



## The Impact Of Real Sectors' Microfinancing On Economic Growth In Nigeria: 1992-2016

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### Abstract

**T**his paper examines the impact of real sectors' microfinancing on economic growth in Nigeria. The selected real sectors are: Agriculture and Forestry, Mining and Quarrying, Manufacturing and Food Processing, Real Estate and Construction and Transport and Commerce. Time series data and econometrics tools were used for the test of stationarity, co-integration and causality of the economic variables. The Ordinary Least Squares (OLS) and Error Correction Model (ECM) were used to estimate the long-run and short-run impact respectively. The results show strong and positive relationships between the real sectors' microfinancing and economic growth in Nigeria both at the long-run and short-run. Five out of the six economic variables were positively related to Real Gross Domestic Product in Nigeria. Loans to Mining and Quarrying (LMQ) and Loan to Transport and Commerce (LTRC) have positive and

*significant impact on economic growth in Nigeria. Though Loans to Agriculture and Forestry (LAF), Loans to the Real Estate and Construction (LREC) as well as Interest Rate have positive impact on economic growth, they were statistically insignificant in explaining the variations in Real Gross Domestic Product in Nigeria while Loans to Manufacturing and Food Processing (LMFP) has negative and insignificant impact on Real Gross Domestic Product in Nigeria. From the results, the insignificant impact of Loan to Agriculture and Forestry (LAF) and the negative impact of Loan to Manufacturing and Food Processing (LMFP) are challenges to economic growth. This may be due to the facts that loans meant for Agriculture, Forestry, Manufacturing and Food Processing are used for importation thereby creating job for other countries and compounding unemployment problem in Nigeria. Therefore, the paper recommends that monitoring and evaluation mechanism should be adopted by the microfinance institutions and government financial agencies to control the diversion of loans meant for the real sectors in order to facilitate sustainable economic growth in Nigeria.*

**Keywords:** Real Sectors, Microfinancing, Economic Growth, Loans, Institutions

## **INTRODUCTION**

Structurally, Nigerian's economy can be classified into three major sectors primary, secondary and tertiary. The primary sector consists of agriculture and natural resources; the secondary sector is mainly industry, which is made up of processing and manufacturing, as well as building and construction; while services and wholesale and retail trade make up the tertiary sector. The real sector is also classified into oil and non-oil sector. While the oil sector is made up of the crude petroleum and gas production, the non-oil sector is made up of agriculture, industry, wholesale and retail and services. The real sector of Nigeria's economy has arguably been the engine of the country's economic transformation over the years. Importantly, the sector has metamorphosed into an emerging industrial workhorse from a hitherto rudimentary agrarian economy that can hardly be ignored. Generally, the real sector had witnessed some fluctuations in fortune looking at the economic history of Nigeria over the years.

Since return to democratic governance, the economy maintained an impressive average growth of 7.9 per cent following governments resolve and commitment to grow the economy reflecting the improved macroeconomic reforms and policies embarked upon, especially the National Economic Empowerment and Development Strategy (NEEDS). During the period of analysis, according to United Nations Development Programme (2015) the economy grew at 0.4 per cent in 1999; peaked at 10.5 per cent in 2004 before moderating to 7.5 per cent in 2011, while in 2013 and 2014 we had 6.9 and 6.22 per cent respectively (Central Bank of Nigeria, 2015). The robust growth rate of GDP during the period 1991-2014 was attributed largely to the development in the non-oil sector. Over the years, the sector have been constrained by so many factors. A plethora of factors, including lack of finance, infrastructural gaps, inefficiencies in the public sector project management and service delivery, the resource curse of oil exploration, dysfunctional macroeconomic policy environment, among others have obviously truncated the real sector revolution.

Nevertheless, government has continued to play a catalytic role through the enunciation of policies and provisioning of financing havens to elevate the sector to levels that can make Nigeria an economic hub and a driver of Africa's economic renaissance. Although, recent numbers suggest resilient growth (especially at the heels of recent trepidations in the global economy), it is incontrovertible to see that currently, most countries that were at the same or even lower stage of development decades ago such as Malaysia have transformed their real sectors.

The issues of real sector development in Nigeria remain intricate and reflect a mix of both domestic and international characteristics. The real sector comprises agriculture, industry,

building and construction, wholesale and retail and the services sectors, while from the international front, developments in the international oil market and the oil and gas sector are influenced by global financial activities. Thus, the policy environment must be adequately focused towards enhancing the capacity of the private sector especially the financial sector to drive real sector activities in order to achieve desirable levels of growth.

There is no gainsaying the fact that the complex financial interactions of agents in the real sector and economic activities pose the challenge of clearly understanding the financial adjustment mechanisms required to attain optimal levels of output in the real sector of Nigeria. Finance being the major determinant for attaining the optimal levels of output in the real sector of Nigeria. Aigbedion and Anyanwu (2015) agreed that one of the ways that the government can achieve the financial support policies to Small and Medium Enterprises (SMEs) in the developing countries like Nigeria is through the microfinance institutions (MFIs). Because Microfinancing is the provision of financial services to low-income, poor and very poor self-employed people which formed the majority of non-oil sector in Nigeria. This is to enable them engage in income generating activities or expand their business activities.

However, the impact of this intervention on real sector of the economy is yet to be ascertained. Despite commitment by the Nigerian government in the above mentioned approaches, majority of the sub-sectors are unable to access loans from MFIs and this has affected the sector and the economy which is characterized by high rate of unemployment, poverty and low per capita income. Therefore, the main objective of the paper is to examine the impact of real sectors' microfinancing on economic growth in Nigeria. While the specific objectives are to:

- i. Examine the relationship between real sectors' microfinancing and economic growth in Nigeria.
- ii. Assess the long run impact of real sectors' microfinancing on economic growth in Nigeria.
- iii. Ascertain the short run impact of real sectors' microfinancing on economic growth in Nigeria.

## **LITERATURE REVIEW**

### **Stylized Facts on Real Sector Performance and Development of Microfinance in Nigeria**

From the Central Bank of Nigeria Annual Report (2015), the oil sector has been the dominant sector in terms of foreign exchange earnings. However, its contribution to GDP has been on the decline since the turn of the millennium. The oil sector contributed about 30.8 per cent of GDP in 1999, which rose to 32.5 per cent in 2000, declined to 31.5 per cent in 2001 and fell consistently to 14.8 per cent between 2011 and 2014. For the period 1999 to 2014, oil sector contributed an average of 23.3 per cent. While the contribution to the GDP has been on the decline, its growth performance has been mixed. The oil sector growth rate declined by 7.5 per cent in 1999, but grew by 11.1 per cent in 2000, reaching its peak in 2003 with 23.9 per cent growth. On the average, the oil sector grew by 1.6 per cent for the period 1999 to 2014. The percentage share of non-oil GDP during the period 1999-2011, averaged 76.7, increasing from 69.2 per cent in 1999 to 85.2 per cent in 2011. Its growth performance also followed the same trend. It grew by 4.4 per cent in 1999 and peaked at 9.4 per cent in 2006 and by 2011 it grew by 8.9 per cent, averaging 7.2 per cent during the period.

Nigeria has 986 microfinance banks that are licensed by the CBN to operate within the country (Abraham and Balogun, 2012). The data does not give a list of MFIs that are in operation, only those licensed to operate. Lagos has the highest share with 19.14% of the total and more than half of the microfinance banks are in the South (79.62%). The Northern part of the country, with over 46% of the nation's population, has 20.38% (201 of 986) of the MFIs in the country. In the heat of

an increasing number of MFIs operating in an unsustainable manner and the unwillingness of CBN to bail them out, the Lagos State Chapter of the National Association of Microfinance Banks set up an Intervention Fund to assist members having liquidity problems (Agwuegbo, 2010). The sustainability of MFIs is under trial. However, some are blaming it on the customers, who have a tendency to default on loan repayments, are uneducated with regard to how to manage their business activities, give false information to qualify for loan approval and are uninformed about the activities of MFIs (Akowe, 2010; Iganiga, 2008; Okoye, 2006b).

According to Sams (2010), MFIs' performance is poor because of the operators' lack of understanding of the guidelines of the microfinance policy and the regulatory framework. Another cause is the high rate of nonperforming directors as well as directors' strong influence on management staff. Others have identified a lack of good governance in MFIs, investment in fixed assets at the expense of sound financial management and the poor national financial infrastructure (Alegieuno, 2008; Ehigiamusoe, 2008; Lawson, 2008; Sanusi, 2010). The lack of knowledge of the operation of microfinance institutions amongst the staff of these institutions compelled the CBN to introduce compulsory certification for all management staff as a requirement to operate in the country. This was part of the requirements for approval of a license to operate. In 2010, the CBN enforced this existing regulation, which was neglected or downplayed in the past but has become relevant in the wake of symptoms of distress in the MFI sector.

### **Empirical Studies on Microfinancing and Economic Growth**

Calderon and Liu (2003) did a study for the Euro area and found that the supply of credit, both in terms of volumes and in terms of credit standards applied on loans to enterprises, have significant effects on real economic activity. In other words, a positive change in loan growth has a positive and statistically significant effect on GDP. Other studies with similar findings include Chang, Nieh, Russel and Hung (2009), who used branch panel data to examine bank fund reallocation and economic growth in China. While the study of Mukhopadhyay and Pradhan (2010) examined the causal relationship between financial development and economic growth of seven Asian developing countries (Indonesia, Malaysia, the Philippines, China, Thailand, India and Singapore), using multivariate VAR model. The study failed to reach any consensus on the finance-growth relationship in the context of developing countries.

In Nigeria, there are diverse opinions as to whether, finance to real sector of the economy is the major constraint to economic growth and development. A number of studies have adopted the VAR-based granger causality test approach to investigate the phenomenon. The study Olutunla and Obamuyi (2008) shown that the growth of business enterprises is not just dependent on accessing bank loans but accessing the right size of loans at the right time. The insignificant impact of the overall F-statistics led to the decision to accept the null hypothesis for the three samples, which implies that micro finance does not enhance the expansion capacity of business enterprises in Nigeria and thereby not enhancing economic growth. Onuorah and Ozurumba (2013), in their approach disaggregated total bank credit to components such as Total Production Bank Credits, Total General Commerce Bank Credits, Total Services Bank Credit, and Other Banks Credit and also found that none of the components granger caused RGDP while RGDP exerted significant influence on the different components. On the other hand, Oluitan (2012) show that credit granger caused output in Nigeria.

Akpanung and Babalola (2012) examined the relationship between banking sector credit and economic growth in Nigeria over the period 1970-2008 using the two-stage least squares approach. They show that private sector credit impacted positively on economic growth during the sample period while lending rate impeded economic growth. Also, the study of Anthony

(2012) show a positive relationship between lagged values of total private savings, private sector credit, public sector credit, interest rate spread, exchange rates and economic growth. The study of Aliero, Abdullahi, and Adamu (2013) examined the relationship between private sector credit and economic growth in Nigeria using autoregressive distributed lag (ARDL) approach and concluded that a long run equilibrium relationship exists between private sector credit and economic growth. They found a significant relationship between the duo and recommended comprehensive policies and strong legal framework to facilitate the disbursement and recovery of private sector credit. Emecheta and Ibe (2014) also confirmed a positive effect of bank credit on economic growth using a VAR methodology.

The above studies showed that the results regarding the impact of micro credit on output has been mixed. While some studies found empirical support for a positive impact, others failed to. In terms of direction impact, some of the reviewed works confirmed unidirectional impact running from financial credit to economic growth while others found the direction impact running from economic growth to bank credit. The third group found empirical support for a bi-directional causality between the two variables. These mixed findings imply that there is yet no consensus on the size and direction of impact or relationship between financial credit and economic growth, especially in Nigeria. To the best of our knowledge, there are only few studies on the impact of microfinance on economic growth, especially on the areas of short and long run impact of real sector microfinancing on economic growth in Nigeria. Our current effort is directed towards bridging these gaps.

### Theoretical Framework

The basic theories of growth are quite explicit on the roles of labour, capital and technological progress. However, the Schumpeterian growth models were more explicit on the relationship between finance and growth. Carlin and Soskice (2006) gave a brief narration of these models as follows;

$$x = \gamma^*\delta*q \tag{2.1}$$

Where technological progress ( $x$ ) is defined as a function of research and development ( $q$ ), while the two parameters define the probability that each unit spent on R&D yields a successful innovation ( $\gamma$ ) and the extent to which each innovation raises the productivity parameter ( $\delta$ ), respectively. The economic determinants of the R&D are assumed to be taken as exogenous by the entrepreneur. Thus, these may include: the discounted value of expected returns, the real interest rate, capital per efficiency unit, and institution features of the economy (Shittu, 2012).

$$q = q \{ \gamma, \delta, r, comp, ppr, \varepsilon \} \tag{2.2}$$

From the equation 2.2 above; the R&D intensity ( $q$ ) is assumed to be positively related to the discounted value of expected return as measured by  $\gamma$  and  $\delta$ , negatively related to real interest rate ( $r$ ), and positively related to capital per efficiency unit ( $k$ ), while product market competition ( $comp.$ ) and property right ( $ppr$ ) are examples of institutional features within the economy.  $\varepsilon$  depicts all other institutional features of the economy not cited in equation 2.2. From equation 2.1 and 2.2, the “Schumpeter relationship” can be derived as:

$$x = x \{k\} \tag{2.3}$$

This states that, since the rate of technology ( $x$ ) depends on  $q$ , which in turn, depends on  $k$ ,  $x$  is a function of  $k$ , the capital efficiency per unit. A positive relationship also exists between the two variables. Thus, an increase in the saving rate in the economy will increase the capital efficiency per unit, which in turn stimulates more R&D activities via innovation (Shittu, 2012). This will bring about growth in the economy. Thus, in a steady state,  $x$  is similar to economic growth.

## METHODOLOGY

### Sources of Data and Method of Analysis

To assess the impact of real sectors' microfinancing on economic growth in Nigeria, the study adopted time series data covering the period 1992 to 2014. The data are Real Gross Domestic Product (RGDP), Loan to Agriculture and Forestry (LAF), Loan to Mining and Quarrying (LMQ), Loan to Manufacturing and Food Processing (LMFP), Loan Real Estate and Construction (LREC), Loan to Transport and Commerce (LTRC) and Interest Rate (INTR). See regression data in Table 4.1 and Appendix I. The study used Ordinary Least Squares multiple regression model to examine the long run impact and relationship between real sectors' microfinancing and economic growth in Nigeria. While Error Correction Model was used to examine the short run impact of real sectors' microfinancing on economic growth in Nigeria.

### Model Specification

#### Ordinary Least Squares Model (Multiple Regression)

This model is the central model of study that take into account all exogenous variables and the endogenous variables. The Ordinary Least Squares is formulated as follows:

$$RGDP = f(LAF, LMQ, LMFP, LREC, LTRC, INTR) \quad 3.1$$

Equation 3.1 shows the functional relationship between the dependent variable Real Gross Domestic Product (RGDP) and the independent variables that is, Loan to Agriculture and Forestry (LAF), Loan to Mining and Quarrying (LMQ), Loan to Manufacturing and Food Processing (LMFP), Loan Real Estate and Construction (LREC), Loan to Transport and Commerce (LTRC) and Interest Rate (INTR). The model shows the mathematical functions of the economic variables. To express the equation as an econometric equation there is the need for a constant ( $\alpha$ ), Parameters ( $\beta_1, \beta_2, \beta_3, \beta_4 \dots \dots \beta_n$ ) and the error term ( $\varepsilon_t$ ) in the equation. Therefore, the equation 3.2 can be expressed as an econometric model as follows:

$$RGDP = \alpha + \beta_1 LAF + \beta_2 LMQ + \beta_3 LMFP + \beta_4 LREC + \beta_5 LTRC + \beta_6 INTR + \varepsilon_t \quad 3.2$$

In regression analysis, the logs of variables are routinely taken, not necessarily for achieving a normal distribution of the predictors and/or the dependent variable but for interpretability. Interpreting a log transformed variable can be done in terms of percentage change. Therefore, the model 3.2 can be expressed by taking the natural log of the economic variables (independent and dependent variables) and adding the log to each of the variables as given below.

$$\log RGDP = \alpha + \beta_1 \log LAF + \beta_2 \log LMQ + \beta_3 \log LMFP + \beta_4 \log LREC + \beta_5 \log LTRC + \beta_6 \log INTR + \varepsilon_t \quad 3.3$$

The equation 3.3 above is the econometric model for long run regression analysis for this study.

#### Modelling Error Correction Model (ECM)

The building of Error Correction Model (ECM) starts with the basic structure of Error Correction Model (ECM) which is stated as:

$$\Delta Y = \alpha + \beta X + \beta \Delta X_{t-1} - \beta EC_{t-1} + \varepsilon_t \quad 3.4$$

Where:  $\Delta Y$  is the output that is gross domestic product which is used as a proxy for economic growth in Nigeria. The  $\beta X$  presents the endogenous variables i.e  $LAF, LMQ, LMFP, LREC, LTRC, INTR$  which are Loan to Agriculture and Forestry (LAF), Loan to Mining and Quarrying (LMQ), Loan to Manufacturing and Food Processing (LMFP), Loan Real Estate and Construction (LREC), Loan to Transport and Commerce (LTRC) and Interest Rate (INTR)  $\beta \Delta X_{t-1}$  this present the lag (period one) of the variables,

To formulate Error Correction Model (ECM), it will begin with the Ordinary Least Squares (OLS), the Ordinary Least Squares for multiple model is formulated as follows:

$$RGDP = \alpha + \beta_1 \log LAF + \beta_2 \log LMQ + \beta_3 \log LMFP + \beta_4 \log LREC + \beta_5 \log LTRC + \beta_6 \log INTR + \varepsilon_t \quad 3.5$$

From the equation above, the Error Correction Model (ECM) is formulated as follows:

$$\begin{aligned} \Delta(\log)RGDP_t = & \alpha_0 + \sum_{c=1}^m \alpha_{1i} \Delta(\log)RGDP_{t-c} + \sum_{d=0}^n \alpha_{2i} \Delta(\log)LAF_{t-d} + \sum_{e=0}^o \alpha_{3i} \Delta(\log)LMQ_{t-e} \\ & + \sum_{f=0}^p \alpha_{3i} \Delta(\log)LMFP_{t-f} + \sum_{g=0}^q \alpha_{2i} \Delta(\log)LREC_{t-g} + \sum_{h=0}^r \alpha_{3i} \Delta(\log)LTRC_{t-h} \\ & + \sum_{i=0}^s \alpha_{3i} \Delta(\log)INTR_{t-i} + ECM_{t-1} + \varepsilon_t \end{aligned} \quad (3.6)$$

The Error Correction Model (ECM) was used to adjust the estimation until the ECM turned negative. The negative sign of coefficient of the error correction term ECM (-1) shows the statistical significance of the equation in terms of its associated t-value and probability value.

## PRESENTATION AND DISCUSSION OF RESULTS

### Descriptive Analysis of Variables

**Table 1: Summary of Descriptive Statistics**

	RGDP	LAF	LMQ	LMFP	LREC	LTRC	INTR
Mean	524601.5	2599.017	214.0348	1096.657	1104.298	13238.10	18.83261
Median	477533.0	1248.350	90.90000	492.0000	105.2000	2109.800	18.29000
Maximum	988564.0	9704.900	624.1000	3156.500	5486.500	59774.30	29.80000
Minimum	271365.5	29.50000	3.700000	19.90000	3.548000	28.31400	13.54000
Std. Dev.	241572.7	2715.333	231.4924	1078.810	1543.892	19938.35	3.351027
Skewness	0.546008	1.003507	0.646940	0.683398	1.405562	1.469718	1.614823
Kurtosis	1.940507	3.210267	1.746535	1.887625	4.133710	3.677054	6.397570
Jarque-Bera	2.218568	3.902636	3.110079	2.976115	8.804894	8.719573	21.05851
Probability	0.329795	0.142087	0.211181	0.225811	0.012247	0.012781	0.000027
Observations	23	23	23	23	23	23	23

Source: Author's E-views 7.0 Computation (2016)

The summary of descriptive statistics of relevant variables of the study is as reported in Table 1 above, as observed from the table, the mean, median, standard deviation as well as the skewness and kurtosis measures of our variables of interest are given. The mean values of Real Gross Domestic Product (RGDP), Loan to Agriculture and Forestry (LAF), Loan to Mining and Quarrying (LMQ), Loan to Manufacturing & Food Processing (LMFP), Loan Real Estate and Construction (LREC), Loan to Transport and Commerce (LTRC) and Interest Rate (INTR) are 524601.5, 2599.017, 214.0348, 1096.657, 1104.298, 13238.10 and 18.83261 respectively. Their respective standard deviations are 241572.7, 2715.333, 231.4924, 1078.810, 1543.892, 19938.35 and 3.351027. The Jarque-Bera test of normality shows that the error term in our specified equation is normally distributed. This is evidenced by the respective insignificant Jarque-Bera statistics of the relevant variables.

## Stationarity Test of Variables

**Table 2: Augmented Dickey-Fuller and Philips-Perron Test Results**

Variables	ADF Statistic	Order	Philips-Perron Test	Order
RGDP	-3.866815	(1)1	-3.866815	(1)1
LAF	-4.515177	(1)1	-6.810374	(1)1
LMQ	-4.082341	(1)1	-3.991974	(1)1
LMFP	-5.179246	(1)1	-7.022412	(1)1
LREC	-5.057611	(1)1	-11.92873	(1)1
LTRC	-3.125693	(1)1	-6.542815	(1)1
INTR	-5.409659	(1)1	-10.12303	(1)1
5% Critical Value (1)1 (3.0199)			5% Critical Value (1)1 (-3.0114)	

Source: Author's E-views 7.0 Computation (2016)

Table 2 shows the stationarity test of the variables used in the study and from the table both Augmented Dickey-Fuller and Philips-Perron test results revealed that the variables are stationary at first order at 5 percent level of significance.

## Pairwise Granger Causality Tests

**Table 3: Rejection of Null Hypotheses of Pairwise Granger Causality Tests**

Null Hypotheses:	Obs.	F-Statistic	Probability
RGDP does not Granger Cause LAF		8.20367	0.00353
RGDP does not Granger Cause LMFP		15.2082	0.00020
RGDP does not Granger Cause LREC		9.64843	0.00178
LAF does not Granger Cause LREC		6.73041	0.00757
LREC does not Granger Cause LMQ	21	9.97049	0.00154
LMFP does not Granger Cause LREC		9.20852	0.00218
LTRC does not Granger Cause LREC	21	5.18572	0.01836
LREC does not Granger Cause LTRC		9.81870	0.00165

Source: Author's E-views 7.0 Computation (2016)

Table 3 above shows Pairwise Granger Causality tests. From the results, all the listed pair of variables have causal relationships among them. That is, there is a causal relationship among the variables given the probability values of the variables at 5 percent level of significance. Therefore, the null hypotheses which stated that there are no causal relationships among variables are rejected.

## Long Run Regression Results

**Table 4: Long Run Regression Results**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	10.51885	1.014484	10.36867	0.0000
LOG(LAF)	0.008246	0.093947	0.087777	0.9311
LOG(LMQ)	0.158665	0.062050	2.557026	0.0211
LOG(LMFP)	0.038282	0.168302	0.227458	0.8229
LOG(LREC)	0.049264	0.029877	1.648885	0.0187
LOG(LTRC)	0.039499	0.026580	1.486038	0.1567
LOG(INTR)	0.330140	0.293253	1.125786	0.2769
R-Squared	0.89			



Adjusted R <sup>2</sup>	0.85
F-statistics	21.0
DW	1.9

Author's E-views 7.0 Computation (2016)

Having conducted the unit root and causality tests, we proceeded to obtain the long-run results of the relationship between real sectors' microfinancing and economic growth in Nigeria using the Ordinary Least Squares method. The result presented in Table 4 revealed that all the variables in the model were positively related to Real Gross Domestic Product (RGDP). Therefore, the Loan to Agriculture and Forestry (LAF), Loan to Mining and Quarrying (LMQ), Loan to Manufacturing and Food Processing (LMFP), Loan Real Estate and Construction (LREC), Loan to Transport and Commerce (LTRC) and Interest Rate (INTR) have positive impact on Real Gross Domestic Product (RGDP) in Nigeria.

The result further shows that the Loan to Mining and Quarrying (LMQ) and Loan Real Estate and Construction (LREC) have significant impact on economic growth at 5 percent significant level in the long-run. This means that a unit increases in these variables will increase Real Gross Domestic Product by 0.159 and 0.049 percent respectively. Similarly, though the Loan to Agriculture and Forestry (LAF), Loan to Manufacturing and Food Processing (LMFP), Loan to Transport and Commerce (LTRC) and Interest Rate (INTR) were positively related Real Gross Domestic Product, they were statistically insignificant at 5 percent significant level in the long-run in explaining the variations in Real Gross Domestic Product in Nigeria.

The adjusted R<sup>2</sup> of 0.85 percent indicates that 85 percent of the variations in the dependent variable are explained by variations in the independent variables and the Durbin Watson statistic of 1.9 suggests that the model is free from serial auto correlation. The F-statistics of 21.0 shows that the model has a good fit in explaining variation in Real Gross Domestic Product in Nigeria and meaning that real sectors' microfinancing has good fit in determining the variation in economic growth in Nigeria.

### The Error Correction Model

Table 5: The Error Correction Model Results

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	11.16093	0.226524	49.27052	0.0000
LOG(LAF)	0.168714	0.042790	3.942841	0.0013
LOG(LREC)	0.131511	0.027250	4.826005	0.0002
D(LOG(LAF(-1)))	-0.448933	0.098263	-4.568670	0.0004
D(LOG(LMFP(-1)))	0.348130	0.120320	2.893363	0.0111
ECM(-1)	-0.099	7.75E-07	-1.289848	0.0266
R-Squared	0.915			
Adjusted R <sup>2</sup>	0.887			
F-statistics	32.57770			
DW	2.01			

Author's E-views 7.0 Computation (2016)

From Table 5, the coefficient of the error correction term is -0.099 which implies that the speed of adjustment is approximately 9.9 percent per quarter. The negative sign and significant coefficient is an indication that co-integrating relationship exists among the variables. The size of the coefficient on the error correction term (ECT) denotes that 0.099 percent of the disequilibrium caused previous year's shock converges back to the long run equilibrium in the current year.

In the result, the Loan to Agriculture and Forestry (LAF), Loan to Transport and Commerce (LTRC) and Loan to Manufacturing and Food Processing (LMFP) at lag one were positively

related to Real Gross Domestic Product in Nigeria while Loan to Agriculture and Forestry (LAF) at lag one is negatively related to Real Gross Domestic Product in Nigeria and they were all statistically significant at 5 percent level of significance. This means that the variables are fit in explaining variations in Real Gross Domestic Product in Nigeria.

Also, from the error correction model in Table 4.6, the coefficient determination ( $R^2$ ) is 0.92, which indicates that about 92 per cent of the systematic variation in Real Gross Domestic Product growth rate in Nigeria is accounted for by the variables taken together. The F-value of 32.58 is significant at 1 per cent level of significance, which further suggests a linear relationship between the Loan to Agriculture and Forestry (LAF), Loan to Mining and Quarrying (LMQ), Loan to Manufacturing and Food Processing (LMFP), Loan Real Estate and Construction (LREC), Loan to Transport and Commerce (LTRC) and Interest Rate (INTR) and Real Gross Domestic Product (RGDP) in Nigeria. While the D.W. statistics of 2.0 shows absence of auto-correlation.

## **CONCLUSION AND RECOMMENDATIONS**

In conclusion, the research has attempted to empirically examine the impact of real sectors' microfinancing on economic growth in Nigeria. The results of the study shows that there is a strong relationship between Real Gross Domestic Product (RGDP) and real sectors' microfinancing indicators in Nigeria. Also, the results revealed that though some variables were statistically insignificant, generally real sectors' microfinancing has impact on economic growth in Nigeria. The result further shows that the Loan to Mining and Quarrying (LMQ) and Loan Real Estate and Construction (LREC) have significant impact on economic growth at 5 percent significant level in the long-run while the Loan to Agriculture and Forestry (LAF), Loan to Transport and Commerce (LTRC) and Loan to Manufacturing and Food Processing (LMFP) at lag one were positively related to Real Gross Domestic Product in Nigeria and they were all statistically significant at 5 percent level of significance. This means that the variables are fit in explaining variations in Real Gross Domestic Product in Nigeria at short run.

From the results some of the key variables like Loan to Agriculture and Forestry (LAF), Loan to Manufacturing and Food Processing (LMFP), Loan to Transport and Commerce (LTRC) with positive relationships have no significant impact on economic growth in Nigeria, especially Loan to Agriculture and Forestry (LAF), Loan to Manufacturing and Food Processing (LMFP) and majority of Nigerians are directly and indirectly involved in these sectors. The insignificant impact of these sectors especially manufacturing and agriculture sectors may be due to the fact that this sector has faced series of challenges such as poor marketing system for both agricultural and manufacturing products, poor infrastructure (such as roads and railway system), educational and health facilities, social services such as potable water and electricity and communication system.

Agricultural performance in Nigeria is greatly impaired by the low level of development of infrastructure. In the rural areas where majority of the smallholders operate, inadequate infrastructure constitutes a major constraint to agricultural investment, production and trade. Also, the rising prices of inputs are the results of instability in the factor markets arising from instability in macroeconomic policy actions leading to inflationary pressures, high interest rates, and volatile exchange rate. Invariably, the deficiency in macroeconomic policy environment constituted a major constraint to the growth of investment in production of agricultural products. This has a tendency to cause high factor cost to the farmers cultivating agricultural crops and manufacturing companies.

Technological constraint is another problem facing manufacturing and agriculture sectors manifests in poor technology, poor quality of raw materials and inadequate supply of modern

inputs. The main causes of the constraint include: low support from government, poor government policy, poverty, low level of awareness, lack of adequate research and increases in the prices of inputs. Poor government support and poor government policy prevent the emergence of innovations from research institutes, thereby curtailing the level of available technically feasible and efficient agricultural practices. Even when they are available, there seem to be communication gaps between farmers (end-users of research efforts) and the researchers. The existence of unified agricultural extension system notwithstanding, there is still poor coordination between researchers, extension agents and farmers.

Therefore, the paper recommends the following policies:

- i. Government should invest heavily in rural infrastructure development that will promote private investment in all areas of manufacturing and agriculture and facilitate linkage of agriculture to industry. The rural electrification programme should be intensified to cover all rural villages in the country.
- ii. Government should sustain its drive to achieve a stable macroeconomic environment, which manifests largely in price stability. On the social front, government should ensure security of lives and property to attract domestic and foreign investment to the sector.
- iii. Government should strengthen Mining and Quarrying and Real Estate and Construction since both have strong and significant impact on economic growth. There is the need for policy measure to encourage more investors especially in Mining and Quarrying sub-sectors of the economy for sustainable economic growth in Nigeria.
- iv. Finally, the lower costs of borrowing would induce the desired credit expansion thereby encouraging investment activities in the country. Also, the implementation of tax incentives policies should be maintained. A vigorous sustainable human centered development strategy capable of achieving a structural transformation of the economy, the need for fiscal adjustment as well as the development of more flexible financing option for the government, and political stability in the country will facilitate sustainable economic growth in Nigeria.

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