Account and Financial Management Journal e-ISSN: 2456-3374
Volume 4 Issue 10 October- 2019, (Page No.-2031-2040)
DOI: 10.33826/afmj/v4i10.01, I.F. - 4.614

Agricultural Financing: A Panacea to Unemployment Malady in Nigeria (2000-2017)

Ayodeji, Emmanuel Abiodun, PhD

Associate Professor of Finance AfeBabalola University, Ado-Ekiti, Ekiti State, Nigeria

Abstract: The study investigated the effects of agricultural financing on unemployment in Nigeria within a time scope 1999-2017. With financial injection theorem as the anchor, the study represented the dependent variable, unemployment, by unemployment rate, and the independent variable, agricultural financing, by commercial banks credit to agriculture, micro finance banks credit to agriculture, and government allocation to agriculture. It employed gross domestic product and inflation as control variables. With respect to those proxies, annualized time-series data were sourced from Central Bank Nigeria (CBN) Statistical Bulletin and reports of National Bureau of Statistics, and estimated using Auto Regressive Distributed Lag (ARDL) model. The study found that, agricultural financing exhibited both significant short and long run relationship with unemployment in Nigeria. It, also, found that, while agricultural financing from commercial banks and microfinance banks exhibit negative relationship with unemployment in Nigeria, government allocation to agriculture exhibited positive relationship with it. The study, therefore, concluded that, agricultural financing makes both short and long run contributions to unemployment reduction; and that, agricultural financing from the private sector contributes to poverty reduction much more than government allocation to agriculture would do. The study recommended that, government should take agricultural development policy, through agricultural financing, as the key solution to unemployment problem in Nigeria, as the sector remains the largest employer of labour in the country. Also, microfinance banks should make agriculture a priority sector; and such, branches of state and national microfinance banks should be sited at rural and semi-urban areas so as to engender agricultural development, and unemployment reduction.

Keywords: Unemployment. Agricultural Financing, Commercial Banks, Microfinance Banks

INTRODUCTION

Scholars in development studies have identified unemployment as the bane of social vices in any economy, whether developed, emerging or undeveloped. These vices include stealing and robbery, hooliganism and gangism, kidnapping and banditry, and prostitution and child trafficking. To avoid the emergence and prevalence of these vices, developed countries provide social security benefits (or better still, unemployment benefits) to the unemployed in their respective countries. However, the beneficiaries of such schemes contribute nothing to their country's national income. By this, social security benefits only prevent the social menace of unemployment, not its economic menace; and as such, economists and development scholars generally started developing theories on the link between unemployment and economic growth.

Okun's Law(1962) was one of the pioneer and prominent theories of unemployment in relation to economic growth; it states that, unemployment exerts negative effects on economic growth, as it reduces the growth potentials of the economy. Specifically, Okun's law states that, output depends on the amount of labour used in the production process. This implies that, all things being equal, increase in the number of labour used in the production process would bring about increase in the total output, As such, there is a positive relationship between employment and output. Essentially, total employment equals the labour force minus the unemployed; consequently, there is a negative relationship between unemployment and output. To this extent, the higher the unemployment rate, the lower the national output. (Mahmoud & Mohammed, 2012; Eze, Atuma&Egbeoma,2016; Hauwa, 2016).

Unemployment is a common problem to most countries of the world, as it stands as one of the major socio-economic problems affecting growth process in them. As a direct consequence of this, it has attracted the attention of the world stakeholders to the extent that, it is one of the sustainable development goals, which every nation must strive to achieve before the Year 2030 (Osman, Ladhani, Findlater&Mckay, 2017). Without mincing words, unemployment in the Sub-Saharan Africa has become endemic and unpalatable, and has continued to have the same pattern over the years. Much more, it has continued to move in an upward trend with the level of education, and university graduates tend to have the highest level of unemployment in Africa. Although, for the poor and the unskilled, unemployment is not an option, as they can find refuge in subsistence agriculture and urban informal sector; however, the graduates from either universities or

polytechnics find it difficult to get jobs of their choice (Golub&Hayat, 2014).

Specifically, it is worrisome to note that, the unemployment situation in Nigeria is both alarming and phenomenal despite the extent of her available resources, which are both diverse and infinite. Available records from the National Bureau of Statistics (NBS) of various editions, from the Year 2000 to the Year 2017, show that, unemployment rate, in Nigeria, have been fluctuating, but it has been on the threshold of 10%, starting from 13.1% in the Year 2000 and stepping up to 16.7% in the Year 2017. Although, there was a surge of unemployment in the Year 2011, taking the rate to 23.9%, and a falloff in the Year 2012, temporary stepping down the rate to 7.8%. Worse still, Nigeria's population is about 200 million people with a labour force of about 60 million (58,959,450 in 2017 to be specific); considering the 10% unemployment threshold in the country, the implication is that, about 6 million Nigerians are unemployed.

In order to tackle the problem of unemployment in Nigeria, the government has been mapping out strategies. Prominent among them is agricultural development through agricultural financing. This is due to the fact that, the sector has remained the largest employer of labour in Nigeria in sharp contrast to other sectors such as manufacturing, and oil and gas (Azoluka&Okezie, 2011). As a direct consequence of this, the Nigerian national government developed strategic initiatives, which are geared towards developing and financing the agricultural sector. These include Agricultural Development Projects (ADPs), 1972; Agricultural and Rural Management Training Institute (ARMTI), 1980;Agricultural Credit Guarantee Scheme Fund (ACGSF), 1977; Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB), 1999,now Bank of Agriculture (BOA), 2010; and Operation Feed the Nation (OFN), 1976 (Eze, Lemchi, Ugochukwu, Eze, Awulonu& Okon, 2010; Ayodeji&Oladokun, 2018).

Aside government initiatives, both deposit money banks and microfinance banks do channel significant proportions of their credits to the agricultural sector as a contribution of their quota to the development of this sector, which should, in turn, reduce unemployment and also engender economic growth. Despite all the government initiatives and allocation to agricultural sector as well as banking sector credits to agriculture, the country has continued to witness an alarming increase in unemployment incidence (Asoluka&Okezie, 2011; Ugwu&Kanu, 2012). That was the motivation for this study.

However, existing studies on this subject are abounding on the use of descriptive statistics and ordinary least squares method. Studies in this order include those of Asoluka and Okezie (2011), Obansa and Maduekwe (2013), Dul and Evbuomwan (2017), Ogboru, Abdulmalik and Park (2018), and Olukayode and Olufemi (2018). As such, there are limited studies on the dynamic relationship (long-run and short-run) between the variables of interest. Few studies that considered short-run relationship with the use of error correction mechanism are those of Bernard and Adenuga (2017) and Ogbanga (2018). Not only that, existing studies on this subject only dwelled on government and foreign sources of agricultural financing without exploring those of commercial banks and microfinance banks, and they did not explore the effects of gross domestic product and inflation on agricultural financing. It was against this backdrop that this study was initiated to investigate the dynamic contributions of agricultural financing to reducing national unemployment in Nigeria within the temporal scope 2000-2017.

LITERATURE REVIEW

Agricultural Financing

Agriculture involves all activities in the cultivation of land, production of crops and keeping of livestock (i.e. rearing of animals for man's use). It, also, involves soil management (agronomy), forestry and fishery (Onipede&Ayodeji, 2005). According to Central Bank of Nigeria (CBN) Statistical Bulletin (2010), agriculture is subdivided into crop production, livestock, forestry and fishing. By and large, agricultural holdings, in Nigeria, are generally small and scattered; farming is often of the subsistence variety, characterized by simple tools (hoes and cutlasses), infertile land and shifting cultivation. Large-scale agriculture however, is not common despite abundant water supply, favorable climatic conditions, and wide areas of arable land. Agriculture occupies priority status in the national economy, as the sector serves as the key driver of growth, wealth creation, employment generation and poverty reduction in the economy.

In Nigeria, prior to the emergence of oil, agriculture provided 70% employment opportunity to the labour force, and subsistence for two-thirds Nigerians, who are low-income earners (Okuneye, 2001;Manggoel, Ajiji, Damar, Damiyal, Da'ar,&Zarmai,2012). However, in the last five years, the sector has been consistently employing an average of 36% of the labour force (International Labour Organization, 2009). This is an indication that, if the sector is appropriately financed, it should accommodate more of the labour force; and as such, foster significant reduction in the level of unemployment in Nigeria. However, the most significant challenge faced by the sector is finance, and this has contributed to the dwindling contribution of the sector to the aggregate economic growth (Ayodeji&Oladokun, 2018).

Agricultural financing refers to the various financial strategies, which provide funds for the development and performance of the agricultural sector in the economy. It, simply, implies the various sources of finance to agricultural business. These are short-term, medium-term and long-term in nature. At any rate, financing of agriculture has, mostly, been through short-term loans from families and friends as well as personal savings,

although, deposit money banks as well as microfinance banks play significant role in providing funds to farmers. However, most farmers find it difficult to access loans from banks due to huge documentation and collateral securities involved.To Adeleye, Ayodeji, Oso and Ojo (2005), agricultural financing refers to the acquisition and use of credit and capital for agricultural activities. While capital is obtainable from personal savings, capital market and charitable organizations, credit is obtainable from banks, friends, family members, government sources, cooperative societies and money lenders

Unemployment

Unemployment, according to Jhingan (2001),refers to the number of people, who are unemployed in an economy, often given as a percentage of the labour force. This definition sees unemployment as the proportion of the unemployed in the labour force (i.e. in the working population) so that, the unemployment rate is the percentage of the unemployed in the total labour force. Thus, unemployment rate is a measure of the prevalence of unemployment, and it is calculated as a percentage by dividing the number of unemployed persons by the total number of persons currently in the labour force. Supporting Jhingan's assertion, Aminu and Anono (2012), as cited inAkutson, Messiah and Araf (2018), stated that, unemployment is the total number of people who are willing and able to work, and make themselves available for job at the prevailing wage but there is no work for them.

However, the International Labour Organization (2009) defined unemployment as a state of joblessness, which occurs when people are without jobs despite the fact that they have actively sought work within the past four weeks. The implication of this definition is that, unemployment refers to the state or condition of inability to secure job by either skilled or unskilled individuals, who are within the labour force age bracket, and are willing to secure employment. In other words, there is unemployment when those who are willing and able to work are unable to secure employment. The total labour force, according to Fapohunda (2013), is made up of all persons aged between 15 and 60 years, excluding students, and persons, who are incapable to work or not interested in work. The implication of this is that, the persons involved must fall within the labour force category, which is 18-65 years in Nigeria or 16-60 years in other climes so that minors and the aged are excluded. Secondly, those persons must be able to work, so that invalids are excluded. Thirdly, those persons must be willing to work, so that the work-shy are excluded. Fourthly, those persons must have sought for jobs, and have found it difficult to get one within a reasonable length of time, say 4-8 weeks.

Essentially, Asoluka and Okezie (2011) blamed the incidence and prevalence of unemployment on the government and the economic environment, as the study identified that, the main causes of unemployment include poor economic growth rate, adoption of untimely economic policy measures, wrong impression about technical and skill works, neglect of agricultural sector, and poor enabling environment. In another dimension, Eze*et al* (2016) blamed the prevalence unemployment on the price system in both the product market and factor market (factor market in this case is the labour market) by asserting that, unemployment is caused by insufficient aggregate demand in the economy, which, in turn, discourages production; and it is caused when the wage rates of workers are set above the equilibrium prices, which result in excess supply of labour in such a manner that the available supply of labour exceeds the existing vacancies. However, Adekoya and Olanipekun (2017) blamed it on the educational system and the individuals themselves by stating that, unemployment is caused by poor quality of higher education system, poor relevance of programmes and institutions, lack of employability skills by graduates, and poor university-productive sector linkages.

Theoretical Framework

This work developed the *Financial Injection Theorem* as the theoretical underpinning for this study. Essentially, finance is the injection required to boost operations and activities of firms and sectors of the economy. Internal funds are injected to exploit internal growth opportunities, and external funds are injected to exploit external growth opportunities, thus influencing the level of sectoral activities (Ayodeji, 2011). Injection, on the other hand, is an addition to the income of domestic firms that does not arise from the spending of households (Ishola, 2011). This suggests that, an injection into a sector of the economy is an addition to the capital of the firms in the sector, which does not come from their residual net income as retained earnings, but are new outside financing, which could be from the banking sector, capital market, the government (by way of public expenditure or intervention mechanism), foreign direct private loans, or foreign direct investment. Financial injection is, thus, required when the capital of a firm or sector is not adequate to engender or boost its level of economic activities.

Thus, the financial injection theorem states that, as more and more funds (i.e. finance) are injected into firms or a sector, the activities of that sector are boosted, and the macroeconomic performance of the nation is improved. The implication of this is that, financial injection has direct bearing on employment, output and aggregate price level. This is due to the fact that, financial injection is capable of influencing the level of economic activities in a sector. These activities are production, distribution and exchange. Suffice it to say that, financial injection increases the productive and distributive capacity of a sector, thereby increasing the ability to acquire more capital in terms of fixed capital (machines/ machinery) and circulating capital (materials), and the ability to engage more labour (whether skilled, semi-skilled or unskilled).

Accordingly, as more and more labour are engaged (occasioned by financial injection), unemployment rate is reduced in the labour force, so that, there is an inverse relationship between financial injection and unemployment rate. Conversely, there is a direct relationship between financial injection and unemployment reduction (i.e. employment generation). Functionally, UEMR = *f*(FINIJ); where *UEMR* is defined as unemployment rate, *f* is function of, and *FINIJ is* defined as financial injection. To this extent, unemployment rate is a function of financial injection, such that, the functional relationship is in the inversion. Narrowing it down to agricultural financing (i.e. financial injection into agricultural sector), then, unemployment rate is a function of agricultural financing.

Empirical Review

Asoluka and Okezie (2011) examined the effects of unemployment on economic growth in Nigeria within a temporal scope 1985-2009. The study sourced annual time-series data from CBN Statistical Bulletins of various editions, and analyzed them using descriptive statistics. The study found that, as the economy grew by 5.5% between 1991 and 2006, and the population grew by 36.4%,this should have resulted in a decrease in the rate of unemployment; rather, unemployment increased by 74.8 percent. It, also, found that, the average contribution of the oil sector to the GDP between 1991 and 2006 was 30.5% while that of agriculture, which is the main source of employment in the country was 36.7 %; this is just a difference of 6.1 percent from that of oil that employs less than 10 percent of the labour force.

Similarly, Obansa and Maduekwe (2013) assessed the relationship between agricultural financing and economic growth in Nigeria. The study proxied the dependent variable by growth rate output, and the independent variable by agricultural financing sources and debt services. It sourced annual time-series data from CBN Statistical Bulletins and reports of National Bureau of statistics of various editions, and estimated them by ordinary least squares method and Granger causality test. The study found a bi-direction causal relationship between agricultural financing and economic growth, and exist and between agricultural output and economic growth. The study suggested that, productivity of investment would be more appropriately financed with foreign direct private loan, share capital, foreign direct investment and development stocks. It, also, suggested that, capital-output ratio would be more appropriately financed with multilateral loans, domestic savings, treasury bills, official development assistance, foreign direct investment and development stock.

Essentially, Bernard and Adenuga (2017) evaluated the effects of agricultural sector development employment generation in Nigeria. The study measured the dependent variable, employment generation, by total employment, and the independent variable, agricultural sector development, by agricultural output, foreign private capital and public expenditure. It employed gross domestic product and industrial sector output as control variables. It sourced secondary data from CBN Statistical Bulletins and reports of National Bureau of Statistics of various editions, and estimated them using error correction mechanism and granger causality test. The study found that, agricultural sector output and other explanatory variables made significant short and long run contributions to employment generation in Nigeria.

Furthermore, Dul and Evbuomwan (2017) examined the effects of agricultural financing on youth unemployment in Plateau State, Nigeria. The study employed descriptive research design; and as such, gathered primary data by administering 170 copies of questionnaire on randomly selected youths in all the local government areas of Plateau State, and analyzed the musing tables, charts and chi-square technique. The study found a positive relationship between agricultural financing and youths' participation in agricultural activities in Plateau State. It, also, found that, the contribution of Plateau State Government to agricultural financing in attracting youths' participation was not enough.

Also, Ogbanga (2018) examined the relationship between agricultural development and employment generation in Nigeria within the time dimension 2008-2017.The study proxied the dependent variable, employment generation, by total employment, and the independent variable, agricultural development, by agricultural sector growth, gross domestic product, foreign private capital and federal government expenditure, and employed industrial sector output as a control variable. It sourced secondary data from CBN Statistical Bulletin and reports of National Bureau of Statistics of various editions, and estimated them using error correction mechanism and granger causality test. The study found that, agricultural sector growth and other explanatory variables contributed significantly to employment generation in Nigeria. It, also, found both short-run and long-run relationship between agricultural development and employment generation in Nigeria.

Specifically, Ogboru*et al* (2018) investigated the effects of government expenditure on agriculture and its impact on unemployment reduction in Nigeria within a time frame 1999- 2015. The study proxied the dependent variable, unemployment, by unemployment rate, and the independent variable, government expenditure on agriculture, by government recurrent expenditure on agriculture and government capital expenditure on agriculture; and employed gross domestic product as a control variable. It sourced time-series data from Central Bank of Nigeria (CBN) Statistical Bulletin and reports of National Bureau of Statistics, and estimated them using ordinary least squares method. The study found that, government expenditure on agriculture did not have significant effects on unemployment in Nigeria.

In the same vein, Olukayode and Olorunfemi (2018) investigated the relationship between fiscal policy tools, employment and sustainable development in Nigeria within a temporal scope 1980-2015. The study proxied the dependent variables by gross domestic product and unemployment rate, and the independent variable, fiscal policy tools, by taxation, government expenditure on agricultural and manufacturing outputs. It sourced secondary data from CBN Statistical Bulletin and reports of National Bureau of Statistics of various editions, and estimated them using Engel granger co-integration test and ordinary least squares method. The study found a long-run relationship between fiscal policy tools and employment. It, also, found that, while government spending on manufacturing output had inverse relationship with unemployment rate in Nigeria, taxation and agricultural output exhibited direct relationships with it.

Methodology

Upon the theoretical framework of this study, the financial injection theorem, the study represented the dependent variable, unemployment, by unemployment rate, and the independent variable, agricultural financing, by commercial banks credit to agriculture, micro finance banks credit to agriculture, and government allocation to agriculture. It employed inflation rate and gross domestic product as control variables. Annualized time-series data were sourced from Central Bank Nigeria (CBN) Statistical Bulletin and reports of National Bureau of Statistics, and estimated using Auto Regressive Distributed Lag (ARDL) model. The model developed was specified as:

$$UEMR = f(FINIJ) \quad \ldots\ldots\ldots \text{ i}$$

Where: *UEMR* is defined as unemployment rate, and *FINIJ is* defined as financial injection.

Financial injection was, then, disaggregated into banking sector sources and government sources, such that, Commercial Banks credit to Agriculture (CBA) and Microfinance Banks credit to Agriculture (MBA) represent banking sector sources, and Government Allocation to Agriculture represents government sources. As such the new model was stated as:

$$UEMR = f(CBA, MBA, GAA) \quad \ldots\ldots\ldots \text{ ii}$$

Further to this, Inflation rate (INF) and Gross Domestic Product (GDP) were incorporated into the model as control variables, and the newer model was stated as:

$$UEMR = f(CBA, MBA, GAA, INF, GDP) \quad \ldots..\text{iii}$$

In an explicit form, the model was given as:

$$UEMR_t = \beta_o + \beta_1 CBA_t + \beta_2 MBA_t + \beta_3 GAA_t \beta_4 INF_t + \beta_5 GDP_t + \mu_t \quad \ldots\ldots\ldots \text{ iv}$$

Estimating this using Auto Regressive Distributed Lag, the model was stated as:

$$\Delta InUEMR_t = \alpha_0 + \sum_{i=1}^{n} \alpha_1 \Delta In\ UEMR_{t-1} + \sum_{i=0}^{n} \alpha_2 \Delta InCBA_{t-1} + \sum_{i=0}^{n} \alpha_{3\Delta} InMBA_{t-1} + \sum_{i=0}^{n} \alpha_4 \Delta InGAA_{t-1} + \sum_{i=0}^{n} \alpha_{5\Delta} InINF + \sum_{i=0}^{n} \alpha_6 \Delta In\ GDP_{t-1} + \alpha_7 In\ UEMR_{t-1} + \alpha_8 InCBA_{t-1} + \alpha_9 In\ MBA_{t-1} + \alpha_{10} InGAA_{t-1} + \alpha_{11} InINF_{t-1} + \alpha_{12} InGDP_{t-1} + \mu_t$$

The *a priori* expectations: Agricultural financing would have both short and long run relationship with unemployment, and its proxies would exhibit inverse relationship with unemployment.

ANALYSIS AND INTERPRETATION

Augmented Dickey Fuller Unit Root Test

The study conducted unit roots test, on all the pro0xies of the variables under consideration, using Augmented Dickey Fuller (ADF) test. It was found that, unemployment rate and inflation rate were stationary at

level 1(0), but other variables were non-stationary at level; however, all the variables became stationary at first difference I(1). Hence, the null hypothesis of the ADF test, which states that, the variables are non-stationary, was rejected, and the alternate hypothesis was accepted. The ADF test results are as presented in Table 1.

Table 1: Augmented Dickey Fuller Unit Root Test Results

Variables	Critical Value/Prob	@ level	@ first difference	LAG
UEM	T-test	-3.4756	-3.5676	
	Prob	[0.0245]	0.0196	3
GAA	T-test	-2.1329	-5.1468	
	Prob	0.2353	0.0025	3
CBA	T-test	-1.1591	-5.0042	
	Prob	0.9960	0.0010	3
MBA	T-test	-0.5997	-4.7167	
	Prob	0.8463	0.0013	3
INF	T-test	-3.4838	-6.6086	
	Prob	0.0220	0.0001	3
GDP	T-test	-1.3687	-3.4325	
	Prob	0.0253	0.0253	3

Source: Author's Computation, 2019

Lag Order Selection

The lag selection was done by checking for the lag order that gives the least value in Akaike Information Criterion (AIC), Schwartz Information Criterion (SIC), Hannan-Quinn Criterion (HQC). From Table 2, on the basis of any of AIC, SIC and HQC, Lag 1 was selected for the Auto Regressive Distributed Lag (ARDL) estimation.

Table 2: Lag Order Selection Results

Lag	Log L	LR	FPE	AIC	SC	HQ
0	-113.1383	NA	0.118364	14.89229	15.18201	14.90713
1	-52.04051	68.73505*	0.007502*	11.75506*	13.78311*	11.85892*

Source: Author's Computation, 2019

Auto Regressive Distributed Lag (ARDL) Bounds Testing

The long-run relationship between agricultural financing and unemployment in Nigeria was estimated using Auto Regressive Distributed Lag (ARDL) bounds test. The decision rule is that, if the calculated F-statistic value of the test is higher than the upper bound, the relationship is significant, but if it falls between the lower bound and upper bound, the result is inconclusive; however, if it falls below the lower bound, it means there is no relationship. Essentially, the estimation produced an F-statistic of 7.0738, which is greater than the lower bound of 2.62 and the upper bound of 3.79. This indicates that, there is indeed a long-run relationship between agricultural financing and unemployment in Nigeria. The implication of this is that, agricultural financing has long-run effects on unemployment.

Table 3: ARDL Bound Testing Results

Test Statistic	Value	K
F-statistic	7.073814	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, 2019

ARDL Model Analysis

Table 4 depicts the results of ARDL model analysis at Lag 1. It shows the effects of agricultural financing proxies on unemployment. From this, commercial banks credit to agriculture (DCBA) exerted a significant negative effect on unemployment with a coefficient of -0.1488 and a p-value of0.0097, which is less than 0.05, that is, 5% level of significance, while microfinance banks credit to agriculture (DMBA) exhibited an insignificant negative effect on it with a coefficient of –1.0994 and a p-value of 0.0994, which is greater than 0.05. On the other hand, while gross domestic product (DGDP) had significant positive effect on unemployment with a coefficient of 0.0012 and a p-value of 0.0109, which is less than 0.05, government allocation to agriculture (DGAA) and inflation (INF) exhibited insignificant positive effects on it with their respective coefficients of 0.1730 and 0.5744, and respective p-values of 0.2635 and 0.0915.

The implications of all these are: First, a unit increase in commercial banks credit to agriculture would significantly bring about 14% reduction in unemployment in Nigeria while a unit increase in microfinance banks credit to agriculture would insignificantly bring about 109% reduction in unemployment. Second, while a unit increase in government allocation to agriculture would insignificantly bring about 17.3% increase in unemployment in Nigeria, a unit increase in inflation rate would insignificantly bring about 57.44% increase in unemployment. Third, a unit increase in gross domestic product would significantly bring about 0.1% increase in unemployment in Nigeria

The estimation produced a coefficient of determination, R-square (R^2)of 0.9258, which implies that, 92.58% variations in unemployment was explainable by the joint effects of commercial banks credit to agriculture, microfinance banks credit to agriculture, government allocation to agriculture, gross domestic product and inflation rate. This was confirmed by the adjusted R-square

of 0.7218, which explained the true behaviour of the explanatory variables in the model. The F-statistic of 4.5389, which is greater than F-tabulated value of 2.70, and a p-value of 0.007, which is less than 0.05, show that, the relationship between agricultural financing and unemployment is significant. The Durbin Watson test result of 1.99 implies that, the variables in the series are free from auto-correlation.

Table 4: ARDL Model Analysis Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DCBA)	-0.08969	0.023252	-3.857326	0.0182
D(DGAA)	-0.014046	0.059813	-0.234827	0.8259
D(DGDP)	0.000659	0.000211	3.122721	0.0354
D(DMBA)	-0.183083	0.23759	-0.770584	0.4839
D(INF)	-0.239385	0.178991	-1.337409	0.2521
C	4.621934	3.224585	1.433342	0.2251
DCBA(-1)	-0.148885	0.032086	-4.640157	0.0097
DGAA(-1)	0.173034	0.133135	1.299692	0.2635
DGDP(-1)	0.001272	0.000283	4.492586	0.0109
DMBA(-1)	-1.09945	0.514363	-2.137497	0.0994
INF	0.574458	0.25981	2.211067	0.0915
UEM(-1)	-1.029301	0.209293	-4.918002	0.0079
R2=0.9258	Adj-R2=0.7218	F-Statistic=4.5389	Prob-0.007	D.W=1.99

Source: Author's Computation, 2019

ARDL Co-integration for Short Run and Long Run Forms

The results of the long-run and short-run form of dynamic influence of agricultural financing on unemployment are depicted in Table 5. A short-run dynamic model describes the speed of adjustment to equilibrium. The lagged value of the linear combination of dependent variable and independent variables is denoted as co-inteq(-1). It is, also, known as Error Correction Mechanism (ECM). It was revealed that, the co-integration value was correctly signed and significant. This is due to the fact that, the ECM had a negative value of -1.0293 and a significant p-value of 0.0079, which is less than 0.05, that is 5% level of significance. This indicates that, the speed of adjustment to equilibrium is -1.029, that is, 102.9%. This implies that, the inconsistencies of unemployment will adjust to changes in the independent variables at 102.9% annually.

In addition, from the result of long-run coefficients, it was found that, commercial banks credit to agriculture had a significant negative effect on unemployment in Nigeria with a coefficient of -0.144646 and a p-value of 0.0181, while microfinance banks credit to agriculture hadan insignificant negative effect on unemployment in the country with a coefficient of -1.068152 and a p-value of 0.0723. While government allocation to agriculture and inflation exhibited insignificant positive effects on unemployment in Nigeria with their respective coefficients of 0.168108 and 0.558104, gross domestic product exerted a significant positive effect on unemployment in the country with a coefficient of 0.001235 and a p-value of 0.037

In effect, both in the short-run and long-run, commercial banks credit to agriculture and microfinance banks credit to agriculture exhibited inverse relationship with unemployment in Nigeria while government allocation to agriculture, inflation rate and gross domestic product demonstrated direct relationship with it. In effect, both in the short-run and long-run, a unit change in commercial banks credit to agriculture and microfinance banks credit to agriculture would bring a disproportionate reduction in unemployment. Both in the short-run and long-run, also, a unit change in government allocation to agriculture, inflation rate and gross domestic product would bring a disproportionate increase in unemployment in Nigeria during the period under review.

Table 5: ARDL Co-integration for Short Run and Long Run Forms Results

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DCBA)	-0.08969	0.023252	-3.85733	0.0182
D(DGAA)	-0.014046	0.059813	-0.23483	0.8259
D(DGDP)	0.000659	0.000211	3.122721	0.0354

D(DMBA)	-0.183083	0.23759	-0.77058	0.4839
D(INF)	0.335073	0.172401	1.943566	0.1239
CointEq(-1)	-1.029301	0.209293	-4.918	0.0079

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DCBA	-0.144646	0.03746	-3.86132	0.0181
DGAA	0.168108	0.123527	1.360906	0.2452
DGDP	0.001235	0.000203	6.099731	0.0037
DMBA	-1.068152	0.440264	-2.42616	0.0723
INF	0.558104	0.217326	2.568047	0.0621
C	4.49036	3.158087	1.421861	0.2281

Source: Author's Computation, 2019

DISCUSSION OF FINDINGS

Having examined the effects of agricultural financing on unemployment in Nigeria within the temporal scope 2000-2017 and on the threshold of financial injection theory, the study found both short and long run equilibrium relationship between the dependent variable, unemployment, and the independent variable, agricultural financing. These findings are line with those of Bernard and Adenuga (2017), who found that, agricultural output made significant short and long run contributions to employment generation in Nigeria. These findings are, also, in tandem with those of Ogbanga (2018), who found significant short and long run relationships between agricultural development and employment generation in Nigeria.

Secondly, the study found that, in both the short-run and long-run, while commercial banks credit to agriculture exerted significant negative effects on unemployment in Nigeria, microfinance banks credit to agriculture exerted insignificant negative effects on it. The implication of this is that, agricultural financing from commercial banks is more efficient and effective than from microfinance banks in Nigeria. This is due to the fact that, agriculture is a priority sector for commercial banks (i.e. deposit money banks) in Nigeria. However, the effects of agricultural financing from microfinance banks has not been so felt, as most of them are located in the urban centres with high focus on trade-related small and medium enterprises. This is in conformity with the findings of Obansa and Maduekwe (2013), who found that, capital-output ratio (agricultural Output) would be more appropriately financed with multilateral loans, domestic savings, treasury bills, official development assistance, foreign direct investment and development stock. Essentially, these exclude microfinance credits.

Thirdly, government allocation to agriculture exhibited insignificant positive relationship with unemployment. The implication of this is that, there is direct relationship between the two variables, such that, a unit increase in government allocation to agriculture would bring about a disproportionate increase in unemployment. The reason adducible to this is that, allocation to agriculture, which is the largest employer of labour in Nigeria, has always been diverted to industry, construction and trade, which do not employ labour as much as agriculture. As such, any further allocation to agriculture, which would still be diverted, would drift away employment attention from agriculture, thus increasing unemployment rate. The findings of this study are in support of those of Dul and Evbuomwan (2017), who found that, the contributions of Plateau State Government to agricultural financing on youths' participation was not enough. The findings of this study, also, support those of Ogboru*et al* (2018), who found that, government expenditure on agriculture did not have significant effects on unemployment in Nigeria. This study, also, confirms that of Olukayode and Olorunfemi (2018), who found that, agricultural development exhibited direct relationship with unemployment in Nigeria.

Fourthly, Gross Domestic Product (GDP) exerted significant positive effect in the short-run and insignificant positive effect in the long-run on unemployment in Nigeria. The implication of this is that, as government allocation to agriculture is diverted to other sectors, this would have direct significant effects on unemployment in the short-run, as its contribution to both GDP and employment generation would reduce, but as time goes on, the effects of low contributions of agriculture to GDP would gradually thin out and become insignificant so that GDP would exert insignificant positive effect on unemployment in the long-run in its relationship with agricultural financing. Lastly, inflation exerted insignificant positive effects in the short-run and significant positive effects in the long-run on unemployment in Nigeria. The implication of this is that, inflation erodes capital, which is long-term in nature, not short-term. As such, as capital is eroded, this would not have perceptible effects on employment in the short-term, but it

would have noticeable effects on it in the long-run, and as such, unemployment would significantly increase.

CONCLUSION AND RECOMMENDATIONS

Based on the theoretical framework of this study, the financial injection theorem, the first *a priori* expectation was that, agricultural financing would have both short and long run relationship with unemployment. Accordingly, the study found both significant short and long run relationship with unemployment in Nigeria. It was, therefore, concluded that, agricultural financing exerts significant short and long run effects on unemployment.

The second *a priori* expectation was that, agricultural financing proxies would exhibit inverse relationship with unemployment. Specifically, the study found that, while agricultural financing from commercial banks and microfinance banks exhibit negative relationship with unemployment in Nigeria, government allocation to agriculture exhibited positive relationship with it. It was, therefore, concluded that, agricultural financing from the private sector contributes to poverty reduction much more than government allocation to agriculture would do.

The overall conclusion of this study is that, agricultural financing makes both short and long run contributions to unemployment reduction. As a direct consequence of the findings of this study and the logical conclusions drawn there from, the following recommendations were made: First, government should take agricultural development policy, through agricultural financing, as the key solution to unemployment problem in Nigeria, as the sector remains the largest employer of labour in the country. Second, government allocation to agriculture should be properly monitored so that agricultural funds are not diverted to other sectors, but would be used to develop agriculture for more employment of labour, which would, eventually, lead to unemployment reduction. Third, microfinance banks should make agriculture a priority sector; and as such, except for unit microfinance banks, which are prohibited from having branches, branches of state and national microfinance banks should be sited at rural and semi-urban areas in order to engender agricultural development, and hence, unemployment reducti0on.

REFERENCES

1. Adekoya, R.B., &Olanipekun, L.N. (2017). Assessment of effective delivery of skill acquisition centers towards managing graduate unemployment in Nigeria (A case study of Ekiti-State). *International Journal of Banking, Finance & Development Studies*, 3(1), 47-62
2. Aktuson, S., Messiah, A.J., &Araf, Y.D. (2018). The impact of unemployment on economic growth in Nigeria: An application of Autoregressive Distributed Lag (ARDL) bounds testing. *Journal of Business Management and Marketing*,1(2), 37-46
3. Adeleye, O., Ayodeji, E. A., Oso, P., &Ojo, D. (2005). *Agricultural Science for Schools and Colleges*. Ibadan: Kins Publishers Limited
4. Aminu, U., &Anono, A. Z. (2012). An empirical analysis of the relationship between unemployment and inflation in Nigeria from 1977-2009. *Business Journal, Economics and Review*, 1(12), 42-61
5. Asoluka, N., &Okezie, A. I. (2011). Unemployment and Nigeria economic growth: International Conference of Teaching, Learning and Change, Department of Economics, AlvanIkoku, Federal College of Education, Owerri Imo State.
6. Ayodeji, E. A. (2011). *Introduction to Financial Management*. Lagos: Emboss Publishers, Foyo Associates Limited
7. Ayodeji, E.A., &Oladokun, B.S. (2018). Small and medium enterprises and economic growth in Nigeria (1999-2017). *The International Journal of Business & Mana*gement, 6(10), 249- 256
8. Bernard, O.A., &Adenuga, O. (2017). Agricultural sector development as a panacea for employment generation in Nigeria. *International Journal of Economics, Business and Management Research*, 1(2), 243-259
9. Central Bank of Nigeria (2010). Statistical Bulletin 19, December, Abuja, Nigeria
10. Dul, S.F., &Evbuomwan, G.O. (2017). Financing agriculture as a tool for reduction of youth unemployment in Plateau State, Nigeria. E-governance Conference, Covenant University Nigeria, 741-759
11. Eze, O.M., Atuma, E., &Egbeoma, N.E. (2016). The relationship between unemployment and economic growthin Nigeria: Granger causality approach. *Research Journal of Finance and Accounting*, 7(24), 153-162
12. Eze, C.,Lemchi, J., Ugochukwu, A., Eze, V., Awulonu, C., &Okon, A. (2010).Agricultural financing policies and rural development in Nigeria: the 84th Annual Conference of Agricultural Economics Society, Department of Agricultural Economics, Federal University of Technology, Owerri, Imo State, Nigeria.
13. Golub, S., & Hayat, F. (2014). Employment, unemployment and underemployment in Africa. *World Institute for Development Economics Research*, Working Paper 2014/014, 1-26
14. Fapohunda, T.M. (2013). Reducing unemployment through the informal sector in Nigeria. *International Journal of Management Sciences*, 1(7), 232-243

15. Hauwa, B. J. (2016). Impact of unemployment on economic growth in Nigeria 1980 –2010. *Pyrex Journal of Business and Finance Management Research*, 2(10), 180-195
16. International Labour Organization (2009). Global employment trends- update, International Labour Office, Geneva. Available: www.ilo.org
17. Ishola, K. A. (2011). *Macroeconomics*, Ilorin: Lavgark Investment Limited
18. Jhingan, M. L. (2001). *Macroeconomic theory. 12th edition*, Delhi: Vrinda Publications (P) Ltd.
19. Mahmoud, A. A., & Mohammed, A. R. (2012). The relationship between unemployment and economic growth in Jordan and some Arab countries. *World Applied Sciences Journal* 18 (5), 673-680
20. Manggoel, W., Ajiji, I.,Damar, W., Damiyal, D.,Da'ar, J., &Zarmai,D. (2012). Agriculture as amitigating factor to unemployment in Nigeria: *International Research Journal of Agricultural Science and Oil Science*, 2(11),465-468,
21. Obansa, S.A. J., &Maduekwe, I.M.(2013). Agricultural financing and economic growth in Nigeria. *European Scientific Journal*, 9(1), 168-203
22. Ogbanga, A. (2018).Agricultural development and employment generation in Nigeria. *International Journal of Advanced Studies in Ecology, Development and Sustainability*, 5(1), 1-22
23. Ogboru, I., Abdulmalik, F.A., & Park, I.O. (2018). Government expenditure on agriculture and its impact on unemployment reduction in Nigeria: 1999 – 2015. *International Journal of Economics, Commerce and Management*, 6(3), 1-25
24. Okuneye, B. (2001). The rising cost of food/food insecurity in Nigeria and its implications for poverty reduction: *CBN Economic and Financial Review*, 39(4), 92-94
25. Okun, A. M. (1962). Potential GNP: Its measurement and significance. Proceedings of the Business and Economics Section of the American Statistical Association, Washington, DC, *American Statistical Association*, 98-104.
26. Olukayode, E.M., &Olorunfemi, Y.A. (2018). Fiscal policy tools, employment generation and sustainable development in Nigeria. Acta Universitatis Danubius, 14(3), 186-199
27. Onipede, D., &Ayodeji, E. A. (2005). *Economics (A Complete Text on 'O' & 'A' Level Economics)*.Ibadan: Kins Publishers Limited
28. Osman, A., Ladhani, S., Findlater, E., &Mckay, V. (2017). *Curriculum Framework for the Sustainable Development Goals, First Edition*.London: Commonwealth Secretariat
29. Ugwu, D. S., &Kanu, I. O. (2012). Effects of agricultural reforms on the agricultural sector in Nigeria. *Journal of African Studies and Development*, 4(2), (51-59).