

Microfinance Banking: The Strength of the Nigerian Economy

Kunle B. Osinusi¹ and Kehinde A. Jaji²

¹Department of Economics, Tai Solarin University of Education, Ijagun, Ijebu Ode, Nigeria
osinusikb@tasued.edu.ng

²Department of Business Administration, Somali National University, Somalia
kennyjahgee@gmail.com

Abstract

Microfinance Bank (MFB) was stabled and licensed by the Central Bank of Nigeria (CBN) to carry on the business of providing financial services such as savings and deposits, loans, domestic fund transfers, other financial and non financial services to microfinance clients. This study present the impact of microfinance banks on Nigeria economy. Times series data gotten from Central Bank of Nigeria (CBN) statistical bulletin spanning between 1990 and 2016 were adopted. The long run Relationship among the variables was determined using the Johansen Co-integration technique while the Error Correction Mechanism was used to examine the speed of adjustment of the variables from the short run dynamics to the long run. The Johansen Co-integration test showed that there is long run relationship between gross domestic product, asset of microfinance bank, deposit, liabilities of micro finance bank, and loans and advances microfinance banks in Nigeria. The error correction result showed that the economy needs 25.6% mechanical adjustment for it to be at equilibrium. The a-priori expectation reveals that there is negative and insignificant relationship between assets of micro finance bank gross domestic product in Nigeria. This means an increase in the asset of micro finance bank affect gross domestic product negatively. There is positive but insignificant relationship between loans and advances microfinance banks and gross domestic product in Nigeria. There is positive but insignificant relationship between deposit, liabilities of microfinance bank and real gross domestic product in Nigeria. This means an increase in deposit, liabilities of microfinance bank leads to increase in real gross domestic product in Nigeria. The study recommend that microfinance institutions should channel very high proportion of their credits to the productive and real sectors of the economy for valuable impact of their operations on Nigeria's economic growth.

Keywords: Domestic Product; Micro Finance Bank; Deposit; Liabilities; Central Bank of Nigeria

Introduction

The word micro-financing is not new in Nigeria; this is simply because its mode of operations has been in practice for a long term among the traditional Nigerian society. This is evidenced by our cultural economic activities as “Esusu”, “Adashi”, “Otataje”, etc, which were practiced to provide funds for producers in our rural and urban communities. What operates at present however, is the effort of governments in Nigeria to modernize micro-financing in rural and urban communities to improve the productive capacity of the rural and urban poor, enhance their economic standing which alleviates the level of poverty and enhance economic growth and development in the economy.

Evidence has shown that there has been a failed trials in Directorate of Food, Road and Rural Infrastructure (DFRRI), Rural Banking by commercial banks and even people's bank programme (1986), the government of the Federal Republic of Nigeria took the bull by the horns by enacting legislation for the establishment of community banks (now microfinance institutions). To complement government efforts, over the years, a lot of NGOs has formally been licensed to operate as micro finance institutions. Some existing NGO microfinance institutions were transformed and Universal Banks were encouraged to engage in microfinance services. Of recent, microfinance banks regulation and supervisory guidelines were inaugurated. The dismal

performance of the conventional finance sectors triggered the advocacy of micro financing by policy makers, practitioners, and international organizations as a tool for economic growth. Since its emergence, the number of microfinance institutions around the world has proliferated at a fast pace after the 1970s. Today there are more than 7000 microlending organizations providing loans to more than 25 million poor individuals around the globe (Mohammed and Hasan, 2008). The Nigerian microfinance industry has come a long way with a boasts of the entire four well - known models in the industry. A CBN study (2001) identified 160 registered Microfinance Institutions (MFIs) in Nigeria with aggregate savings worth N99.4 million and outstanding credit of N649.6 million, indicating huge business transactions in the sector (Anyanwu, 2004). Specifically, as at the end of 2004, the microfinance intermediation activities of community banks shows a total mobilized deposits of N21.4 billion, asset base of N34.2 billion and loans and advances to the tune of N11.4 billion (CBN, 2005). Currently microfinance banks are of two forms, as all licensed community banks in Nigeria that met CBN guidelines have been transformed to microfinance bank.

The two forms of microfinance Banks (MFBs) are; (i) Microfinance Banks (MFBs) licensed to operate as a unit. These are hitherto community banks licensed to operate branches and/or cash centres subject to meeting the prescribed prudential requirements and availability of free funds for opening branches/cash centres. The minimum paid-up capital for this category of banks is N20 million for each branch. The branching should be gradual within a local council before it spreads to other local councils and state. (ii) Microfinance Banks licensed to operate in a state. These are MFBs licensed to operate in all parts of the state at once without recourse to gradual coverage (spread) as in unit MFBs. Branches are opened subject to meeting the prescribed prudential requirements and availability of free funds. The minimum paid-up capital for this category of banks is N1 billion. About 600 Community Banks have migrated to Microfinance Banks by January 1st, 2008 and there are several others that have been licensed to operate (CBN, 2008).

Microfinance Bank (MFB) was construed to mean any company licensed by the Central Bank of Nigeria (CBN) to carry on the business of providing financial services such as savings and deposits, loans, domestic fund transfers, other financial and non financial services to microfinance clients. Thus, being an incorporated entity, each MFB in Nigeria has a main objects clause Companies and Allied Matters Act. Laws (2012), section 27 (c and d); which, in the technical parlance of company secretarial practice, is usually described as the “substratum of the company”; and it connotes the foundation on which the company is built; as well as its intents and purposes. In addition to defining the powers of the company, objects clauses serve as guide to every policy, step or action taken by or on behalf of the company, because deviations and inconsistencies are usually regarded and technically adjudged as ultra vires which means falling “beyond the powers of the company”. The objective of this research is to determine the impact of microfinance banks on Nigeria economy.

Literature Review

Murad and Idewe (2017) on the impact of microfinance institution in economic growth of a country with focus in Nigeria employed multiple regression analysis found out that microfinance loans have a significant positive impact on the short run economic performance in Nigeria and microfinance investment also has a significant impact on economic performance in Nigeria in the long run. Apere (2016), in impact of microfinance banks on economic growth in Nigeria opined that activities of microfinance bank has the capacity to influence the entire economy if is well coordinated. It also find out that bank loans and domestic investment significantly and positively affect the growth of Nigeria's economy. Ifionu (2016) researched on a decade of microfinance bank's operations and economic development in Nigeria, using ordinary least squares method of multiple regression analysis and granger causality test, found out that deposit mobilization remains the key mover in microfinance bank operations and contributes positively to economic development while bank loans exhibited a negative contributions. Akpan and Nneji (2015) on contribution of microfinance banks to the development of small and medium scale enterprises in Nigeria using the ordinary least square analysis concluded that microfinance bank has potentials

for enhancing the performance of small businesses in two ways – regular participation in microfinance and offering of non financial services.

Microenterprises in Nigeria have not made the desired impact on the economy (Nwachukwu, 2012). This may not be unconnected to the numerous challenges facing the enterprises, among which is finance. Olorunshola (2001) rightly observed that the major gap in Nigeria's industrial development process is lack of long and in some cases short term finance for microenterprises. Microenterprises usually raise their finance through informal sources. The sources comprise owners' savings/retained earnings, contributions/borrowing from friends, relations (Ango, 2011). In most cases finance generated from informal sources fall short of the required capital for microenterprises (Okungwu and Saleh, 2004). To raise the balance of the required finance, entrepreneurs look up to the formal sources, which comprise banks, other financial institutions, cooperative societies and government loans agencies (Ango, 2011). There are a lot of challenges for microenterprises in raising finance through the formal sources, especially as it affects banks and other financial institutions (Lawal, 2010).

Dauda (2007) evaluates the performance of Nigeria's community banking scheme and observes that deposits generated significantly grew over the period of evaluation (1992–2004). The study attributes the deposit growth to improved grass root banking habit. Although their aggregate loan portfolio to agriculture and rural based real sector activities increased nominally over the period, the credit exposures are relatively much lower than their exposure to general commerce (19.2% against 47.6%). The study remarks that this trend is counter-productive to policy efforts at boosting real sector growth and sustainable economic development in Nigeria. Oluyombo (2011) attempt to investigate the contributions of microfinance banks to Nigeria's economic growth and employs credits disbursed by the microfinance institutions as a proxy for their operational activities. The study employs the Ordinary Least Squares (OLS) regression technique and finds a weak, though positive relationship between Nigeria's microfinance banking operations and the nation's economic growth. Consequently, it recommends that microfinance institutions should channel very high proportion of their credits to the productive and real sectors of the economy for valuable impact of their operations on Nigeria's economic growth.

Babajide (2011) studied the effects of microfinancing on micro and small enterprises (SMEs) in South West Nigeria using Diagnostic Test Kaplan-Meier Estimate, Hazard Model and Multiple Regression Analysis. The study indicates that microfinance enhances survival of small business in South West Nigeria; that microfinance does not enhance growth and expansion capacity of MSEs in Nigeria; that microfinance impacts significantly on the level of productivity of MSEs operators in South West Nigeria and that the provision of non-financial service by microfinance institutions enhances the performance of micro and small enterprises (MSEs) in South West Nigeria. Okpara (2010) examines the critical factors that induce poverty among the enterprising poor in Nigeria and the extent to which micro credits have assisted in alleviating poverty. The study selected causative factors for poverty include low profit, high cost of start-up or expansion funds for business and low rate of business growth. Employing two-stage regression technique within a quadratic equation framework, the study finds that in the first or take-off stage of microfinance banking, poverty was observed to have increased, though at a declining rate with increase in micro credits. In the second stage of the study which started from the year 2001, persistent increases in disbursed micro credit facilities are observed to have significantly lowered the poverty index in Nigeria. Consequently, the study calls for policy measures to establish microfinance institutions in every community in Nigeria.

The Impact of Microfinance Banks on Economic Growth in Nigeria

The impact of the microfinance banks can therefore be summarized to include the following (Apere 2016):

- a) **Deposit Mobilization and Promotion of Saving Culture:** One of the requirements of microfinance clients is a safe place to keep their savings so that they can build up large

sums of money to meet several needs- payment for shops, tools, accommodation, school fees, medical expenses, marriages, burials, etc. These needs are met by the savings mobilization activities of the MFBs. Most micro enterprises find it difficult to leave their shops and business premises for banking transactions. The convenience of this role is that the staffs of the bank go to the customers at their houses, shops, etc. for daily collection of deposits and loan repayments. The microfinance banks usually pay interest on the amount saved. This role has helped to promote a healthy banking culture among the hitherto marginalized groups.

- b) **Credit Extension to Customers:** Credit delivery is perhaps one of the most important roles of microfinance banks, as the loans extended are the main source of funds used to expand existing businesses and in some cases to start new ones. The credit delivery system in the microfinance banks exclusively focus on the poorest of the poor, organize borrowers into small homogenous groups, and give loans to meet diverse development needs of the poor without emphasis on tangible collaterals. Many microfinance banks have a number of loans such as small business loans, small entrepreneur lending, and loans for hardcore poor, partnership build up programmes. Governments also encourage cooperatives to partner with the microfinance banks to raise bulk loans for on-lending to the beneficiaries.
- c) **Employment Generation:** MFBs also contribute immensely to job creation in the rural areas through the provision of skills acquisition and adult literacy programmes. It has therefore been acknowledged that the rural setting is an arena of many industries and self-employed microenterprises, which could be empowered to contribute significantly to the national economy. In some cases, the MFBs may pass on new skills and production techniques to a micro enterprise under a profit sharing agreement at the end of the production period. Most startup financing are aimed at job creation.
- d) **Promotion of Entrepreneurship:** The aim of microfinance is not only to extend credits to beneficiaries but to promote entrepreneurship and boost rural financial markets that will provide sustainable access to financial services by creating a relationship between those with financial resources and those who need them.

The MFBs also facilitate economic development by providing ancillary capacity building to micro-enterprises in areas such as record keeping and small business management; collection of money or proceeds of banking instruments on behalf of their customers through correspondent banks; provision of payment services such as salary, gratuity and pension for the staff of micro-enterprises and various tiers of government; provision of loan disbursement services for the delivery of credit programme of government agencies, groups and individuals for poverty alleviation on non-recourse basis; provision of ancillary banking services to their customers such as domestic remittance of funds and safe custody; and investment of surplus microfinance funds in suitable instruments including placing funds with correspondent banks and in treasury bills, among others. Other impacts microfinance banks include; reorientation of the rural populace on sound financial practices, as well as issues such as partnering with other institutions to provide insurance services to clients, reproductive healthcare, girl child education and the granting of scholarship to children of clients up to secondary and university education (Ehghiamusoe, 2011). All these areas have a direct positive link with entrepreneurial capabilities of the rural people.

Methodology

Model Specification

Based on the objectives of the study, this research work adopted the best econometric approach for analyzing the time series relationships is employed. This is the Ordinary Least Square (OLS) method. It is regarded to be superior to all other estimation technique because of the 'BLUE' (Best, Linear, Unbias, and Efficiency) property it posses. A simple model that tends to capture the

activities of the microfinance banks in Nigeria between the periods of 1980–2016 is adopted. The model for the study is specified as:

$$GDP = \beta_0 + \beta_1 AST + \beta_2 DPL + \beta_3 LOA + \mu_1 \quad (1)$$

where, GDP – Gross Domestic Product, AST – Assets of microfinance banks, DPL – Deposit Liabilities microfinance banks, LOA – Loans and advances microfinance banks, β_s – parameters to estimate, μ_1 is a white noise or error term.

The “A-priori” Expectations

The “a-priori” expectation involves an examination of the signs and magnitude of the estimated parameters to determine their conformity with theoretical expectations. Theoretically and from literature, an increase in infrastructural spending should lead to a rise in the growth of an economy. Thus the parameters β_0 , β_1 and β_2 should be positive. This means that infrastructural spending, capital and recurrent expenditure are expected to have a positive effect on the growth level.

Dependent	Independent	Expected Relationship (sign)
GDP	Asset of microfinance bank	Positive (+)
GDP	Deposit liabilities microfinance bank	Positive (+)
GDP	Loans and advances microfinance banks	Positive (+)

Results

The main type of data used in this study is secondary; sourced from the Central Bank of Nigeria statistical bulletin of various issues. The model used in this study are estimated using annual Nigeria data on some macroeconomic indicators, which includes gross domestic product asset of micro finance bank, deposit, liabilities of micro finance bank, loans and advances microfinance banks for the period of 1990–2016. The OLS and unit root test to test for the Stationary of the data was used. The long run relationship is done through Johansen Co-integration Test and Error Correction Model is also done to check the percentage at which the variables adjust back to equilibrium.

Intepretation of Ordinary Least Square

For the results to be accurate and easier to interpret, the data was logged. From the table above the coefficient of the independent variables; Loans and Advances of microfinance bank (LOA), Assets of microfinance bank (AST) and Deposit Liabilities of microfinance bank (DPL) reveals that RGDP is positively related and any slight increase in the independent variables (LOA, AST and DPL) will caused a positive change on the dependent variable (RGDP). From regression result above, the intercept is 4.456078 which shows that if all explanatory variables were held constant, real; gross domestic product will be 4.456078 all things being equal. Furthermore, the magnitude of the coefficient of the independent variable differs with Loans and Advances of Micro Finance Bank (LOA) having 0.590954 which connotes that an increase in loans and advances of microfinance bank (LOA) by 1% will bring about 0.598% increase in the real gross domestic product (RGDP) in Nigeria, this is so because the model is in log form. Also, the coefficient of Assets of microfinance bank (AST) is 0.048596 and at such an increase in AST by 1% will bring about 0.048596 increases in the real gross domestic product (RGDP) in Nigeria.

Furthermore, the magnitude of the coefficient of DPL rate is 0.036462 and at such an increase in DPL by 1% will bring about 0.036462 increases in the real gross domestic product (RGDP) in Nigeria. The standard error is used to measure the reliability of the coefficients. To determine if the coefficient is reliable using the standard error, half of the estimated coefficient must be greater than the standard error. Having stated the condition for reliability of the coefficient, the standard error for the intercept which is C is 0.201059 and at such the intercept is reliable. The standard error for AST and DPL are 0.050506 and 0.058289 respectively. Thus, the standard error connotes that the coefficient of AST and DPL are unreliable, the reason been that they are greater than the half of their coefficients while the standard error of LOA is 0.060440 and since it meet

the condition of testing the reliability of coefficient, it can be said that the coefficient of LOA is reliable.

The T-statistics is used to measure the level of significance of a variable. In considering if the variable is statistically significant, the probability value must be put into consideration. At such if the probability value is less than the level of significance, and then the variable is significant but if the probability value is more than the level of significance, then the variable is not significant. For the intercept C, the probability value is 0.0000 and at such it is statistically significant at 1%. The probability value for LOA is 0.0001 and this implies that LOA is statistically significant at 1%. The probability value for AST and DPL are 0.3731 and 0.5547 respectively and at such AST and DPL are not statistically significant at any level of significant, the reason been that it is greater than 10% level of significant and inflation rate is statistical significant at 1%. This implies that LOA can be said to be significant factors influencing change in the real gross domestic product while AST and DPL are not significance factors influencing change in the real gross domestic product in Nigeria. The R-squared measures the goodness of fit and it explains the proportion of change in the dependent variable with respect to changes in the independent variables. The R-squared is given 0.991914 and it implies that the independent variables explains about 99.1914% changes in real gross domestic product and at such the independent variables are relevant to the Nigerian economy while the remaining 0.8086% are the other variables that affect real gross domestic product but not captured within the model. This 0.8086% are called stochastic random error term.

Data Analysis

Dependent Variable: LOGRGDP
 Method: Least Squares
 Date: 11/30/18 Time: 15:31
 Sample (adjusted): 3 12
 Included observations: 10 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGLOA	0.590954	0.060440	9.777515	0.0001
LOGDPL	0.048596	0.050506	0.962179	0.3731
LOGAST	0.036462	0.058289	0.625535	0.5547
C	4.456078	0.201059	22.16307	0.0000
R-squared	0.991914	Mean dependent var		8.080666
Adjusted R-squared	0.987871	S.D. dependent var		0.726715
S.E. of regression	0.080034	Akaike info criterion		-1.923559
Sum squared resid	0.038433	Schwarz criterion		-1.802525
Log likelihood	13.61779	Hannan-Quinn criter.		-2.056333
F-statistic	245.3440	Durbin-Watson stat		1.908051
Prob (F-statistic)	0.000001			

The F-statistics is also used to test the significance of variables. The probability value of the F-statistics must be less than the significant level for it to be statistically significant. The probability value of F-statistics is 0.0001; therefore the independent variables are significant both at 1% and 5% respectively. Durbin-Watson test is used to determine the presence or absence of auto serial correlation in the model. Durbin-Watson estimated value of 1.908051 is closer to two (2), therefore we can conclude there is no auto serial correlation. This means that the Durbin-Watson statistic is greater than Durbin-Watson upper limit.

Unit Root Test

Variable	Levels	Critical values		First difference	Critical values		Order of integration	Remark
LOGRGDP	-0.672833	1%	-4.356068	-4.434525	1%	-4.374307	I(1)	Stationary at 1 st difference
		5%	-3.595026		5%	-3.603202		
		10%	-3.233456		10%	-3.238054		
LOGLOA	-2.072785	1%	-4.356068	-4.698679	1%	-4.394309	I(1)	Stationary at 1 st difference
		5%	-3.595026		5%	-3.612199		
		10%	-3.233456		10%	-3.243079		
DPL	1.813989	1%	-4.394309	-6.374988	1%	-4.394309	I(1)	Stationary at 1 st difference
		5%	-3.612199		5%	-3.612199		
		10%	-3.243079		10%	-3.243079		
LOGAST	-2.770140	1%	-4.394309	-7.168249	1%	-4.416345	I(1)	Stationary at 1 st difference
		5%	-3.612199		5%	-3.622033		
		10%	-3.243079		10%	-3.248592		

Source: Authors computation using E-views 10

It is cognizant to establish the stationary of the data to check if they move in the same proportion and to check if the variable is significant. This is carried out using the augmented dickey fuller (ADF) unit root test. The decision rule is that the ADF test statistic value must be greater than the Mackinnon critical value at 5% and at absolute value. From the above summary, the augmented dickey fuller (ADF) unit root test shows that all the variables are not stationary at the level of 1%, 5% and 10% level of significant which is represented I(0) in the order of integration but the variables are stationary at the first difference and this is the reason why the order integration is written as I(1). Therefore, we reject the null hypothesis and accept the alternative hypothesis because there is no unit root at first difference.

Johansen Co-Integration Test

A necessary but not sufficient condition for co-integrating test is that each of the variables be integrated of the same order. The Johansen co-integration test uses two statistics test namely: the trace test and the likelihood eigenvalue test. The first tables in each of the table tests the hypotheses of no co-integrating relation, the second table test the hypothesis of one co-integrating relation and so on, against the alternative of full rank of co-integration. The results are presented in the table below:

Date: 09/07/18 Time: 00:04
 Sample (adjusted): 3 27
 Included observations: 25 after adjustments
 Trend assumption: Linear deterministic trend
 Series: RGDP AST DPL LOA
 Lags interval (in first differences): 1 to 1
 Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.887793	97.34629	47.85613	0.0000
At most 1*	0.733940	42.66099	29.79707	0.0010
At most 2	0.229553	9.560134	15.49471	0.3161
At most 3	0.114516	3.040527	3.841466	0.0812

Trace test indicates 2 cointegratingeqn(s) at the 0.05 level

*denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.887793	54.68530	27.58434	0.0000
At most 1*	0.733940	33.10086	21.13162	0.0007
At most 2	0.229553	6.519607	14.26460	0.5475
At most 3	0.114516	3.040527	3.841466	0.0812

Source: Authors computation using E-views 9

From the result of the Johansen Co-integration test, it is discovered that there is long run relationships between gross domestic product asset of micro finance bank, deposit, liabilities of micro finance bank, and loans and advances microfinance banks. From the trace statistics above, it shows that the probability of the first hypothesis (none) is lesser than 5% and it shows integration. We can therefore draw conclusion that there is long run relationship among the variables. From the max-eigen statistics above, it shows that the probability of the first hypothesis (none) is lesser than 5% and it shows co-integration. We can therefore draw conclusion that the max-eigen statistics have co-integration equations and there is long run relationship among the variables. Therefore, because there is co-integrating equation between the trace statistics and the max-eigen value test, we can conclude that all the variable share common stochastic trend and grow proportionally.

Interpretation for Error Correction Model

The results of Error Correction Model (ECM) has a negative sign (-0.256699) and falls within the acceptance region of $-1 < error\ correction < 0$. The significance of the Error Correction term (ECM) indicated that there exist long run relationship between the variables and its takes few years to attain equilibrium. The ECM indicates a feedback of approximately 25.6% of the previous year's disequilibrium from long run elasticity of the explanatory variable. That is, the coefficient of the error correction term measures the speed at which the level of real gross domestic product adjusts to changes in the explanatory variable in an effort to achieve long run static equilibrium. It can be said therefore that the speed of adjustment is fast.

Error Correction Model

Dependent Variable: D(RGDP)
 Method: Least Squares
 Date: 09/07/18 Time: 00:15
 Sample (adjusted): 2 27
 Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2882.924	568.9827	5.066804	0.0001
D(AST)	-1.567032	2.097899	-0.746953	0.4634
D(LOA)	0.304861	0.172813	1.764109	0.0923
D(DPL)	8.314861	6.325220	1.314557	0.2028
ECM(-1)	-0.256699	0.097985	-2.619772	0.0160
R-squared	0.614773	Mean dependent var		3884.224
Adjusted R-squared	0.541397	S.D. dependent var		3329.165
S.E. of regression	2254.519	Akaike info criterion		18.45030
Sum squared resid	1.07E+08	Schwarz criterion		18.69224
Log likelihood	-234.8539	Hannan-Quinn criter.		18.51997
F-statistic	8.378334	Durbin-Watson stat		1.384253
Prob(F-statistic)	0.000333			

Source: Authors computation using E-views 9

A-priori Expectation

From the analysis above there is negative and insignificant relationship between assets of micro finance bank gross domestic product in Nigeria. This means an increase in the asset of micro finance bank affect gross domestic product negatively. There is positive but insignificant relationship between loans and advances microfinance banks and gross domestic product in Nigeria. This means an increase in loans and advances microfinance banks affect gross domestic product positively. There is positive but insignificant relationship between deposit, liabilities of micro finance bank and real gross domestic product in Nigeria. This means an increase in deposit, liabilities of micro finance bank leads to increase in real gross domestic product in Nigeria.

Statistical Criteria

F-statistics is used to test the overall joint statistical significance of the explained variable and explanatory variable. So, from the analysis above, F-calculated (8.378334) is greater than F-tabulated (0.000333). There is joint statistical significance relationship between the explained variable and explanatory variable. Co-efficient of determination R^2 (0.614773) is used to test the measure of goodness of fit of the model. There is 61.5% dispersion of variation between the explained and explanatory variable. The remaining 38.5% are other factors affecting the explained and explanatory variable. The result of the R-square is high and it insinuates that there is a strong relationship between the explained and explanatory variable.

Econometrics Criteria

We use the Durbin-Watson to test the presence or absence of auto serial correlation. Because Durbin-Watson estimated value (1.384253) is lesser than two (2), there is presence of auto serial correlation. This means that the Durbin-Watson statistics is lesser than Durbin Watson upper limit.

Discussions

From the Johansen Co-integration Test, it is discovered that there is long run relationship between gross domestic product asset of micro finance bank, deposit, liabilities of micro finance bank, and loans and advances microfinance banks. From the trace statistics above, it shows that the probability of the first hypothesis (none) is lesser than 5% and it shows integration. We can therefore draw conclusion that there is long run relationship among the variables. From the max-eigen statistics above, it shows that the probability of the first hypothesis (none) is lesser than 5%

and it shows co-integration. We can therefore draw conclusion that the max-eigen statistics have co-integration equations and there is long run relationship among the variables. Therefore, because there is co-integrating equation between the trace statistics and the max-eigen value test, we can conclude that all the variable share common stochastic trend and grow proportionally.

The Error Correction Model result suggested that about 25.6% of the disequilibrium in the income distribution is corrected each year. Therefore, from the explanation above, the economy needs 10.6% mechanical adjustment for it to be at equilibrium. The statistical test (F-test) shows that there is joint statistical significance relationship between the explained variable and explanatory variable. The a-priori results reveal that there is negative and insignificant relationship between assets of microfinance bank gross domestic product in Nigeria. This means an increase in the asset of micro finance bank affect gross domestic product negatively. There is positive but insignificant relationship between loans and advances microfinance banks and gross domestic product in Nigeria. This means an increase in loans and advances microfinance banks affect gross domestic product positively. There is positive but insignificant relationship between deposit, liabilities of micro finance bank and real gross domestic product in Nigeria. This means an increase in deposit, liabilities of micro finance bank leads to increase in real gross domestic product in Nigeria. However, these results also go in line with Oluyombo (2011) attempt to investigate the contributions of microfinance banks to Nigeria's economic growth and employs credits disbursed by the microfinance institutions as a proxy for their operational activities. The study employs the Ordinary Least Squares (OLS) regression technique and finds a weak, though positive relationship between Nigeria's microfinance banking operations and the nation's economic growth. Consequently, it recommends that microfinance institutions should channel very high proportion of their credits to the productive and real sectors of the economy for valuable impact of their operations on Nigeria's economic growth.

Conclusion

Based on the empirical findings, the following conclusion is established:

- i). Microfinance bank loans have a stimulating or expansionary effect on real gross domestic product in Nigeria over the years. The possibility of this; is traceable to the fact that microfinance bank gives soft loans to productive and promising micro, small and medium scale enterprises (MSMEs) that are key players in the drive for economic growth. Moreso, microfinance bank loans have played a vital role in the economic growth in Nigeria because it serves as a catalyst for economic growth in Nigerian economy.
- ii). Generally it is believed that inflation has more of a negative impact on gross domestic product than of a positive impact.

The study therefore recommended that more attention be given to the issue of inflation and its dampening effect on the economy. Microfinance institutions should channel very high proportion of their credits to the productive and real sectors of the economy for valuable impact of their operations on Nigeria's economic growth. Microfinance banks (MFBs) should be front-liners of ethical and professional conduct by ensuring that soft loans are given to credible and promising entrepreneurs.

References

- Aderibigbe, J.O. (2001). The Role of the federal sector in poverty reduction. *CBN Bullion*, 39 (4), 13-24.
- Akpan, E.S and Nneji (2015). Contribution of microfinance banks to the development of small and medium scale enterprises in Nigeria. *Research Journal of Finance and Accounting*, 6 (8), 19-28.
- Annan, K. (2006). Global microcredit summit, purpose and background. <http://www.globalcreditsummit2006.org/purpose.php>
- Apere, T.O (2016). The impact of microfinance bank on economic growth in Nigeria, *International Journal of Academic Research in Economic and Management Services*, 5 (4), 1-9.
- Aryeetey, E. (1995). Informal finance in Africa. AERC/East African Educational Publishers, Nairobi.
- Besley, T. (1996). Political economy of alleviating poverty: theory and institutions in Bruno. M and Pleskovic, B (Ed) *Annual World Bank Conference*.
- Central Bank of Nigeria (2005, December 31). Annual report and statement of accounts for the year ended. CBN, Abuja.

- Central Bank of Nigeria (2008). Guidelines and procedures for the establishment of microfinance banks in Nigeria. *Published by the CBN.*
- Chirwa, E.A. (1997). An econometric analysis of the determinants of agricultural credit payment in Malawi. *African Review of Money Finance and Banking*, 1-2, 107-122.
- Cohen, M. and Sebstad J. (2000). Microfinance, risk management and poverty. Synthesis Study based on Field Studies Conducted by Ronald T. Chua, Paul Mosley, Graham A.N. Wright, Hassan Zaman.
- Cohen, M. and Snodgrass D. (1999). An assessment of the impact of SEWA bank in India: baseline findings. *Harvard Institute for International Development*. <http://www.mip.org>.
- Conford, R. (2002). Microcredit, microfinance or access to financial services, what do pacific people need? *The Foundation for Development Cooperation*, Brisbane QLD 4000, Australia. www.fdc.au.
- Ehigiamusoe, G. (2005). Tested institutional practices for effective microfinance services delivery. Proceedings of Seminar in Microfinance Policy, Regulatory and Supervisory Framework for Nigeria.
- Hulme, D. and Mosley, P. (1996). Finance against poverty. Routledge, London. 1-2.
- Ifiomu, E.P (2016). A decade of microfinance bank's operations and economic development in Nigeria. *Research Journal of Finance and Accounting*, 7 (5), 152-161.
- Ketu A.A. (2008). Microfinance banks in Nigeria: an engine for rural transformation. *West African Institute for Financial and Economic Management*. Lagos Nigeria.
- Khandker, S. (1998). Fighting poverty with microcredit: experience from Bangladesh. Oxford University Press for the World Bank, New York.
- Kimotho, M. (2005). National microfinance policy framework and expected impact on the microfinance market in Nigeria. CBN Proceedings of Seminar in Microfinance Policy, Regulatory and Supervisory Framework for Nigeria.
- Kpakol, M. (2005). The role of microfinance in poverty eradication. Proceedings of Seminar in Microfinance Policy, Regulatory and Supervisory Framework for Nigeria.
- Liew, J. (1997). Observations on microcredit scheme in the pacific: making microcredit more people-centred. *ESHDP Working Paper*, Suva: UNDP. www.undp.org.
- Marr, A. (2002). Studying group dynamics: an analysis of micro finance impacts on poverty reduction and its application in Peru. *Ph.D Thesis*, University of London.
- Marr, A. (2002). Microfinance and poverty reduction: the problematic experience of communal banking in Peru. PhD research thesis, funded by the Economic and Social Research Council, United Kingdom and undertaken at the School of Oriental and African Studies, University of London.
- Mathins, S. (2003). Economy and epidemic: microfinance and HIV/AIDS in Asia. *The Foundation for Development Operation in British and Australia*. www.google.com.
- Murad, A.B. and Ideweale, I.E. (2017). The impact of microfinance institution in economic growth of a country: Nigeria in focus. *International Journal of Development and Management Review*. 12 (1), 1-20.
- National Bureau of Statistics (2005). Social Statistics in Nigeria. Published by NBS.
- Ogbunaka, U.M. (2003). The future of community banks in Nigeria, emerging challenges. *CBN Bullion*, 30 (5), 30-41.
- Zeller, M., Gertrud, S., Joachim, von.B. and Franz, H. (1997). Rural finance for food security for the poor: implications for research and policy in food policy review. *International Food Policy Research Institute*, Washington DC, 4.

APPENDIX

OBS	RGDP	AST	DPL	LOA
1990	499.68	0	1.4	16.3
1991	596.04	0	0.6	23.1
1992	909.8	6.8	1.2	31.2
1993	1,259.07	3.6	1.7	47.5
1994	1,762.81	5.9	1.5	63.3
1995	2,895.20	6.7	2.2	180.4
1996	3,779.13	8.3	2.5	285.8
1997	4,111.64	5.9	3.5	262.6
1998	4,588.99	10.7	4.2	300
1999	5,307.36	3.8	5.2	472.3
2000	6,897.48	3.3	7.9	662.5
2001	8,134.14	14.7	15.9	764.5
2002	11,332.25	9.2	35.4	764.9
2003	13,301.56	20	62.9	1359.3
2004	17,321.30	26.4	72.8	2112.5
2005	22,269.98	15.4	88.4	2900.1
2006	28,662.47	87	141.6	5120.9
2007	32,995.38	93	292.3	13181.7
2008	39,157.88	244	480.7	9563
2009	44,285.56	388.2	328.61	7030.8
2010	54,612.26	375	545.67	9918.2
2011	62,980.40	446.3	875.34	10275.3
2012	71,713.94	559.4	923.12	14800.9
2013	80,092.56	1,112.40	1024.45	19077.4
2014	89,043.62	547.1	1215.09	25664.3
2015	94,144.96	1,115.60	1409.87	32127.6
2016	101,489.49	367.7	1562.04	41676.2