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AGRICULTURAL SECTOR DEVELOPMENT AS A PANACEA FOR EMPLOYMENT GENERATION IN NIGERIA.

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ABSTRACT

This paper examines Agricultural Development and employment generation with particular reference to Nigeria. The paper acknowledged the important role agriculture plays in developing countries such as Nigeria not only in employment generation but also for overall economic growth. It showcases the agriculture sector as the most critical and basic sector that has significant potentials for the transformation of the Nigerian economy. Employment was seen as one of the basic problems confronting the economy of Nigeria, therefore, this paper resort to finding the contribution of the earlier mainstay of the economy to employment generation in Nigeria. To achieve this objective the Error Correction and Granger Causality test was employed to analyse the contribution of agricultural sector alongside other explanatory variables such as gross domestic product, foreign private capital, federal government expenditure and industrial on employment generation in Nigeria. The study also provides the overview of agricultural development in Nigeria and also provides a framework for understanding the agricultural sector in relation to the strategies employed by government to develop the sector. However, the result of the study revealed that agricultural sector and other explanatory variables contribute significantly to employment generation in Nigeria. There, to reduce the increasing unemployment in Nigeria, government should intensify effort in improving the agricultural sector that could serve as feedback mechanism in providing raw materials for industrial purposes.

Keywords: Employment, economic growth, economy of Nigeria, Agricultural Development

INTRODUCTION

The menace of unemployment has been increasingly recognized as one of the socio-economic problems currently facing many developing countries like Nigeria and African as a whole (Adebayo and Ogunrinola, 2006). International statistics portrays that industrial and services workers living in developing regions account for about two thirds of the unemployed (Patterson et al, 2006). This according to Becker et'al (1990), this menace brings about economic waste and causes human suffering. The contribution and attitude of this economic waste were emphasized by the fact that the factor services are the least durable economic commodity. This economic burden has been a problem in Nigeria especially since 1980, when the nation economy took a

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turn for the worst as world petroleum price tumbled, the Nigerian currency became devalued corruption became rampant and the population of Nigeria ballooned at a breath taking pace (Iwayemi, 2008).

The goal of achieving full employment among other macroeconomic goals is an important one in many developing nations where unemployment and underemployment has been a major cause and consequence of widespread poverty. However, in spite of the very high-sounding electioneering promises of political leaders in many poor nations of the world, the achievement of impressive growth and decent employment remains a mirage. High rate of unemployment, unimpressive growth rates and poverty among other miseries of the populace, are the order of the day. For instance, facts available for the Nigerian economy show a high rate of unemployment and underemployment. The rate of open unemployment was 12% in March 2005; it rose to 19.7% in March 2009 while the rate of underemployment hovered around 19% in 1998 (Adebayo and Ogunrinola, 2006, NBS 2010). Among the youths in the 15-24 age cohorts, the rate of unemployment is over 40% according to the 2010 edition of the Labour Force Sample Survey of the National Bureau of Statistics. Thus, the issue of real output and employment growth in developing nations is a sine qua non for poverty reduction and a more equitable income distribution (Fofana 2001).

Many studies on Nigeria's employment situation have been devoted to unemployment and its determinants and/or its impacts on economic growth (Adebayo and Ogunrinola, 2006; Oladeji, 1994; Omotor and Gbosi, 2006). However, to our knowledge, not much research attention has been given to the estimation of employment elasticity with respect to agricultural output in Nigeria. Though from a cursory look at the Nigerian data on employment level and agricultural output, it appears that the recent trends and patterns have been insufficient to make any appreciable impact on employment generation, but this has not been sufficiently investigated empirically in the literature (Oni, 2006; Patterson et al 2006). This study is therefore an attempt to fill this gap by employing an econometric method for the purpose of estimating the significance of agricultural output on employment generation in Nigeria. The rest of this paper is organized as follow: Section 2 presents the review of relevant literature on the employment-agricultural output relationship; Sections 3 presents the data sources and research methodology respectively; section 4 reports the empirical evidences generated from data analysis while section 5 concludes the paper.

2. LITERATURE REVIEW

2.1 Overview of Nigerian Agriculture Sector

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Although, Nigeria today depends heavily on oil industry for its revenue, it is still predominantly an agricultural society. Agriculture remains a key sector of the economy providing employment for about 70% of the population. The bulk of these populations are engaged in agricultural production at a subsistence level; the holdings are generally small and scattered. The Federal office of statistics in its' 1999 reports indicated that agriculture sector provided 41% of Nigeria's total gross domestic product (GDP) in that year. This represented a decrease of 24.7 % from its contribution of 65.7 % to the GDP in 1957.

Nigeria's enabling of climate allows it to produce a variety of food and cash crops. The staple food crops include cassava, yam, corn, coco-yam, cow-peas, beans, sweet potatoes, millet, plantain, banana, rice, sorghum, and a variety of fruits and vegetable. The leading cash crops are cocoa, citrus, cotton, groundnut (peanuts), oil palm, and rubber. They were also Nigeria's major export in the 1960s and early 1970s until oil took over as the major source of the country's revenue. Among major export destinations for Nigeria agricultural export products were Britain, United States, Canada, France and Germany.

A significant portion of the agricultural sector in Nigeria involves cattle rearing, fishery, poultry, lumbering, which contributed more than 2 % to the gross domestic product (GDP) in the 1980s. According to the United Nation Food and Agriculture Organization (1987), estimate, there were 12.2million cattle, 13.2 million sheep, 26.0 million goats, 1.3 million pigs, 700,000 donkeys, 250,000 horses and 18,000 camels, mostly in Northern part of Nigeria, and owned mostly by rural dwellers rather than by commercial companies. Fisheries output ranged from 600,000 to 700,000 tons annually in the 1970s. Estimates indicated that the output had fallen to 120,000 tons of fish per year as at 1990, and this has continually declined. This is related strongly to the environmental degradation and water pollution in the Niger Delta Region caused by oil exploration activities. The output is however, experiencing rapid increase since 2006. This increase was initiated by the encouragement and training of farmers in the Niger Delta by the Green River Project of the Nigerian Agip Oil Company Limited (NAOC).

As noted earlier, the decline in agricultural production in Nigeria began with the advent of oil boom in the early 1970s, which resulted in the neglect of the agricultural sector. The oil boom in the oil sector brought about a distortion in the labour market. This distortion in turn produced rippling adverse effects on the production levels of both food and cash crops. Government had paid farmers low prices over the years on the food for the domestic market in order to satisfy urban demands for cheap basic food products. This policy, in turn, progressively made agricultural work unattractive and enhanced the lure of the cities for farm workers. Collectively, these developments worsened the low productivity, both per unit of land and per worker, due to

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several factors: inadequate technology, poor transportation, environmental degradation, and infrastructure, and trade restrictions.

However, as food production could not keep pace with its increasing population, Nigeria began to import food. It thus lost its status as exporter of such cash crops as cocoa, palm oil, and groundnuts. According to United State Department of State FY2001 Country Commercial Guide, Nigeria's total food and agricultural imports are valued at approximately 1.6 million per year.

The major imports from the United States are wheat, sugar, milk powder, and consumer ready food products. However, efforts been made since late 1970s to revive agriculture so as to make Nigeria food self sufficient again, generate employment and increase the export of agricultural products have only produced modest results. These efforts have only produced modest result.

2.2 Theoretical Issues and Brief Survey of Literature

2.2.1 Theoretical Issues

The desire to expand decent and productive employment is at the heart of any nations' macroeconomic policies geared towards poverty reduction.

In spite of its importance, the implementation of policies on employment creation in many developing nations has not yielded much impact as there is a wide gap between the jobs available and the number of job seekers actively seeking work in most poor nations. Not only is the level of decent jobs diminishing, the challenges of globalization and economic liberalization has brought about new realities having uncertain implications for employment creation in many developing nations (Ogunrinola and Osabuohien, 2010). The high rate of labour force growth vis-a-vis the low and dwindling rate of formal sector job growth has made the labour market in developing nations to exhibit some peculiar characteristics. First is the widening of the informal sector where many who would have remained in open unemployment take up low-wage jobs or even self-employment while still hoping to pick up formal sector job when available. Second, the unemployed in the labour market in poor nations do not enjoy any form of unemployment insurance or any social benefit from the government. Third, the reported unemployment rates in official documents are usually very low due to high rate of disguised employment and underemployment in the informal sector. Fourth, self-employment, part-time employment, and unpaid employment in family enterprises have a disproportionate share in total employment. All these are pointers to the need for a search for solution to employment problems in developing nations.

In an attempt to explain the concept of employment and unemployment, the classical economic analysis based the weight of its argument on the Walrasian general equilibrium model in which price flexibility is the key factor in the correction of any labour market disequilibrium. The

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flexible ruling market price also helps to maintain the system-wide market clearing equilibrium. Thus, in the classical labour market, shortages or surplus of labour is dealt with by wage movement: the wage falling below the equilibrium to mop up excess labour supply, and rising above the equilibrium when there are shortages. By so doing, the incidence of involuntary unemployment is removed from the classical labour market. However, at the ruling market clearing wage, unemployment that can exist are the voluntary and frictional types.

In Keynes' analysis, the classical view of wage flexibility and its acceptance by labour was rejected while the power of the invisible hands to restore employment level and output after a recession/depression did not materialize during the depressions of the 1930's. Keynes assumed that workers will not be willing to accept wage cut to secure more employment even if they will accept reduction in real wage brought about by rising prices at constant money wage. His weight of analysis rests on the influence that government policy can have in influencing the level of aggregate demand in the economy. Full employment will only be restored through an increase in aggregate demand and not through the classical prescription of falling money wages. This is because, Keynes believed wages to be inflexible in the downward direction, as workers through their union will resist wage cut. Thus, the combined influences of union militancy, worker's obstinacy in resisting money wage cut and the fact that product price might fall in the same proportion with wage cut, thereby leaving real wage unchanged might make classical predictions unrealistic. Rather than relying on wage flexibility, Keynes recommended fiscal policy measures in form of government deficit budgeting spent on public works. This has the potentials of increasing aggregate demand and hence, removing the incidence of involuntary unemployment.

For a developed economy, Keynes' remedial policy for removing involuntary unemployment might be applicable but its potency for solving unemployment problem in developing countries are rather very doubtful for two reasons. First, the nature of unemployment in these countries differs from those in the developed nations. While developing countries suffer from chronic unemployment for a long period of time due to either deficiency or inefficient use of capital and other co-operant factors, unemployment in developed nations is cyclical resulting from low level of aggregate demand. Thus unemployment in poor nations might not be receptive wholly to demand-augmenting policies due to structural rigidities especially with regards to the supply of output (Jhingan, 1997). As a result, increases in aggregate demand will only lead to rising product prices rather than increasing employment. Second, Keynes' policy prescription relates to open unemployment rather than disguised unemployment which has assumed enormous dimension in developing nations. However, this did not receive attention in his analysis since it is not an important phenomenon in developed nations.

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In spite of these however, Keynes analyses reflect some aspects of labour market behaviours in developing nations. For example, in the formal wage sector of the economy, the market is not usually cleared as a result of too high a wage level which is policy, rather than market-determined. Moreover, the actions of unions and government minimum wage laws help to keep wages above the market clearing level. In most cases, this wage does not decline appreciably despite the usually long queue of the unemployed willing to take up formal sector jobs.

However, with time, workers who are not able to get formal sector job usually lower their expectations by taking up informal employment at the going level of earnings. In most developing nations, the informal sector is therefore relatively large and growing as a result of low labour absorptive capacity of the formal sector.

2.2.2 Brief Survey of Empirical Literature

Several empirical studies have been carried out to examine the nature and character of employment situations in developing nations in general and Nigeria in particular (Ogunrinola, 1991; Oladeji, 1987).

Sodipe and Ogunrinola (2011) formulated a simple model of employment that was subjected to Least Square estimation haven corrected for non-stationary on the basis of the Hodrick-Prescott filter. The result of their econometric analysis shows that a positive and statistically significant relationship exists between employment level and GDP growth in Nigeria. In this regard, Sodipe and Ogunrinola (2011) obtained the empirical finding that supports the strand of theory suggesting that the positive relationship between GDP and employment is normal and that any observed jobless growth might just be a temporary deviation.

Onwioduokit (2006) examined the link between unemployment and several macroeconomic variables in Nigeria and concluded that 'the shift in the composition of unemployment in Nigeria since 2000 is very instructive as it has brought to the fore the inadequacies of the received theory towards explaining the unemployment phenomenon in the country'.

Spieza (2004) formulated and estimated a model in which employment was a function of exports, import and non-tradable to examine the effect of trade on employment. He found no significant relationship between FDI (the proxy variable for globalization) and employment.

According to Schmid, (2008), the type of economic growth (extensive or intensive), is an important factor that determines the rhythm of job creation in relation to economic growth. Thus, the economic growth (GDP growth - aggregate production) as reaction to the aggregate demand

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growth, can be achieved in different ways: either the quantity of inputs (labour force, capital, etc) increases and then we talk about extensive growth, or the productivity of production factors increases (intensive growth), or a combination of the two possibilities.

Fofana (2001) argued that the employment- growth relationship is significant and positive for Cote d'Ivoire having utilized time series data in the study. Fofana results were never in isolation as they were corroborated by those obtained by Swane and Vistrand (2006).

On his part, Yogo (2008) posits that the employment issue in sub-Saharan Africa is mostly a matter of quality rather than quantity. In particular, Yogo (2008) observed that the weak employment-growth nexus is not attributable to labour market rigidities; but rather to the weakness of productivity growth over time. The author thus investigated the relationship between economic growth, employment and unemployment in the European Union on one hand, and on the other analyzed the link between economic growth and the labour market. In sum, Walterskirchen (1999) found that a strong positive correlation between GDP growth and change in the level of employment.

Sawtelle (2007) estimated a significant positive elasticity of employment with respect to real GDP in each of fourteen industry sectors of the US with respect to changes in real GDP during the ten year period of 1991-2001.

Generally, recent studies (Kapos, 2005 and Dopke, 2001) showed that between economic growth and employment there is a positive and strong relationship, meaning that economic growth generates new jobs, but of different intensity from one period to another and from one country to another. This reflects the different response of the labour market to the economic growth process. The explanation for the existence of different employment intensity in relation to economic growth must be looked for in many directions.

Given the high proportion of the informal sector in the labour market of developing nations, Ogunrinola (1991) examined the issue of employment and earnings of the urban informal sector of Ibadan. The study found that the urban informal sector of Ibadan has contributed significantly to employment creation, skill development and entrepreneurial development. For instance, about 90% of the entrepreneurs were trained under the apprenticeship systems who are also involved in capacity development of others. Oladeji (1987) investigated the issue of graduate unemployment in Nigeria while Borisade (2001) examined the structure of educational system and employment relationship in Nigeria. Both conclude that a re-orientation of the educational system towards the employment needs of the economy would go a long way towards promoting productive employment in Nigeria. In terms of the relationship between the level and growth

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rate of economic activity of the nation and employment generation, a number of empirical studies have been conducted in several different nations. Swane and Vistrand (2006) examined the GDP-employment growth relationship in Sweden. Using the employment-population ratio as a measure of the extent of employment generation, the study found a significant and positive relationship between GDP and employment growth. This finding supports the strand of theory suggesting that the positive relationship between GDP and employment growth. They however make useful suggestion for further research on the causal relationship between employment and GDP.

In an empirical survey of the link between employment and growth in sub-Saharan African countries, Yogo (2008) is of the view that the employment issues in sub-Saharan Africa is mostly a matter of quality rather than quantity. According to him, the reason for the observed weak employment performances could not be found in labour market rigidities; but that the observed increase of working poor could be explained by the weakness of economic growth over time. Examining the relationship between economic growth, employment and unemployment in the European Union (EU), Walterskirchen (1999) analysed the link between economic growth and the labour market. He found that the relationship between GDP growth and change in unemployment is divided into two components viz: those changes in employment and unemployment rates governed by economic factors as well as those governed by demographic influences and labour market policies. He employed the use of panel data. The finding of the study showed a strong positive correlation between GDP growth and change in the level of employment.

Sawtelle (2007) estimated and compared elasticities in each of fourteen industry sectors of the US with respect to changes in real GDP during the ten year period of 1991-2001. Also, the study estimated for each industry sector and the aggregate economy two models of employment determination. One of the models related employment to real GDP while the other related employment to several other macroeconomic variables affecting employment together with the real GDP. Since the demand for labour is a derived demand, the expansion of real GDP for instance generates increased derived demand for workers. The findings of Sawtelle (2007) are in line with those of Pandalino and Vivarelli (1997). Generally, studies have employed econometric research to estimate the elasticity of employment with respect to real GDP as well as to examine gender differences in employment cyclically. Our study follows a similar approach for Nigeria.

However, emphasis on the study of the determinant of employment generation has not

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recognized the important of agricultural development in generating employment in Nigeria. Most statistical evidence of agricultural contribution to employment has been a point estimate. This studies in addition to estimating the contribution of agricultural sector on employment generation, employed econometrics techniques to analyze time series data to determine the contribution of agricultural sector on employment generation in Nigeria.

3: METHODOLOGY

3.1 The Data

The major source of data for this study is the Statistical Bulletin published annually by the Central Bank of Nigeria. Other sources of data include the publications of the National Bureau of Statistics as well as those of the defunct National Manpower Board (now merged with the Nigerian Institute of Social and Economic Research) and World Development Indicators, December, 2015.

Time series data for real gross domestic product (GDP), foreign direct investment and government expenditure were obtained from Statistical Bulletin while employment figures were from the National Bureau of Statistics National Manpower Board. We used the published data on foreign private investment as proxy for foreign direct investment. Finally, we used total government expenditure (recurrent and capital) as proxy for public expenditure.

3.2 The Model

Several empirical studies employing various macro-economic variables (as suggested by theory) in cross-country analysis regressions have been employed to examine the employmenteconomic growth relationship in both developed and developing nations. For instance, Levine and Renelt (1992), Barro (1991) and Becker et al. (1990) used simple regression analysis to assess the relationship between the level of employment and other macro variables highlighted in their studies. Pandalino and Vivarelli (1997) used panel data to study the employment/economic growth relationship in G-7 countries. Fofana (2001) studied the employment-economic growth relationship for a single country, Cote d'Ivoire using time series data for the study. The methodology of this study takes after Fofana's, and as such we specify our basic model as:

$$EMPT = f (AGQ, GDP, FPC, PEX, INQ)$$
(1)

Where:

EMPT = Total Employment AGQ = Total Agricultural Output GDP = Real Gross Domestic Product FPC = Foreign Private Capital (a proxy for Foreign Direct Investment)

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PEX = Public Expenditure

INQ = Industrial sector output

Assuming a linear relationship among explanatory variables the explicit form of equation (1) becomes:

 $EMPT_{t} = \alpha + \beta_{1} AGQ_{t} + \beta_{2} GDP_{t} + \beta_{3} FPC_{t} + \beta_{4} PEX_{t} + \beta_{4} PEX_{t} + \beta_{5} INQ_{t} + \mu_{t}$ 2

We similarly estimated the non-linear form of equation (1) which is log-linearised as:

 $\ell n EMPT_t = \alpha + \beta_1 \ell n AGQ_t + \beta_2 \ell n GDP_t + \beta_3 \ell n FPC_t + \beta_4 \ell n PEX_t + \beta_5 INQ_t + \mu_t - --3$

The variables expressed in equation 3 are in logarithm form; they express the elasticities of employment level with respect to the variables to which each is attached. In terms of *apriori* expectations regarding the signs of the coefficient estimates of the variables in equation 3; we expect a positive sign for each of them.

The Error Correction Model used in this study is specified as

 $\Delta \ell n EMPT_{t} = \beta_{0} + \beta_{1} \sum_{t=1}^{n} \Delta \ell n AGQ_{t-1} + \beta_{2} \sum_{t=1}^{n} \Delta \ell n GDP_{t-1} + \beta_{3} \sum_{t=1}^{n} \Delta \ell n FPC_{t-1} + \beta_{4} \sum_{t=1}^{n} \Delta \ell n PEX_{t-1} + \beta_{5} \sum_{t=1}^{n} \Delta \ell n INQ_{t-1} + \sigma_{i} ECM(-1) + \varepsilon_{t}$

The variables were as earlier defined in equation 2 and on a priori, we expect the estimates of $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$, and $\beta_5 > 0$. The coefficient of the ECM variables (σ_i) contains information about whether the past values of variables affect the current values of the dependent variable. The size and statistical significance of the coefficient of the error correction term (σ_i) measures the tendency of each variable to return to equilibrium level. A significant coefficient implies that past equilibrium errors plays a role in determining the current outcomes. In other words, it shows the ability of the model to correct the short-term shocks in equilibrium in the long-run.

4. Presentation and Analysis

In carrying out this analysis we recognise that there is a need to assess the stationarity or otherwise of the data series. This is because an attempt to regress a non-stationary series on another non-stationary series leads to spurious regression. Furthermore, statistical tests of the parameters resulting from the regression may be biased and inconsistent. A standard procedure for investigating the stationarity of a time series is via unit root tests using the Phillip Peron (PP), Dickey Fuller (DF) or Augmented Dickey Fuller (ADF) approaches, among many others. This study adopts the ADF approach which appears to be in common use. To conduct the ADF

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test, it is crucial to estimate the following regression:

 $Ay_t = 4 (3_2t \ 4 \ 2j = irj - Ay_t$

Where yt = relevant time series $s_t =$ white noise residual, t = linear deterministic trend which is included because the alternative hypothesis is that it is stationary around a linear trend.

The ADF test consists of testing the null hypothesis (H₀) that Pi=0 in the regression equation above. The hypothesis is rejected if the pseudo t-statistics resulting from the above equation is below the absolute value of the critical value reported in Engle and Yoo (1987). We used the E-Views econometric software for all the data analyses carried out in this study.

In analysing the relationship between employment and all the explanatory variables, we first estimated equations 2 at levels to determine the residual for the formulation of the error correction term (ECM); and secondly the two equations were estimated again after the variables were detrended, and lastly we estimated the double-log equation with the error correction variable. The ECM term takes care of the speed of adjustment of the model to its equilibrium in the short run.

Variable	ADF Statistic	Critical value at 5 Percent	Prob.	Remarks
LnEMPT	-6.360192	-2.957110	0.0000	I(I)
LnAGQ	-5.711656	-2.957110	0.0000	I(I)
LnGDP	-9.387307	-2.957110	0.0000	I(I)
LnFPE	-8.269832	-2.957110	0.0000	I(I)
LnFEX	-6.480249	-2.967767	0.0000	I(I)
LnINQ	-5.432902	-2.957110	0.0001	I(I)

Table 1: Unit Root Test Result

Source: Author's computation using Eviews 7.0

The result in table 1 above provides evidence that all the variables employed in this study are stationary in their first difference.

Using differenced variables for the estimation of regression would suggest a loss of valuable information about the long-run equilibrium between variables. Therefore there is need to

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integrate the short-run dynamics with the long-run equilibrium using the error correction mechanism (ECM). The ECM reveals the ability of the model to restore or not restore to equilibrium path. In doing this, a co-integration test was conducted using the Johansen co-integration test.

In the Johansen co-integration test results in table 2 below, the Trace test indicates 6 cointegrating equations at 5 percent critical level, while the Max-Eigen value test indicates 5 cointegrating equations at the 5 percent critical level.

Table 2. Contegration Test Result

Null	Trace	Critical	Null	Maximum-	Critical Value
Hypothesis	Statistic	Value At 5 Percent	Hypothesis	Eigen Statistic	at 5 Percent
$\mathbf{r} = 0^*$	243.2894	95.75366	$\mathbf{r} = 0^*$	92.84448	40.07757
r ≤1*	150.4450	69.81889	r ≤1*	72.66231	33.87687
r ≤2*	77.78266	47.85613	r ≤2*	38.25872	27.58434
r ≤3*	39.52393	29.79707	r ≤3*	30.58285	21.13162
r ≤4	8.941086	15.49471	r ≤4	8.908003	14.26460
r ≤5	0.033083	3.841466	r ≤5	0.033083	3.841466

Unrestricted Cointegration Rank Test (when GDP is used)

Note: r represent number of cointegrating vectors. Trace test indicates 4 cointegrating equations at the 0.05 level while max-eigenvalue test also indicates 3 cointegrating equations. *Denotes rejection of the null hypothesis at the 0.05 level.

Source: Author's computation using Eviews 7

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Dependent Variable: D(LNEMPT) Method: Least Squares				
Variable	Coefficient	t Std. Error	t-Statistic	Prob.
С	1.511199	0.885854	1.705923	0.1045
D(LNAGQ)	0.529390	0.225704	2.345506	0.0027
D(LNGDP)	0.317583	0.148001	2.145817	0.0046
D(LNFPC)	0.034339	0.305465	0.112417	0.9116
D(LNFEX)	0.460223	0.169157	2.720686	0.0009
D(LNINQ)	0.344991	0.171981	2.005983	0.0058
D(LNAGQ(-1))	0.369562	0.104889	3.523363	0.0002
D(LNGDP(-1))	0.774346	0.387701	1.997276	0.0557
D(LNFPC(-1))	0.174868	0.302780	0.577540	0.5700
D(LNFEX(-1))	0.109060	0.705667	0.154549	0.8787
D(LNINQ(-1))	0.999079	0.304599	3.279981	0.0012
ECM	-0.429498	0.150030	-2.862753	0.0096
R-squared	0.754868	Mean de	pendent var	0.151020
Adjusted R-squared	0.310046	S.D. dep	endent var	0.826454
S.E. of regression	0.686481	Akaike info criterion		2.365521
Sum squared resid	9.425128	Schwarz criterion		2.915171
Log likelihood	-25.84833	Hannan-	Quinn criter.	2.547714
F-statistic	62.26641	Durbin-V	Watson stat	2.142868
Prob(F-statistic)	0.000200			

Table 3: Parsimonious Error Correction Model

Source: Author's computation using Eviews 7.0

From table 3 above, the t values of the independent variables (AGQ, GDP, FPC, FEX and INQ) in the parsimonious error correction model has turned out to be significant at 5% level and the variables are positively signed. Hence we observed that, a 1% increase in agricultural output on the average will bring about 53% increase in employment in Nigeria, a 1% increase in gross domestic product on the average will bring about 32% increase in employment in Nigeria, a 1% increase in employ

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Nigeria. Also, a 1% increase in federal government expenditure on the average will bring about 1% increase in economic growth in Nigeria and a 1% increase in ENCR on the average will bring about 11% increase in employment in Nigeria. All the variables except foreign private capital are statistically significant in the long run. The result of the ECM shows that a convergence relationship exists between the variables in the short run. That is, the coefficient of ECM of -0.43 shows a speed of adjustment of the short-run fluctuation to long-run equilibrium. This study has shown that agricultural output and federal government expenditure contribute more to employment generation within the period of study in Nigeria.

Table 4: Relationship between Total Energy Consumption and Economic Growth in Nigeria

Pairwise Granger Causality Tests					
Null Hypothesis:	Obs	F-Statistic Prob.			
AGQ does not Granger Cause EMPT EMPT does not Granger Cause AGQ	32	8.940950.00310.184710.8324			
GDP does not Granger Cause EMPT EMPT does not Granger Cause GDP	32	3.448720.04641.254470.3013			
FPC does not Granger Cause EMPT EMPT does not Granger Cause FPC	32	5.925930.00081.103270.3463			
FEX does not Granger Cause EMPT EMPT does not Granger Cause FEX	32	3.000390.00662.285780.1210			
INQ does not Granger Cause EMPT EMPT does not Granger Cause INQ	32	7.920840.00200.429750.6550			

Granger causality test

Source: Author's computation using Eviews 7.0

Figure 4 above present the causality test result between and total employment in Nigeria, agricultural output and other independent variable. The result revealed unidirectional causality between total employment in Nigeria and energy consumption in Nigeria. It is evidenced that agricultural output, gross domestic product, foreign private capital, federal government

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expenditure and industrial output contribute to the growth of employment in Nigeria. Therefore, agricultural sector should be considered important in driving employment in Nigeria.

5. CONCLUSION.

From the analysis as well as the error correction mechanism, it is clear that there is a positive relationship between agricultural output and employment generation in Nigeria. The study also identifies increase in economic activities proxied by gross domestic product, activities of foreign investors in Nigeria, government expenditure and increase in industrial activities as stimulus and contributors to employment generation in Nigeria.

This study supports the Keynesian view that increase in aggregate supply will increase employment generation of a country. Also, in addition to other studies on the determinants of employment in Nigeria, this study has succeeded in justifying the contribution of agricultural sector to employment generation in Nigeria. As evidence from other developing and developed countries, the more the increase in economic activities, the more the country's unemployment reduces.

For sustainable increase in employment generation in Nigeria, the government of Nigeria should develop policies that could improve agricultural activities in Nigeria. These policies could increase credit policies for agricultural purposes, strengthening of the agricultural product marketing board to encourage farmers.

This study indentified the activities of foreign investors as a determinant of employment. Therefore, government should intensify more effort in creating an enabling environment for foreign investment in Nigeria.

In addition to the recommendations, an enabling environment for industrial activities should be created. This environment should include credit policies and interest rate policies that could encourage borrowing for investment. Also, social amenities in the form of electricity, pipe born water, roads and securities are necessary to encourage industrialization in Nigeria.

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