM	-5.134610	4.394309 (1%) -3.612199 (5%) -3.243079 (10%)	I(2)
MS	-5.414325	-4.374307 (1%) -3.603202 (5%) -3.238054 (10%)	I(1)
EXC	-6.965325	-4.394309 (1%) -3.612199 (5%) -3.243079 (10%)	I(2)
GXP	-5.921256	-4.416345 (1%) -3.622033 (5%) -3.248592 (10%)	I(2)

Source: *Authors' Computation, (2018)*

Table 4.2 shows the Augmented Dickey Fuller test is used to test for unit root. POV, INR, MS, EXC, GXP and UNM underwent unit root test using the Augmented Dickey-Fuller (ADF) test. All the variables were found to be non-stationary at levels but were stationary at different order of integration. POR, INR and MS were stationary at first difference I(1) while UNM, EXC and GXP were stationary at second difference I(2).

Table 4.3: Johansen's Co-integration Result

Eigen Value	Likelihood Ratio	5 percent Critical Value	P-value
0.843602	138.4758	95.75366	0.0000
0.770517	92.09196	69.81889	0.0003
0.621352	55.29383	47.85613	0.0086
0.448921	31.01516	29.79707	0.0360
0.422121	16.11823	15.49471	0.0403
0.091844	2.408467	3.841466	0.1207

Source: *Authors' Computation, (2018)*

The estimation from table 4.3 shows that there is five cointegrating equations this implies that that; POV, INR, MS, EXC GEX and UNM are cointegrated. From the table the likelihood ratios of (138.4758, 92.09196, 55.29383, 31.01516 and 16.11823) are all greater than their respective critical values (95.75366, 69.81889, 47.85613, 29.79707 and 15.49471) at 5 percent level of significant. Base on this result, the variables are cointegrated. The implication of cointegrated variables is that the variables considered have longrun relationship i.e. they all move in the same direction in the longrun. Since there is longrun relationship among the variables, OLS is used base on the order of integration as indicated in stationartiy result to analysis the impact of macroeconomic policies, unemployment on poverty level in Nigeria.

Table 4.4: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
MS does not Granger Cause UNM	25	2.71668	0.0904
GXP does not Granger Cause UNM	25	4.04428	0.0335
GXP does not Granger Cause MS	25	6.81087	0.0055

Source: *Authors' Computation, (2018)*

The result in table 4.4 shows that unemployment, interest rate, money supply, exchange rate, government expenditure cause poverty while poverty causes other variables as well. There is bidirectional relationship between poverty and other variables used in the study.

Table 4.5: Regression Result Model (Dependent Variable: POR)

Independent Variables	Coefficient	Standard Error	t-Statistic	P-Value
Constant Intercept	57.54669	12.49391	4.605978	0.0003
UNM(2)	1.655250	0.676826	2.445606	0.0256
INR(1)	-0.392618	0.091745	-4.279446	0.0005
MS(1)	0.000791	0.000833	0.949848	0.3555
EXC(2)	-0.177180	0.085631	-2.069121	0.0541
GXP(2)	-0.005505	0.003214	-1.712587	0.1050
R^2= 0.793473		F Statistic = 10.88565 Pr(0.0000)		
Adjusted R^2 = 0.720582		D-W Statistic = 1.535614		

Source: *Authors' Computation, (2018)*

Interpretation of Results

From the result in table 4.5 shows that a unit increases unemployment and money supply on the average holding other independent variables constant will lead to 1.655250 and 0.000791 unit increase in POR respectively. However, a unit increase in INR, EXC, and GXP on average holding other variables constants will lead to 0.392618, 0.177180 and 0.005505 decreases in POR.

The *R-Squared* shows that the model has a good fit with 0.793473 (79%) change in POR accounted for by change in the independent variables. This implies that 79 percent of the change in POR was explained by changes in the independent variables while 21% were unexplained due to other factors that were not capture in model.

The *Adjusted* R^2 is given as 0.720582 (72 per cent). This means that precisely 72 percent of the variations in poverty level in Nigeria are accounted for by the included variables, after the co-efficient of determination (R^2) has been adjusted to make it insensitive to the number of included variables. The value of DW is given as 1.535614 which indicates the absent of autocorrelation. The regression is not useful for policy making and forecasting. The P-value of UNM, INR, MS, EXC and GXP is given as 0.0256, 0.0005, 0.3555, 0.0541 and 0.1050 respectively. This implies that UNM, INR and EXC have significant impact on POR level in Nigeria while MS and GXP have no significant impact on POR level in Nigeria.

Hypothesis Testing

In addition, the *F-statistic* supports this position with its result showing that the model is significant and well specified. From the F-distribution table with 5per cent and degree of freedom (v1 = k-1 = 6-1 = 5 and n-k=27-6 = 21) at 5 per cent level of significance, the critical F value 2.66 was obtained. This value is less than the calculated value of 10.88565, leading to *rejection of the null hypothesis of insignificant model* implying that the independent variables are significant explanatory factors that determines the level of poverty in Nigeria. This implies that macroeconomics policies, unemployment have significant impact on poverty level in Nigeria.

Discussion of Result

From interpretation of results and findings, unemployment rate causes poverty in Nigeria and increases in unemployment will lead to increases in poverty level. This result is in line with the work of Fielding (2013) who carried out the same research on Nigeria, using VAR model and he concluded that unemployment affects poverty incidence in Nigeria. Similarly, Quartey (2013 and Lupa submitted that unemployment causes poverty in Nigeria. Also government expenditure reduces poverty incidence in Nigeria and this result is in line with Khan and Senhadji (2011).

In related development Sargsyan (2013) and Reinstadler and Ray (2010) discovered that government expenditure have a significant impact on poverty level in Nigeria. However, money supply increases poverty level in Nigeria which may occur as result of economy not able to absorb money in circulation, leading to inflation. Hence, poverty becomes inevitable.

However, there is a significant relationship between interest rate and poverty. This indicates that as interest rate increases, poverty level reduces which may not conform to apriori expectation.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study revealed that, macroeconomic policies such as money supply, government expenditure, exchange rate, unemployment rate and interest rate have statistically significant impacts on poverty level in Nigeria from 1990-2016. The implication of this is that an increase in money supply and interest rate has a negative effect on poverty level. Similarly, an increase in unemployment rate will lead to higher poverty level in Nigeria since unemployment rate has a positive and significant impact on poverty level.

Recommendations

From the findings, the following recommendations are made;

i. Since increases government expenditure reduces poverty level, emphasis should be placed on increasing government expenditure especially those meant for development programmes and projects. This will reduce poverty level in the country.

ii. Since money supply has a positive relationship with poverty; government should adopt expansionary fiscal and contractionary monetary policy to increase government expenditure and reduce money supply into the economy in order to reduce poverty level in Nigeria.

iii. Interest rate has a significant effect on poverty, as such interest rate should be lowered to increase investment, productivity and reduce unemployment and poverty level.

iv. Finally, having established a positive relationship between unemployment rate and poverty, employment generation scheme such as, Sure-P and N-power among youth should be encouraged in order to reduce unemployment in Nigeria.

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