UNEMPLOYMENT AND INCLUSIVE GROWTH: THE CASE OF NIGERIA

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Abstract

This study explores the relationship between unemployment and inclusive growth in Nigeria using a time series data for a period of 45 years ranging from 1970-2015. In achieving this objective, several quantitative techniques including: the Augmented Dickey-Fuller (ADF) unit root test and the Autoregressive Distributed Lag (ARDL) model/Bounds testing approach were employed. The study found out that in the long run, the rate of unemployment has a significant negative impact on the inclusiveness of the growth process in Nigeria. The study also found that institutional quality and the supply of infrastructure also have a negative and significant impact on inclusive growth in Nigeria. On the other hand, the study results revealed that that the interest rate and level of financial deepening both have a positive and significant impact on inclusive growth in Nigeria. The result implies that the reduction in the rate of unemployment and improvements in the level of financial deepening are key requirements to the improvement in the quality of the growth process in Nigeria. Based on the findings, the study recommends among other: the creation of policy implementation assurance mechanisms to ensure the effective implementation of the government's policies with respect to employment generation. This will ensure the attainment of the nations employment objectives, thereby improving the inclusiveness of the growth process. Increase allocation of bank credit to highly absorptive sectors such as agriculture and industry. This will aid in the promotion of the growth of private sector activity in the country, and thereby reduce the unemployment problem.

Keywords: *Unemployment, Inclusiveness, Economic growth*

Introduction

In the last decade, Nigeria experienced a steady rise in its Gross Domestic Product (GDP). The country recorded an average growth rate of 7 per cent for the period between 2007 and 2011 (NBS, 2009).Despite the increase in GDP, other development indicators such as; poverty, unemployment, per capita

income and infrastructural facilities remain at abnormal low level. With the rebasing of the economy in 2013, Nigeria became the largest economy in Africa, with an increase in GDP from $259b in 2010 to $510b in 2013 (NBS, 2009). The new position has adjudged the country to be one of the fastest growing economies in the world in the last few years. Nigeria became one of the world's fastest growing economy, averaging 7.4 per cent (NER, 2014). However, the new growth rate is different from the economic realities in the lives of the larger population. Data showed that about 25.7 per cent of the populace lives in severe poverty, about 46 per cent and 67.98 per cent live below poverty line (CBN, 2009). Income inequality worsened from 0.43 to 0.49 between 2004 and 2010, this is correlated with differential access to infrastructure and amenities. As at the second quarter of 2015, the trend of unemployment showed that Nigeria is far from achieving sustained increases in job creation as unemployment was 23.9 percent in 2013. The rate rose to 8.2 percent from 7.5 percent in the first quarter (NBS, 2009). UN (2015) noted that Nigeria's dependency ratio of ages 0-14 was around 83.9 while the dependency ratio of 65 years old and above was expected to be about 5.1 percent.

The percentage of total dependants in Nigeria was expected to hit 89 per cent in 2015 (UNSD, 2014), meaning that the active work force was just 11 percent in 2015. The literacy rate in Nigeria between 2002 and 2012 was 51.1 percent. With an intolerable rate of carbon emission in Africa, which have reduced its life expectancy to 52 years. Nigeria's energy consumption capacity is very low, both in terms of energy consumed per-capita and energy consumed per $1000 at purchasing power parity. All these challenges have made the basic needs of life unaffordable to an average Nigerian and inclusive growth just a dream.

The issues discussed so far raise concerns about the inclusiveness of the Nigeria's economic growth. Macroeconomic policy focus thus has shifted from increases in the GDP to inclusive growth. That is, increase in income due largely to increase in productive employment and in turn accompanied by a significant reduction in poverty and income and non-income inequality. Inclusive growth has been defined as broad-based rapid pace of growth across sectors in an economy contributed to and benefited by a cross section of people in the economy including the poor (WEF, 2014). It focuses on ways to

raise the pace of growth by utilizing fully parts of the labour force trapped in low productive activities or completely excluded from the growth process. For growth to be inclusive, productivity must be improved and new employment opportunities created. Inclusive growth is about raising the pace of growth and enlarging the size of the economy while levelling the playing field for investment and increasing productive employment opportunities. The major concern here is sustainable growth and for growth to be sustainable it has to be broad-based, across sectors leading to structural transformation for economic diversification. This is highly essential because how growth is generated is critical for accelerating poverty reduction. Productive employment is emphasised rather than income redistribution, the strategy is to teach a person how to catch a fish rather than giving him a fish, hence the core of inclusive growth strategy is not only on employment growth but also on productivity growth. Thus inclusive growth is an absolute pro poor growth strategy. Non inclusive growth according to Pedro & Paula (2013) is the failure of economic growth in creating productive employment opportunities and addressing issues of poverty and income inequalities prevailing in Nigeria. It is such a growth that bypasses important segments of the society. It is a growth pattern that undermines sustainability, and further entrenching existing poverty level, unemployment rates and income inequalities.

Table 1: Average Growth Rates of Economic Growth, Unemployment and Poverty (1981 to 2010)

Years	Economic Growth	Unemployment Rate	Poverty Rate
1981-1990	0	3.93	42.07
1991-2000	3	3.88	59.65
2001-2010	6.5	14.7	63.99

Source: Authors computation using data from CBN annual reports and NBS Bulletin of various Editions.

This inconsistent link of rising economic growth rates with rising unemployment, poverty and income inequality; undoubtedly demonstrate that the trickle-down effect of such growth is utterly inconsequential on the welfare of the greater Nigerian populace. The above further demonstrates that despite the notable growth rate experienced over the years, the problems of unemployment, poverty and income inequality appears a pig-headed one.

However, previous empirical studies on Nigeria related to these issues such as Ijaiya, Ijaiya, Bello and Ajayi, 2011; Sodipe and Ogunrinola, 2011; Oloyede, 2014 among others, focused exclusively on the relationship between unemployment and economic growth. Unfortunately, inferences from the findings of these studies cannot be extended to inclusive growth. This is because economic growth is just one of the necessary elements of inclusive growth.

This study examined; the inclusiveness of Nigeria's economic growth. It explores the relationship between unemployment and inclusive growth in Nigeria. The rest parts of the paper are organized as follows: section two presents the concept of inclusive growth, section three reviews related empirical studies. Section four discussed the methodology; section five presents the principal component analysis of inclusive growth. Section six presents the regression results and section seven concludes the paper.

Literature Review

Conceptual Issues

Inclusiveness

The usage of the term "inclusive" in the characterization of growth episodes can be traced back at least to the turn of the century when Kakwani and Pernia (2000) employed it to highlight the contents of pro-poor growth as that one enables the poor to actively participate in it and benefit from the growth process. Inclusive growth involved both poverty and inequality reduction. Ali and Son (2007) defines inclusive growth as the growth process that increases the social opportunity function which depends upon the average opportunities available to the population and how these opportunities are shared among the population.

According to Ali (2007) the key elements in inclusive growth are employment and productivity, development in human capabilities and social safety nets and the targeted intervention. Habitat (2009) defines inclusiveness of economic growth as gross domestic product growth that leads to significant poverty reduction. Elena and Susana (2010) of World Bank focused on both the pace and pattern of growth and have identified the employability of the poor and

the cost of capital, geography and infrastructure as building blocks of inclusive growth analytical framework.

Elena and Susana (2010) defined inclusive growth as that growth which can reduce poverty and allow people to contribute to economic growth and benefit from the growth process. They pointed out that rapid pace of growth is unquestionable necessary for substantial poverty reduction but for growth to be sustainable in the long run should be broad based across the sectors and inclusive of the large part of the country's labor force. This definition of inclusive growth has a direct link between the micro and macro determinants of growth. Inclusive growth is disadvantage reducing growth (Klasen, 2010). Growth Report (2010) notes that inclusiveness is a concept that encompass equity, equality of opportunity and protection in market and employment transitions. World Bank (2009) stated that inclusive growth can be achieved by focusing on expanding the regional scope of economic growth, expanding access to assets and thriving markets and expanding equity in the opportunities for next generation.

McKinley (2010) identifies that inclusive growth entails achieving sustainable growth that will create and expand economic opportunities and ensuring broader access to these opportunities so that members of society can participate in and benefit from growth. In reviewing the ADB literature Raumiyar and Kanbur (2010) point out that while there is no agreed and common definition of inclusive growth or inclusive development, the term is understood to refer to "growth coupled with equal opportunities and consisting of economic, social and institutional dimensions. They further pointed out that inclusive growth is accompanied by lower income inequality so that the increment of income accrues disproportionately to those with lower incomes.

Asian Development Bank (ADB, 2013) defines inclusive growth economic growth that results in a wider access to sustainable socio economic opportunities for a broader number of people, regions or countries while protecting the vulnerable, all being done in an environment of fairness, equal justice and political plurality. Ramos et al (2013) follow the concept of benefit sharing and participation to measure inclusiveness. Exchange rate coordination, improved international tax capacity, coordinated fiscal stimulus, global resource system, issue of macro-economic imbalances are some of the

key policy actions that will stimulate inclusive growth in developing countries (Maritns and Lucy, 2013). Inclusiveness of growth is the growth elasticity of poverty in the sense that poverty reduction is the overall objective of any policy debate over a period of time (Han and Thorat, 2013). It depends upon two factors (a) income growth and (b) income distribution (Anand et al, 2013).

Economic Growth

Sustainable and faster economic growth is pre requisite for achieving the goal of inclusive growth. Asian Development Bank's long term strategic framework 2008-2020 (Strategy, 2020) identifies inclusive growth as its first development agenda with the second and third being environmentally sustainable growth and regional integration. It details two key determinants of inclusive growth: (i) achieving sustainable growth that will create and expand economic opportunities, and (ii) ensuring broader access to these opportunities so that members of society can participate in and benefit from growth. The second determinant for inclusive growth is identified as "expanding human capacities such as investing in education, health and basic social services". Social safety nets are also emphasized to protect the most vulnerable and deprived who have been excluded in the growth process.

Unemployment

Generally, unemployment means a state of joblessness. According to Briggs (1973), unemployment is defined as the difference between the amount of labour employed at current wage levels and working conditions and the amount of labour not hired at these levels. However, Gbosi (1997) has defined unemployment as a situation in which people who are willing and able to work at the prevailing wage rate are unable to find jobs. Therefore, anybody who is not willing and actively seeking paid employment should not be counted as part of the employed labour force. If we do so, we may be overestimating the official rate of unemployment. On the other hand, additional workers should not be counted as part of the unemployed labour force. If we do so, we may be underestimating the official rate of unemployment. No matter how one defines unemployment, the underlying philosophy is that unemployment means a state of joblessness.

Empirical Literature

Empirically, some studies have taken the position of Okun's Law, for instance, Noor et al (2007) examined the relationship between output and unemployment in Malaysia in order to ascertain if Okun's law actually exists. The end result of their analysis shows that forgone output is the major cost of unemployment, and if the loss is very high it could lead to recession.

Nkwatoh, (2015) in his work "*the nexus between entrepreneurship development and unemployment: implication for economic growth in Nigeria"* used the weighted least square technique to estimate the different models with time spans of five and nine years respectively within the period 1982 to 2013.The choice of his technique was driven by its ability to handle regression situations in the presence of non-constant variance (heteroskedasticity). The results established the occurrence of a twin effect: entrepreneurship development reduces future unemployment and also unemployment induces entrepreneurship development. Some authors have identified education as a catalytic component for the negative relationship between unemployment and inclusive growth.

The work reviewed focused on entrepreneurship development and unemployment. Entrepreneurship development was used as a measure of inclusive growth while in this study, the ratio of agricultural output to GDP is been used as a measure of inclusive growth. Also, Nkwatoh (2015), stopped at 2013 while this study extended to 2015. Hence, this work attempts to examine unemployment and inclusive growth in Nigeria.

Methodology

Model Specification

In this study, the ratio of agricultural output to the gross domestic product is used as a measure of the inclusiveness. The independent variables include the unemployment rate, institutional quality (the role of institutions in promoting the equitable distribution of income and the gains from the growth process), infrastructure- this is expected to have a positive impact on the growth and financial deepening. The model for the study followed Nkwatah (2015) but with little modification in the areas of variable included and measurement.

$$AGDP = \beta_0 + \beta_1 UNEP + \beta_2 INST + \beta_3 IFRA + \beta_4 INTR + + \beta_4 FIND + Ut$$

Where

AGDP = Agricultural-GDP ratio
UNEP = Unemployment
INST = Institutional quality
IFRA = Infrastructure (Captured using the consumption of electricity)
INTR = Interest rate
FIND = Financial deepening
U = Stochastic error term

Data Sources and Estimation Technique

The specified model is estimated using several quantitative techniques including: the Augmented Dickey-Fuller (ADF) unit root test, the Autoregressive Distributed Lag (ARDL) model/Bounds testing approach. The study is based on the use of time series data. The data for the study is sourced from the Central Bank of Nigeria Annual Statistical Bulletins (various issues) and World Bank (2017). The data set span from the period, 1970 - 2015

Table 1: Augmented Dickey-Fuller Unit Root Test Result

Variable	t-Statistic	5% Critical Value	t-Statistic	5% Critical Value	Order of Integration
AGDP	-2.147767	-3.513075	-6.521225	-3.515523	*I*(1)
UNEP	-2.943427	-3.513075	-5.438138		*1(1)*
INST	-5.240877	-3.513075			*I*(0)
INTR	-3.612505	-3.513075			*1(0)*
FIND	-7.578557	-3.536601			*I*(0)
IFRA	-3.060040	-3.513075	-9.033470	-3.515523	*I*(1)

Source: Author`s computation, 2021.

The unit root test result in Table 1 shows that the measure of inclusive growth (the ratio of the agricultural output to the GDP) and the measure of infrastructure (electricity consumption) are both stationary after first differencing, meaning that they are integrated of the first order. On the other hand, the measure of institutional quality (contract intensive money) and the measure of financial deepening (the ratio of the broad money supply to the GDP) are both stationary at level, making them integrated of order zero. The

other variables used in the study were not tested for unit roots on account of the fact that they are rates.

Table 2: Bounds Cointegration Test Result

Test Statistic	Value	K
F-statistic	6.044458	5
Critical Value Bounds		
Significance	**I0 Bound**	**I1 Bound**
10%	2.26	3.35
5%	2.62	3.79
2.50%	2.96	4.18
1%	3.41	4.68

Source: Author`s computation, 2021.

The bounds test result is presented in Table 2. The result indicates the rejection of the null hypothesis of no long run relationship for both upper and lower bounds. The study thus concludes that there exists long-run relationships, and thus cointegration among the variable used in the study.

Table 3: Bounds Test Long Run Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UNMP	-0.0235	0.006493	-3.61903	0.0012
INTR	0.009869	0.002109	4.679683	0.0001
FIND	0.018693	0.005799	3.223799	0.0033
INST	-0.5798	0.174618	-3.32037	0.0026
IFRA	0.001525	0.000545	2.795913	0.0094
C	0.744316	0.133174	5.589062	0.0000

Source: Author`s computation, 2021.

The long run result for the bounds test shows that the level of financial deepening, the interest rate and infrastructure have a positive and significant impact on inclusive growth in Nigeria in the long run. On the other hand, the quality of the domestic institutions and the rate of unemployment both have a significant negative impact on inclusive growth in Nigeria in the long-run.

Conclusion and Recommendations

The need to ensure the active participation of the wider majority of the population in the drive towards the attainment of rapid and sustainable levels of economic growth has long been recognized by policy makers in Nigeria. This recognition is in view of the role of such an approach in reducing the levels of poverty and inequality, thus ensuring that the growth process is inclusive. In pursuit of this objective the government has over the years implemented a wide spectrum of measures aimed at increasing the level and quality of employment, either directly through the creation of jobs, or indirectly through the provision of an enabling environment to ensure the growth of the private sector through improvement in the quality of the domestic institutions and infrastructural facilities. However, the continued persistence of high levels of unemployment and infrastructural decay, given the high rates of growth in recent decades leads to questions as to the inclusiveness of such growth.

In view of the importance of the inclusiveness of the growth process to the developmental aspirations of the country, this study was carried out to provide answers to the question raised above. The results of the study revealed that in the long run, the rate of unemployment has a significant negative impact on the inclusiveness of the growth process in Nigeria. the study also found that institutional quality and the supply of infrastructure also have a negative and significant impact on inclusive growth in Nigeria. On the other hand, the study results revealed that that the interest rate and level of financial deepening both have a positive and significant impact on inclusive growth in Nigeria. the result implies that the reduction in the rate of unemployment and improvements in the level of financial deepening are key requirements to the improvement in the quality of the growth process in Nigeria. Based on the findings, the study makes the following recommendations:

1. The creation of policy implementation assurance mechanisms to ensure the effective implementation of the government's policies with respect to employment generation. This will ensure the attainment of the nations employment objectives, thereby improving the inclusiveness of the growth process.

2. Increase allocation of bank credit to highly absorptive sectors such as agriculture and industry. This will aid in the promotion of the growth of private sector activity in the country, and thereby reduce the unemployment problem.
3. The reassessment of the current interest rate structure which is too high, and its reduction to a level low enough but consistent with the overall growth and employment objectives of the country.
4. Improvement in the quality of the country's institutions through the increase in their financial independence and the reduction of executive interference in their internal processes.
5. Improvement in the quantity and quality of infrastructure, especially the energy and transport infrastructure. This will reduce the cost of doing business in Nigeria and create and enabling environment which will encourage the growth of the private sector.

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Appendix

ARDL Cointegrating And Long Run Form
Dependent Variable: AGDP
Selected Model: ARDL(1, 2, 1, 3, 3, 0)
Date: 03/22/17 Time: 05:12
Sample: 1970 2015
Included observations: 43

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(UNMP)	-0.005494	0.003086	-1.780117	0.0863
D(UNMP(-1))	0.008858	0.002543	3.482828	0.0017
D(INTR)	0.005121	0.001381	3.708215	0.0010
D(FIND)	-0.001318	0.002395	-0.550253	0.5867
D(FIND(-1))	0.000263	0.002348	0.111867	0.9118
D(FIND(-2))	-0.016041	0.004376	-3.665861	0.0011
D(INST)	0.003973	0.054899	0.072372	0.9428
D(INST(-1))	-0.103672	0.038586	-2.686758	0.0122
D(INST(-2))	0.738675	0.158540	4.659245	0.0001
D(IFRA)	0.001171	0.000431	2.717371	0.0113
CointEq(-1)	-0.767664	0.126156	-6.085052	0.0000

Cointeq = AGDP - (-0.0235*UNMP + 0.0099*INTR + 0.0187*FIND -0.5798 *INST + 0.0015*IFRA + 0.7443)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UNMP	-0.023499	0.006493	-3.619029	0.0012
INTR	0.009869	0.002109	4.679683	0.0001
FIND	0.018693	0.005799	3.223799	0.0033
INST	-0.579798	0.174618	-3.320369	0.0026
IFRA	0.001525	0.000545	2.795913	0.0094
C	0.744316	0.133174	5.589062	0.0000

Dependent Variable: AGDP
Method: ARDL
Date: 03/22/17 Time: 05:36
Sample (adjusted): 1973 2015
Included observations: 43 after adjustments
Maximum dependent lags: 3 (Automatic selection)
Model selection method: Hannan-Quinn criterion (HQ)
Dynamic regressors (3 lags, automatic): UNMP INTR FIND INST IFRA
Fixed regressors: @EXPAND(@QUARTER,@DROPFIRST) C
Number of models evalulated: 3072
Selected Model: ARDL(1, 2, 1, 3, 3, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
AGDP(-1)	0.232336	0.126156	1.841659	0.0765
UNMP	-0.005494	0.003086	-1.780117	0.0863
UNMP(-1)	-0.003687	0.002216	-1.663663	0.1077
UNMP(-2)	-0.008858	0.002543	-3.482828	0.0017
INTR	0.005121	0.001381	3.708215	0.0010
INTR(-1)	0.002455	0.001359	1.806971	0.0819
FIND	-0.001318	0.002395	-0.550253	0.5867
FIND(-1)	-0.000110	0.002336	-0.047166	0.9627
FIND(-2)	-0.000263	0.002348	-0.111867	0.9118
FIND(-3)	0.016041	0.004376	3.665861	0.0011
INST	0.003973	0.054899	0.072372	0.9428
INST(-1)	0.185940	0.046836	3.970028	0.0005
INST(-2)	0.103672	0.038586	2.686758	0.0122
INST(-3)	-0.738675	0.158540	-4.659245	0.0001
IFRA	0.001171	0.000431	2.717371	0.0113
C	0.571385	0.103176	5.537965	0.0000

R-squared	0.911796	Mean dependent var	0.327052
Adjusted R-squared	0.862794	S.D. dependent var	0.068246
S.E. of regression	0.025279	Akaike info criterion	-4.238840
Sum squared resid	0.017254	Schwarz criterion	-3.583510
Log likelihood	107.1351	Hannan-Quinn criter.	-3.997175
F-statistic	18.60727	Durbin-Watson stat	2.322181
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

ARDL Cointegrating And Long Run Form
Dependent Variable: AGDP
Selected Model: ARDL(1, 2, 1, 3, 3, 0)
Date: 03/22/17 Time: 05:37
Sample: 1970 2015
Included observations: 43

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(UNMP)	-0.005494	0.003086	-1.780117	0.0863
D(UNMP(-1))	0.008858	0.002543	3.482828	0.0017
D(INTR)	0.005121	0.001381	3.708215	0.0010
D(FIND)	-0.001318	0.002395	-0.550253	0.5867
D(FIND(-1))	0.000263	0.002348	0.111867	0.9118
D(FIND(-2))	-0.016041	0.004376	-3.665861	0.0011
D(INST)	0.003973	0.054899	0.072372	0.9428
D(INST(-1))	-0.103672	0.038586	-2.686758	0.0122
D(INST(-2))	0.738675	0.158540	4.659245	0.0001
D(IFRA)	0.001171	0.000431	2.717371	0.0113
CointEq(-1)	-0.767664	0.126156	-6.085052	0.0000

Cointeq = AGDP - (-0.0235*UNMP + 0.0099*INTR + 0.0187*FIND -0.5798 *INST + 0.0015*IFRA + 0.7443)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UNMP	-0.023499	0.006493	-3.619029	0.0012
INTR	0.009869	0.002109	4.679683	0.0001
FIND	0.018693	0.005799	3.223799	0.0033
INST	-0.579798	0.174618	-3.320369	0.0026
IFRA	0.001525	0.000545	2.795913	0.0094
C	0.744316	0.133174	5.589062	0.0000

ARDL Bounds Test
Date: 03/22/17 Time: 05:37
Sample: 1973 2015
Included observations: 43
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	6.044458	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

Test Equation:
Dependent Variable: D(AGDP)
Method: Least Squares
Date: 03/22/17 Time: 05:37
Sample: 1973 2015
Included observations: 43

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(UNMP)	-0.007351	0.003385	-2.171999	0.0388
D(UNMP(-1))	0.007111	0.002731	2.603926	0.0148
D(INTR)	0.005567	0.001530	3.637894	0.0011
D(FIND)	-0.000101	0.002694	-0.037476	0.9704
D(FIND(-1))	-0.019472	0.004981	-3.909165	0.0006
D(FIND(-2))	-0.018816	0.004771	-3.943397	0.0005
D(INST)	0.012690	0.065326	0.194251	0.8474
D(INST(-1))	0.442854	0.164871	2.686057	0.0122
D(INST(-2))	0.510928	0.174286	2.931556	0.0068
C	0.474118	0.115068	4.120317	0.0003
UNMP(-1)	-0.017997	0.005099	-3.529151	0.0015
INTR(-1)	0.008426	0.001822	4.624450	0.0001
FIND(-1)	0.019233	0.004534	4.241861	0.0002
INST(-1)	-0.274236	0.132683	-2.066850	0.0485
IFRA(-1)	0.000399	0.000426	0.937032	0.3570
AGDP(-1)	-0.719979	0.144543	-4.981062	0.0000

R-squared	0.672276	Mean dependent var	-0.003471
Adjusted R-squared	0.490207	S.D. dependent var	0.039320
S.E. of regression	0.028075	Akaike info criterion	-4.029085
Sum squared resid	0.021281	Schwarz criterion	-3.373754
Log likelihood	102.6253	Hannan-Quinn criter.	-3.787419
F-statistic	3.692423	Durbin-Watson stat	2.388512
Prob(F-statistic)	0.001549		

DATA

YEAR	AGDP**	FIND**	INTR*	INST**	UNMP***	IFRA***
1970	0.447428	0.231856	7	0.649969	9.768022	32.27036
1971	0.420995	0.220931	7	0.65982	9.763899	28.49249
1972	0.380375	0.248304	7	0.682937	9.766138	32.63679
1973	0.340621	0.286723	7	0.713695	9.783153	35.1992
1974	0.229799	0.14776	7	0.757726	9.758898	32.75295
1975	0.28115	0.156087	6	0.756979	9.747405	45.63789
1976	0.234623	0.202601	6	0.771181	9.775097	51.4161
1977	0.234821	0.250594	6	0.754292	9.851213	58.98368
1978	0.2298	0.273357	7	0.729857	9.661879	60.47856
1979	0.201465	0.341412	7.5	0.770084	9.701431	59.60691
1980	0.206101	0.478655	7.5	0.789013	9.885864	67.80365
1981	0.28257	0.078752	7.75	0.761046	10.15568	50.70674
1982	0.297723	0.090611	10.25	0.76663	8.904542	81.57746
1983	0.317943	0.112496	10	0.768055	9.859641	81.41297
1984	0.304627	0.127313	12.5	0.791036	10.62359	61.8158
1985	0.327048	0.130711	9.25	0.813153	11.23493	80.12961
1986	0.35022	0.132979	10.5	0.810955	3.9	90.51529
1987	0.339872	0.164386	17.5	0.812917	13.68004	88.93497
1988	0.349078	0.206694	16.5	0.792866	13.6794	86.77632
1989	0.341647	0.198771	26.8	0.79257	13.6803	96.66263
1990	0.315248	0.256634	25.5	0.782252	13.68105	86.71021
1991	0.32973	0.329716	20.01	0.735764	13.6794	89.21814
1992	0.329244	0.475689	29.8	0.715262	13.67685	89.66875
1993	0.329642	0.72218	18.32	0.708559	13.6839	100.4507
1994	0.337022	0.969121	21	0.6606	13.68405	95.14616
1995	0.341927	1.132747	20.18	0.664819	13.67279	91.08615
1996	0.341167	1.26073	19.74	0.686442	13.66667	85.52179
1997	0.346047	1.422846	13.54	0.695931	13.71208	81.6319
1998	0.350008	1.690751	18.29	0.701855	13.68467	76.61259
1999	0.366998	2.241418	21.32	0.733533	13.62773	75.4092
2000	0.358301	3.147468	17.98	0.735531	13.64219	74.13121
2001	0.343205	3.685967	18.29	0.742625	13.89375	75.19744
2002	0.438901	3.692248	24.85	0.758085	13.575	104.1345
2003	0.42596	4.157183	20.71	0.792385	13.4	101.4018
2004	0.409815	4.290543	19.18	0.797407	13.7	122.9846
2005	0.411907	5.009234	17.95	0.799907	14.9	128.6357
2006	0.417237	6.760248	17.26	0.838391	12.3	111.1444
2007	0.420145	9.195866	16.94	0.87349	12.7	138.1424
2008	0.421265	13.63701	15.14	0.902619	14.9	126.5322
2009	0.417014	0.014994	18.99	0.91399	19.7	119.9494
2010	0.408693	0.014846	17.59	0.906096	21.4	135.6377
2011	0.402071	0.015948	16.02	0.906405	23.9	149.3125
2012	0.239108	0.000258	16.79	0.915967	7.6	155.8544
2013	0.233325	0.000248	16.72	0	7.1	141.873
2014	0.229036	0.000208	16.55	0.655055	4.8	145.6694
2015	0.231111	0.000212	16.85	0.605576	10.85	148.1773

Source: *Central Bank of Nigeria Annual Statistical Bulletin (2012), (2016).

** Authors computation based on data from the Central Bank of Nigeria Annual Statistical Bulletin (2012), (2016).

*** World Development Indicators derived from the World Bank (2017)/