Microfinance Credit and Agricultural Sector Output in Nigeria

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ABSTRACT

This study focused on microfinance credit and agricultural sector output in Nigeria. The main objective is to examine the effect of microfinance credit on agricultural sector output in Nigeria. The specific objectives are to find out the effect of microfinance loan, microfinance deposit and shareholder's fund on agricultural sector output in Nigeria. The data were obtained from Central Bank of Nigeria Statistical Bulletin for the period 1992 to 2019. The Autoregressive Distributive Lag approach which is apt for data with mixed order of integration was employed to regress the microfinance credit variables on agricultural sector output which is the dependent variable The empirical analyses revealed that microfinance loans and microfinance deposits had a positive effect on Agricultural sector output while shareholders fund had negative effect on agricultural sector output in Nigeria. This work indicates that microfinance credit has only short run effect on Agricultural sector output in Nigeria. These findings depict among others that the micro financing hub of the financial system is capable of driving short term investment needs of the agricultural sector. The study recommends that an enabling environment capable of supporting the microfinance banks in microcredit delivery should be provided. This can be achieved by government, through mandating the CBN to undertake the responsibility of writing off at least 50% of losses incurred by micro finance institutions in an attempt to extend credits to rural dwellers who essentially engage in agriculture. They should also ensure that agricultural inputs which are made available to the rural farmers get to them not to the politicians and civil servants.

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KEYWORDS: Microfinance, Credit, Loan, Deposit, Agriculture

INTRODUCTION

Microfinance bank provides soft loans to the citizens that cannot make available collateral and who cannot also meet the stringent conditions for taking loans from the money deposit bank in order to alleviate poverty in the society. Their concern is also channelled towards agricultural sector especially in the rural area. Microfinance literally means building finance system that effectively and efficiently serves the needs of the poor. It is a powerful tool for fighting poverty the world over. According to Central Bank of Nigeria (2013), microfinance bank is the provision of a broad range of financial services such as savings, loans payment services, money transfers and insurance to the poor and low income persons, households and their micro enterprises. Robinson, (1998) asserted that microfinance bank "is mostly used in developing economies where SMEs do not have access to other sources of financial assistance". Kolawole (2013) in Olowe, et al (2013) states that microfinance bank helps to generate savings in the economy, attract foreign donor agencies, encourage entrepreneurship and catalyze development in the economy. Robinson (2002), opined that, microfinance enables clients to protect, diversify and increase their incomes as well as to accumulate assets and reduce vulnerability to income and consumption shocks. Ashamu (2014) stated that "the introduction of microfinance will improve the strategy of small-scale development in Nigeria and that the introduction of microfinance will improve accessibility to loan for small-scale industry in Nigeria. Ketu (2008) observed that microfinance banks have disbursed more than

800 million micro credits to over 13000 farmers across the country to empower their production practices. According to Ademola & Arogundade (2014), credit delivery is one of the most important roles of microfinance banks as the loan extended are used to expand existing businesses and in some cases, to start new ones Agricultural sector is one of the major sector that steer the economic growth of every nation rapidly.

Statement of problem

Poverty reduction has become a fundamental challenge to many emerging nations. One of the major aims of microfinance institutions is poverty alleviation and extension of financial services to the poor citizens in the rural areas who were excluded from the conventional financial services of the financial institutions. Notably, one of the serious problems which also is confronting many developing countries is the savings gap, which essentially means that these countries find it difficult to fund investments needed for growth from domestic saving. However, it becomes crucial that microfinance credit be made available to the citizens especially the agricultural sector to reinvigorate the decreasing agricultural sector output in Nigeria. This study, therefore seeks to examine the effect of microfinance credit on agricultural sector output in Nigeria.

The following specific objectives are to:
1. Investigate the extent to which microfinance loan affects agricultural output in Nigeria.
2. Determine the degree to which microfinance deposits affects agricultural output in Nigeria.
3. Find out the extent to which shareholder's funds affects agricultural output in Nigeria

Review of Related Literature

Microfinance is a category of financial services targeting individuals and small businesses that lack access to conventional banking and related services. Microfinance includes microcredit, the provision of small loans to poor clients; savings and checking accounts; micro insurance; and payment systems. Wikipedia. According to Ikeora (2007), objectives of Microfinance Bank includes: making financial services accessible to a large segment of the potentially productive Nigerian population which otherwise would have little or no access to financial services, promote synergy and mainstreaming of the informal sub-sector into the national financial system, enhance service delivery by microfinance institutions to micro small and medium enterprises, contribute to rural transformation and promote linkage programmes between universal development banks, specialised institutions and microfinance banks. Microfinance credit is the extension of very small loans (microloans) to impoverished borrowers who typically lack collateral, steady employment, or a verifiable credit history. Microcredit is part of microfinance services, which provides a wider range of financial services, especially savings accounts, to the poor. Kolawole (2013) in Olowe, et al (2013) states that microfinance bank helps to generate savings in the economy, attract foreign donor agencies, encourage entrepreneurship and catalyze development in the economy". Based on the description of microfinance bank, they are to alleviate poverty in the land by providing soft loan to people that cannot provide collateral and other stringent conditions for taking loan from the money deposit banks. Their efforts are directed towards the small and medium enterprises either in group or individually, by providing basic education on running a business and managing money, provide access to ideas, technology and new business ventures. Robinson, 1998 as cited by Olowe, et al (2013) asserted that microfinance bank "is mostly used in developing economies where SMEs and other low income earners like rural farmers do not have access to other sources of financial assistance". Obialor, Ejiofor, Ubogu and Onwuka (2020) opined that better loan packaging strategy that meets the aspirations of small farmers and business people are capable of promoting economic growth.

Microfinance Credit (MC): Microfinance credit are credit provided such as soft loans to the citizens that cannot make available collateral and who cannot also meet the stringent conditions for taking loans from the deposit money banks in order to alleviate poverty in the society. It is a powerful tool for fighting poverty the world over. According to Central Bank of Nigeria (2013), microfinance bank is the provision of a broad range of financial services such as savings, loans payment services, money transfers and insurance to the poor and low income persons, households and their micro enterprises. Therefore, one can easily conclude that microfinance is in existence to alleviate the suffering of the poor masses by providing initial fund for small business and alleviate poverty in the land. Microfinance banks can be described as banks set up to tackle banking services that the local populace cannot easily get from money deposit banks in Nigeria. Concisely, it is referred to as the grass root bank. The indicators of microfinance are defined as follows:-

Microfinance Loan: These loans are provided by microfinance banks to groups of individuals or small and medium scale enterprises to finance small and micro income-generating activities. Micro finance credit is the extension of small loans to entrepreneurs

or the poor, to qualify for traditional bank loans (Srinivas, 2017). The key implication of micro credit is in its name "micro". A number of issues come to mind when micro is considered. The small size of the loans made, small size of savings made, the smaller frequency of loans, shorter repayment periods and amounts, the micro /local level activities, the community -based immediacy of micro credit etc. (Srinivas, 2017).

Microfinance Deposits: Microfinance deposit is the money or funds put in an account and entrusted to the care of a bank. Microfinance bank deposits are products of customers' savings which are a source of loans to microfinance customers. Microfinance banks offer various differentiated categories of deposit accounts that target small and medium scale enterprises in meeting their returns and withdrawal demands. Microfinance attracts depositors by offering competitive interest rates to enable them increase their deposit levels. An increase in deposits enhances availability of credit, stabilizes interest rates, investment and results to growth in an economy. This measure was preferred because it gives annual levels of deposits collected by Microfinance banks. Microfinance banks Deposits offer all the general savings products such as the regular savings accounts, current accounts, and time deposits. Typically, the largest share of the deposit portfolio in a Microfinance banks is held in the savings account.

Shareholders' Funds: This is referred to the amount of equity in a company, which belongs to the shareholders. The amount of shareholders' funds yields an approximation of theoretically how much the shareholders would receive if a business were to liquidate.

Agricultural Output Growth: Agriculture as a term denotes the science of rearing of animals, growing of plants and cultivation of crops which provides food and other raw materials like wool for man's use. Agricultural sector output is the worth or value of agricultural yields that are produced during each financial year which are provided for consumption and export even before other processes. Obialor, Ibe & Egungwu (2022). It is one of the largest real sectors of the Nigerian economy with the contribution of an average of 24% to the nations GDP from 2013-2019. It is statistically shown that the sector employs more than 36% of the nation's labour force. The Nigerian agricultural sector performs the critical role of broadening the productive and export base of the economy. It provides job opportunities and guarantees supply of industrial inputs, maximum security and growth of the economy. (Obialor, Ibe, Onwuka, 2022) asserted that if adequate funds are

channeled to agricultural sector of Nigeria, it will lead to economic growth of the Nation. However, recent studies on the financial development in Nigeria have shown more attention on its effects on economic growth. (Adelakun, 2010), (Sanni, 2012), (Calderon & Liu, 2003), (Sunde, 2012), and host of other researchers, opined that if there is improvement in economic growth, it entails that all other sectors are efficiently functioning and improving, thus, neglecting the study of growth of some sensitive individual sectors of the economy like agricultural sector. It is true that in recent time, bank intermediation in formal banking has been changed in terms of speed of responses to their customers' need and quality of service rendered in Nigeria as a result of the efforts geared towards the financial inclusion and deepening of the financial system, (Sanusi, 2011). Hence, the attention is not extended to those in the rural area and that is where the chunks of Nigerian's agricultural firms and entrepreneurs are located. And also all schemes and agricultural specialized funds and institutions are not well managed. Agricultural output suppose to be the major driver of the Nigerian economic growth considering some factors like natural resources, human resources, historical evidence and past records. Obialor, Nzotta & Obialor (2017) in their study effect of government agriculture investment on economic growth in sub-saharan Africa: evidence from Nigeria, South Africa and Ghana suggested that increased budgetary allocations for importation of necessary agricultural equipment and raw materials will enhance growth in the economy. Okuma, Nwoko & Obialor (2019) in their study on causal relationship between technologies of cashless policy and agricultural sector output in Nigeria found that cashless policy impacted significantly on agricultural sector output in Nigeria

This study is anchored on microfinance theory of change. The classic microfinance theory is simple: it explains that a poor person goes to a microfinance provider and takes a loan to start or expand a microenterprise which yields enough net revenue to repay the loan with major interest and still have sufficient profit to increase personal or household income enough to raise the person's standard of living.

METHODOLOGY

Research Design: This study employed the *ex-post facto* research design. The study relied on historical time series secondary data collected from the Central Bank of Nigeria's Statistical Bulletin. According to Kerlinger (1973), *ex-post facto* design is a systematic empirical inquiry in which the investigator does not have direct control over the value of the variables in the study

Nature and Sources of Data: Data for the study are secondary data obtained from the Central Bank of Nigeria (CBN), Statistical Bulletin, between 1992 and 2019.

Model Specification

Model for Microfinance Credit and Agricultural Sector

The model was a modification of the model of Ayodele Ademola.E. and Kayode Arogundade (2013) who studied the impact of Microfinance on Economic Growth in Nigeria Their model is stated thus:

GDP= F (AST, DPL, LOA)

Where:
GDP= Gross Domestic Product
AST= Assets of microfinance bank
DPL= Deposit Liabilities OF microfinance banks
LOA= Loans & advances of microfinance banks

This present study included the variables as shown in the function below;
ASO = f(MFL, MFD, SF), ...(model 1)

Where:
ASO= Agricultural sector output
MFL= Microfinance loan,
MFD = Microfinance Deposits
SF= Shareholders' Funds

The relationship can be clearly formulated into an econometric equation thus:

$ASO = \alpha_0 + \alpha_1 MFL + \alpha_2 MFD + \alpha_3 SF \; \mu i$.............. (equation 1)

Where α_o is a constant or intercept, α_1, α_2 and α_3 are the coefficients of the explanatory variables, e is stochastic error term.

Method of Data Analysis

This study uses series of econometrics techniques in testing the effect of microfinance credit on agricultural sector output. It engaged time series data and this necessitated stationarity tests in order to avoid false results. The unit root test was followed by the co-integration procedure to examine whether there is existence of long run relationship between variables of microfinance credit. The Regression analysis was employed. The error correction model (ECM) was used to provide information on the long run relationship and short run relationship as well as the speed of adjustment between the two variables. The hypotheses were tested at 0.05 level of significance.

Regression Analysis

This study made use ARDL approach in estimating long run as well as short run relationship between Agricultural sector represented by agricultural sector output (ASO) and microfinance credit represented by microfinance loan, microfinance deposits and shareholders' Funds

Results and Discussion: The data used for this study are the agricultural sector output as the dependent variable and the independent variables are the Microfinance loan, microfinance deposits and shareholders' funds. They are time series data spanning 1992 to 2019. All the data were log transformed to smoothen stochastic tendencies in time series. All the data on microfinance variable are in Naira billions. The level data were used for the descriptive analysis while the log transformed data were employed for unit root tests and model estimation.

Table 1: Microfinance Development Variables

	ASO	MFL	MFD	SF
Mean	9643.254	59266.54	63187.76	31263.66
Median	6772.815	19650.20	37617.70	15468.56
Maximum	31904.14	262630.0	260810.5	117983.4
Minimum	184.1200	135.8000	639.6000	227.0000
Std. Dev.	9211.818	78683.41	72379.21	35941.49
Skewness	0.801410	1.282051	1.159155	0.972142
Kurtosis	2.583543	3.302591	3.399626	2.694136
Jarque-Bera	3.199545	7.777213	6.456638	4.519423
Probability	0.201942	0.020474	0.039624	0.104381
Observations	28	28	28	28

The description of the ASO has been done in Table 1 above showing relative normality. The mean and standard deviation values are: MFL (59266.54 and 78683.41), MFD (63187.76 and 72379.21) and SF (31263.66 and 35941.49). The results depict higher standard deviations for each of the variables.

The trends from Figure 1 show relative fluctuation for MFL, MFD and SF. The fluctuation seems relatively stable and follows the growing trend over time.
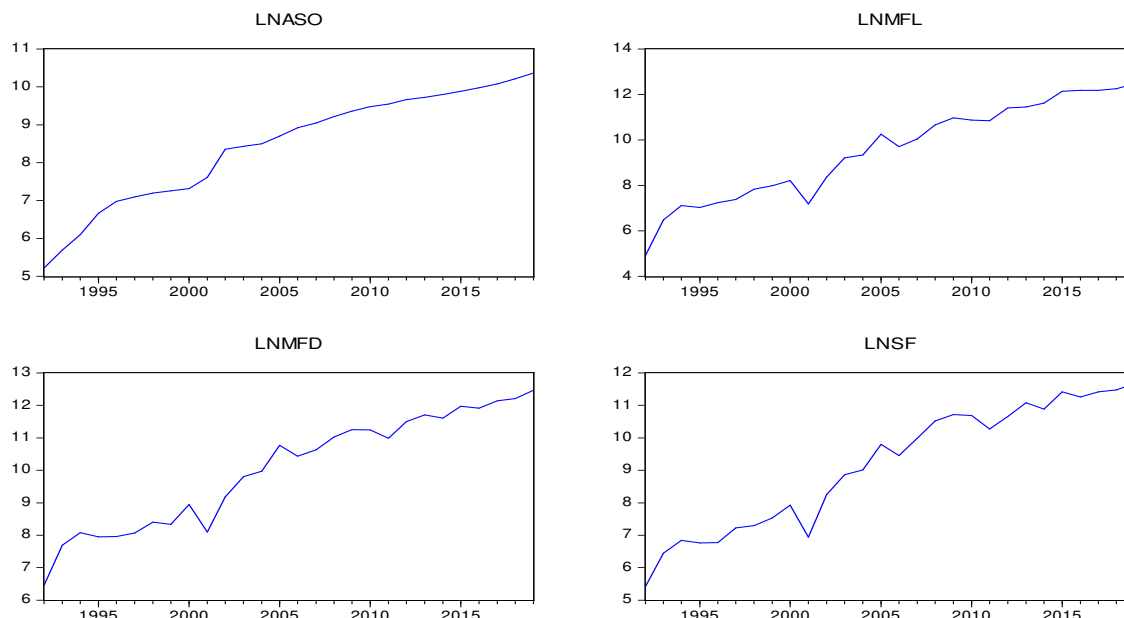
Figure 1: Trends in Nigerian microfinance development variables between 1992 and 2019

Unit Root Test

The time series data has been known to fluctuate over time making them vulnerable to instability that can distort normal trends and affect the reliability of regression analyses. The variables were therefore subjected to unit root test to determine their stationarity. The Augmented Dickey-Fuller (ADF) and the Philip Peron tests were jointly used to determine whether they are stationary series or non-stationary series. The need for two different tests is for validation of results. The stationarity results for the variables of agricultural sector output (as the dependent) and the independent variables of microfinance credit variables) are presented on the table below.

The ADF and PP statistics for tests of stationarity for variables of the study.

Table 2

Variables	Augmented Dicker Fuller (ADF) Test					Philip Peron (PP) Test				
	At Level		At 1st Difference		Order of Integration	At Level		At 1st Difference		Order of Integration
Dependent Variable										
LnASO	-3.1055	0.04	-	-	**1(0)**	-4.4444	0.00	-	-	**1(0)**
Microfinance Development										
LnMFL	-1.9526	0.30	-6.5986	0.00	**1(1)**	-2.2017	0.21	-10.611	0.00	**1(1)**
LnMFD	-0.8948	0.77	-7.6734	0.00	**1(1)**	-1.7565	0.39	-8.9876	0.00	**1(1)**
LnSF	-1.0935	0.70	-7.2382	0.00	1(1)	-1.8313	0.35	-8.1776	0.00	1(1)

Source: Eviews 9 output.

The results from ADF and PP tests have similar p. values. This indicates that the unit root results are validated. From the results of the unit root tests, the dependent variable (Agricultural Sector Output, ASO) was stationary at level {1(0)}. Other independent variables were not stationary at level. They are tested and found stationary in their first differences.

Justification for Employment of ARDL:

Since the unit root test result is of mixed order of integration, this qualifies the Autoregressive Distributive Lag (ARDL) regression technique as the most suitable tool of analysis for this study. Thus, the long run relationship was tested using the bound test while the short run effects were examined with ARDL regression.

Model Estimation

The analyses of the model was done and presented as follows:

Microfinance credit variables and agricultural sector output; The bound test is used to determine long run relationship between each of the model and agricultural sector output. The test of short run dynamism was performed with Autoregressive Distributive Lag (ARDL) technique. The results are presented under two broad headings:

A. Analyses of Long run relationship between microfinance credit and agricultural sector output
B. Analyses of short run effect of microfinance credit variables on agricultural sector output

Estimation of Long run Effect of Microfinance Credit Variables on Agricultural Sector Output
The test of co-integration for the presence of a long-run relationship in the model is shown in below table. The Bound Test result is used to compare the bound critical values with the F-statistics values. If the F-statistic is above the upper and lower critical bound values, then there is a long run relationship in the model; but where the F-statistics is below the upper and lower bound critical values, it is inferred that there is no long-run effect (relationship). The null hypothesis is that "No long-run relationship exists".

Table 3: Result of ARDL Bounds Test for long run effect of microfinance credit variables on Agricultural sector output in Nigeria

Models	F-Statistic	Lower Critical Value Bound at 5% level	Upper Critical Value Bound at 5% level
Model 2: Microfinance credit	3.4868		

*significant at 5%
Source: Extracts from Eviews 9

The result is summarised below:
Microfinance credit variables do not have significant long-run effect on agricultural sector output in Nigeria.

Estimation of Short Run Effect of microfinance credit on Agricultural sector output in Nigeria
The short-run relationship between Microfinance credit indicators and agricultural sector output were determined on employment of the Auto-regressive Distributive Lag (ARDL) model. The ARDL regression model is preferred to the traditional OLS mainly because the variables were integrated in the order of 1(0), 1(1). The analyses are interpreted based on the coefficient of the explanatory variables, and the coefficient of determination (R^2). The statistical significance is confirmed using the t-statistics for the coefficient of regression, and F-statistics for the coefficient of determination.

Short run effect of microfinance credit variables on agricultural sector output

Table 4.Result of Short Run Model of the Relationship between Microfinance Credit Development and Agricultural Sector Output in Nigeria

Dependent Variable: LNASO				
Method: ARDL				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.***
LNASO(-1)	0.372466	0.570820	0.652511	0.5349
LNASO(-2)	-0.009015	0.449314	-0.020064	0.9846
LNASO(-3)	-0.576610	0.518826	-1.111374	0.3031
LNASO(-4)	0.499919	0.303547	1.646924	0.1436
LNMFL	0.194754	0.249561	0.780389	0.4607
LNMFL(-1)	-0.740920	0.311409	-2.379250	0.0489
LNMFD	0.882973	0.362948	2.432778	0.0452
LNMFD(-1)	1.092503	0.528885	2.065673	0.0777
LNMFD(-2)	-0.525241	0.352348	-1.490688	0.1797
LNMFD(-3)	0.048644	0.298485	0.162971	0.8751
LNMFD(-4)	0.561573	0.303747	1.848816	0.1070
LNSF	-0.673535	0.293995	-2.290976	0.0557
LNSF(-1)	-0.364226	0.217402	-1.675358	0.1378
LNSF(-2)	0.552643	0.289220	1.910803	0.0976
LNSF(-3)	0.064048	0.258928	0.247358	0.8117
LNSF(-4)	-0.414535	0.269713	-1.536948	0.1682
C	-1.386602	1.255150	-1.104730	0.3058
R-squared	0.996858	Mean dependent var		8.865833
Adjusted R-squared	0.989677	S.D. dependent var		1.102976
S.E. of regression	0.112066	Akaike info criterion		-1.354933
Sum squared resid	0.087912	Schwarz criterion		-0.520479
Log likelihood	33.25920	Hannan-Quinn criter.		-1.133552
F-statistic	138.8114	Durbin-Watson stat		1.939039
Prob(F-statistic)	0.000000			

The result in Table 4 is the analysis of the short run relationship between microfinance credit variables and agricultural sector output in Nigeria. The results of coefficient of determination (r squared with 0.9969) showed that about 99% of changes in ASO can be explained by microfinance credit indicators in Nigeria. This means that microfinance credit development has huge explanatory power and can be used as policy measure to predict ASO in Nigeria. The F-statistics (138.81) with probability value of 0.0000 showed the overall significance of the microfinance credit variables (MFL, MFD, SF) at 0.05 level of significance. This shows that microfinance credit indicators have a significant influence in explaining about 99% of changes in ASO in Nigeria.

Diagnostic Tests: The diagnostic tests was carried out to determine the reliability of the model estimation and empirical findings on this study. The diagnostics tests carried out include multicolinearity, serial correlation, and normality test.

Multicolinearity Test

Presence of multicolinearity was tested using the Variance Inflation Factor (VIF). The result of the VIF statistics, the centred VIFs for all the variables in the model are less than 10. Thus the study posits that there is no multicolinearity problem in the study. The result affirms that the coefficients of the regression and coefficient of determinations from the model is correct. There is no over or understatement of the coefficients. Therefore, the explanatory powers reported for the model are the true position of the effect of microfinance credit indicators on agricultural sector output in Nigeria.

Table 5: Test of Multicolinearity using the Variance Inflation Factor

Microfinance Credit Development			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
LNASO(-1)	0.325835	434.28	7.5528
LNASO(-2)	0.201883	280.49	5.4640
LNASO(-3)	0.269181	757.30	3.6793
LNASO(-4)	0.092141	51.24	3.2953
LNMFL	0.062281	48.12	2.0523
LNMFL(-1)	0.096976	561.65	1.2964
LNMFD	0.131732	992.63	7.0201
LNMFD(-1)	0.279719	383.97	8.332
LNMFD(-2)	0.124149	640.61	2.5025
LNMFD(-3)	0.089093	56.83	8.2766
LNMFD(-4)	0.092262	26.35	9.3656
LNSF	0.086433	49.15	6.1209
LNSF(-1)	0.047263	70.569	4.4618
LNSF(-2)	0.083648	71.35	3.1642
LNSF(-3)	0.067044	83.32	5.8065
LNSF(-4)	0.072745	57.75	5.0815
C	1.575401	10.608	NA

Serial Correlation Test

Presence of serial correlation is explained to confirm the reliability of the significance values and the direction of the coefficient of regression (positive or negative relationship). The presence of serial correlation implies that there is a correlation of time periods in the series which leads to reportage of high significant value, inefficient estimation, exaggerated goodness of fit and false coefficient of regression sign (positive or negative). The results of the Breusch-Godfrey Serial Correlation LM Test of serial correlation are shown in the table below. The decision rule is to reject the null hypothesis if the p.value is less than 0.05 level of significance.

Table 6: **Breusch-Godfrey Serial Correlation Result of the Model**

Models	F-statistic	P-value
Microfinance Credit Development	0.761682	0.5143

Source: Eviews 9 output

The results of the F-statistic for the model for microfinance credit showed p.values greater than 0.05. This indicates that the study cannot reject the null hypothesis of no serial correlation. The study thus concludes that there is no serial correlation (of time series) in the model. This confirms that the nature of the relationship

(negative or positive) as found in the estimation from the ARDL is correct and true of the model characteristics. As well, the significance values are correct as estimated. This implies that the result of the test of hypothesis from the ARDL gives the correct position of the agricultural sector output determined from microfinance credit.

Normality Test: Test of normality determines the extent to which the results from the model on the effect of microfinance credits can be used to predict agricultural sector output in Nigeria. Jarque-Bera is a test statistic for testing whether the series is normally distributed. The null hypothesis is that the variable is normally distributed. The decision rule is to reject the null hypotheses when p.value is less than 0.05 level of significance.

Table 7: Normality Test of the Model of the Study

Models	Jarque-Bera statistic	P-value
Microfinance Credit Development	1.0047	0.6051

Source: Extract from Eviews results

From the results on the Jarque-Bera statistics in table above, the p.values for the Microfinance Credit indicators, for the model is greater than 0.05 level of significance, thus the study cannot reject the null hypothesis. Thus it concludes that the residuals of the model are normally distributed.

It is therefore expected that the results for the model of Microfinance Credit development, will be good predictors of agricultural sector output in Nigeria.

Hypotheses Testing: The diagnostics tests have shown that the estimated ARDL long run and short run model are reliable for testing the effect of microfinance credit on agricultural sector output in Nigeria. Thus, hypotheses testing are now carried out to determine the significance of microfinance credit indicators on agricultural sector output in Nigeria. The hypotheses are tested separately for the long run and short-run effects. The short-run effects are tested using the adjusted R^2 and the corresponding F-statistics.

Decision rules:
For long run effect: If the bound values are less than the F-statistics value or if F-statistics is greater than or above the bounds values, reject the null hypothesis and accept the alternative.

For short run effect: At 5% level of significance, reject the null hypothesis, if the F-statistics p.value is less than 0.05.

Test of Hypothesis
HO_1: Microfinance credit has no significant effect on agricultural sector in Nigeria.

HA_1: Microfinance credit has significant effect on agricultural sector in Nigeria.

Long Run Effect: F-Statistics = 3.4868 (Lower and Upper Bounds = 3.23 and 4.35)

Short Run Effect: Adj R^2 = 0.9897; F-statistics = 138.8114; P.value 0.0000

The bound values are greater than the F-statistics (3.4868). This indicates that the null hypothesis cannot be rejected at 0.05 level of significance. The study thus concludes that microfinance has no long-run effect on agriculture sector output in Nigeria.

Also, the computed F-statistics (3.4868) has a p.value less than 0.05 for rejection of the null hypothesis of short-run effect. The study concludes that microfinance has a short run significant effect on agriculture sector output in Nigeria. The adjusted coefficient of determination indicates 99% explanatory power.

Decision: Microfinance has significant short run policy effect but no significant long run effects on agriculture sector output in Nigeria. Therefore, the null hypothesis is rejected for the short run and accepted for the long run.

Conclusion
The result showed that microfinance credit has significant short-run effect on agricultural sector output in Nigeria. The result showed that MFL had positive and insignificant effect on ASO with the values (0.194754) (0.4607 > 0.05), MFD had positive (0.8829) and significant effect (0.0452 < 0.05) and SF had negative and significant effect on ASO with the values (-0.6735) (0.055 = 0.05). Therefore, MFD is valuable in predicting contribution of agriculture to Nigeria's GDP (i.e agric sector's output). These findings depict among others that the micro financing hub of the financial system is capable of driving short term investment needs of the agricultural sector.

Recommendations: An enabling environment capable of supporting the microfinance banks in microcredit delivery should be provided. This can be achieved by government, through mandating the CBN to undertake the responsibility of writing off at least 50% of losses incurred by micro finance institutions in an attempt to extend credits to rural dwellers who essentially engage in agriculture. This will enhance effective credit delivery of microfinance institutions. They should also ensure that agricultural inputs which are made available to the rural farmers get to them not the politicians and civil servants.

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