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Microfinance Bank and Economic Growth in Nigeria

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Abstract

It is impossible to overstate the value of microfinance institutions in fostering economic development in developing countries like Nigeria. Using Ordinary Least Square (OLS), this research investigates the effect of microfinance banks on GDP expansion in Nigeria. Microfinance bank liabilities have a negative and negligible effect on real GDP growth, according to the data. Economic expansion was further bolstered by microfinance bank deposits, loans, and gross fixed capital formation. There was a small but favourable relationship between real GDP growth and total government spending. The study concludes that the Central Bank of Nigeria (CBN) and other monetary authorities should work to increase the amount of money lent by microfinance banks and direct that money to the appropriate persons and industries. With this in mind, we suggest prioritising extending credit to both small and medium-sized businesses and households with limited financial resources.

Keywords:
Banks, Economic growth, CBN, GDP, Nigeria

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Background to the Study

Attaining economic growth is a critical macroeconomic objective that has absorbed policymakers' attention. An increase in national output and income is the result of an expanding economy, which is able to produce more goods and services thanks to increased production capacity. If the economy is doing well, foreign investors may decide to put money into it directly. Chances of alleviating poverty are fostered by an expanding economy. In addition to these benefits, it creates new businesses, pays wages, and expands access to goods and services. Economic expansion may also bring monetary gains and the resulting material comforts. Most commonly, an increase in GDP or real national income is used to describe economic expansion. As stated by Chugtai, Malik, and Rashid (2015), GDP measures the nation's total value-added output. In general, the term "economic growth" refers to an increase in GDP. Over time, microfinance banking has proven to be an effective method of bolstering economies, particularly in underdeveloped regions.

Microfinance banks are banking institutions whose primary aim is to provide microfinance services such as microloans, deposits, payment services, insurance services and money transfers, especially to low-income households and microenterprises in addition to combining advisory and lending services. They also offer account services to small-balance accounts that traditional banks may not accept to offer and provide small transaction services for charges that may be quite lower than the average charges that mainstream financial institutions could charge. Microfinance banks worked with the vision of improving the condition of living of everyday people via value-adding products and services. The business strategies of most microfinance banks hinged on pronged strategies of enhanced customer experience leveraging on a bank's strength as a financial institution, structural efficiency and sustainable growth (The Guardian, 2022). Ekpenyong & Nnamocha (2019) posit that the main targeted group is the poor populace that may not be served by the bigger financial institutions in the economy.

The fundamental policy aims of Nigeria's Microfinance Policy, Regulatory and Supervisory Framework of 2005 is to promote financial discipline and sustainability while providing the country's previously unbanked population with access to banking services. In addition to its other purposes, the framework was created to affect the expansion of capital. Microfinance institutions in Nigeria can legally accept deposits thanks to a licence from the CBN and the NDIC's backing (World Bank, 2017). More than 13 million people worldwide use the services of microfinance banks; roughly 10 million of these people are unbanked. The overall asset base of microfinance banks is less than 1% of the asset base of deposit money banks, as noted by the World Bank (2017). Since more people are being served by deposit money banks, the percentage of the population that is formally financially included has increased to about 38%, with roughly 10% of those people being served by microfinance institutions.

Microfinance institutions (MFIs) serve a vital role in any economy by providing access to capital and other services that empower the disadvantaged, particularly women, to

launch or expand businesses that generate positive net income. Consequently, the economy will be able to help reduce poverty. Microfinance institutions help the economy expand by offering a range of services at low or no cost. They facilitate savings intermediation and create jobs, for instance. Microfinance institutions allow the disadvantaged to take part in the economy and society in a structured, managed, and sustainable manner. Financial intermediation and the stimulation of productive activities, especially in the rural sector, are hypothesised to lie at the heart of the positive correlation between microfinance banks and economic expansion. Also, microfinance banks activate banking habits among rural dwellers and micro and small entrepreneurs. Microfinance banks enable an integrated national financial system and enhance the development of micro and small-scale entrepreneurship, which is pivotal for economic growth and development. Microfinance banks could influence economic growth through their services to unserved and underserved markets – the economically active population. Microfinance banks also generate employment and enable existing businesses to diversify and grow. New businesses, women and disadvantaged groups could also be empowered by microfinance banks. Therefore, stimulates economic activities in the national economy (Apere, 2016).

It is safe to say that it will be difficult to influence economic growth through microfinance banks without properly-targeted and well-organized programs for microfinance banks to facilitate the provision of credit facilities and other factors of production for people and businesses, especially micro and medium-scale enterprises. With properly-targeted and well-organized programs, there is a common concession that microfinance services significantly boost entrepreneurship capacity and enable people to carry out economic activities to become more self-reliant and generate employment, increase household income and instigate economic growth (The Guardian, 2022). Poverty alleviation in third-world countries is impossible without sustained economic growth. Economic growth in emerging nations like Nigeria requires coordinated efforts at the national and international levels to improve people's access to economic opportunities, boost economic activities, and maintain macroeconomic stability. Particularly problematic was the limited availability of resources for both financial support and personal growth. For these reasons, the rise of microfinance banks was seen as a crucial strategy for expanding participation in the financial sector and boosting economic activity. While microfinance banks have been shown to be an effective tool to stimulate economic growth in many nations, this does not appear to be the case in Nigeria. Nigeria's economy has been growing slowly and weakly, and the majority of the population still lives in poverty.

Inadequate banking services, a lack of rural savings mobilisation, and access to credit are just some of the factors that prompted the creation of the microfinance bank. Microfinance banking was founded on the premise that better access to banking services in rural areas would boost the flow of capital to such areas and encourage greater savings mobilisation among rural residents. Despite a policy shift in terms of the establishment of a microfinance banking system, the lack of finance remains a fundamental issue in Nigeria's economic growth process. There is uncertainty about the fulfilment of the basic

functions for which microfinance banks were created. Even, though the location of microfinance banks is supposed to be within the rural communities to provide them with financial services, a large proportion of microfinance bank branches are located within the urban areas, therefore, leaving the rural areas, the main focus of their operations to be neglected. Both the neglect of rural areas and overzealous but inappropriate implementation of microfinance banking functions have damaged or reduced rural resources and have failed to bring expected growth benefits to large segments of the rural population. By some socioeconomic yardsticks – including the low growth rate for many years, the low life expectancy, and the frequent economic recessions, it is safe to say that Nigeria is still far in its economic growth trajectory and one of the most rural-oriented nations among the developing countries within and outside Africa. For example, Nigeria recorded a negative GDP growth rate in 2016 and 2020 of about -1.79 per cent and -1.8 per cent. In 2021, the economy grows by about 3.6 per cent and 3.52 in 2022. The growth was not driven majorly by the real sector in particular. But it was driven mainly by agriculture and, also services. Microfinance banks in Nigeria seem not to have played a significant role in the economic growth process as expected (Trading Economics, 2023).

Although the number of individuals with bank accounts might have increased over the years due to the establishment of microfinance banks, accessibility to institutional credit is still a problem for the poor. When combined with poorer public transport, long distances to microfinance banks, have kept rural areas to be the dominance of very small firms with lower productivity. This adds to higher average living costs and poorer standards of living than expected. The expectation that small-scale rural producers and the poor populace generally would benefit from microfinance bank credit resources seems to be defeated Microfinance banks are an integral part of many economies, and understanding how they interact with overall economic growth is crucial for designing and assessing economic policies that will ultimately lead to greater prosperity.

Although research in this field has looked at how microfinance banks contribute to economic development, further work is needed. This study differs from others in the field since it uses a different set of metrics and indicators to examine Nigeria's microfinance sector. Therefore, this research (i) looks at how microfinance bank liabilities affect economic growth in Nigeria, (ii) checks to see if microfinance bank loans have an appreciable effect on economic growth in Nigeria, and (iii) analyses how microfinance bank deposits affect economic growth in Nigeria.

Theoretical Literature

Endogenous or New Growth Theory

A new theory, known as endogenous growth theory, was created in the 1980s in response to issues raised by the neo-classical growth model. Long-term economic growth is something that can be affected by policy decisions, according to the endogenous growth theory. Productivity increases, according to endogenous growth economists, are the result of increased innovation and human capital investment. Endogenous growth theorists place a premium on public and private institutions and markets that encourage

innovation, as well as personal financial incentives for creative thinking. Knowledge is a key factor in the theory's explanation of economic development.

Two unique methods of accounting for human capital in growth models have emerged in the endogenous growth literature. The first theory, popularised by Lucas, attributes economic expansion to an increase in human capital. The second strategy puts a premium on the human capital pool's contribution to innovation and tech diffusion. Similar to how technology enters the production function in the Solow model (albeit in a labor-augmenting form), human capital does the same in Lucas's model.

The model relies heavily on one key assumption, namely the dynamics of the human capital variable. Since there is no upper bound on learning, human capital can expand indefinitely and fuel endogenous expansion. If human capital has external influences (> 0), then the Lucas model's steady-state characteristics change. It follows that the term h in the production function influences the final product in this case. Human capital can increase without limit, leading to endogenous growth, because there are no diminishing returns to learning new things. Unlike Mankiw, Romer, and Weil (1992), Lucas believes that people invest in human capital by devoting some of their time to learning new skills rather than a portion of their income. Human capital depreciation is another issue that Lucas overlooks. Human capital is produced in a separate sector from consumer goods and physical capital in the Lucas model, which contradicts the findings of Mankiw, Romer, and Weil (1992). Given that "education relies heavily on educated people as an input," this makes sense. The buildup of human capital is the primary driver of the Lucas model's self-sustaining growth.

Harrod-Domar Growth Theory

Sir Roy Harrod in 1939 and Evsey Domar in 1946 separately came up with what is now known as the Harrod-Domar growth model. It's a growth model that says a country's prosperity depends on its saving rate and its capital-to-output ratio. When there is a lot of savings in a country, businesses have access to capital to invest with. The increased output of goods and services is one of the primary drivers of economic growth, and investment can boost a country's capital stock and so spur expansion. The efficiency of an investment can be evaluated by looking at the capital-output ratio. If the capital-output ratio drops, the economy becomes more productive, leading to more output from the same amount of resources. Again, this contributes to a flourishing economy. Therefore, in a straightforward equation, we have Net Savings (S), which is a percentage (s) of National Income (Y).

$$S = s\,Y \quad . \quad . \quad . \quad (1)$$

Net Investment (I) is defined as the change in the capital stock, **k** and represented

$$I = \Delta k \quad . \quad . \quad . \quad (2)$$

but, total capital stock, **k,** relates to output Y, as expressed by the capital-output ratio, as

$$k \backslash y = c \text{ or } \Delta k = c\Delta Y \quad . \quad .(3)$$

Finally, because net national savings, S, must equal net investment, I, we can write as:

$$S=I \quad . \quad . \quad . \quad (4)$$

Economic development is a primary use of this concept. It implies that in order for emerging countries to achieve economic growth, governments should promote saving and invest in technology to lower the capital-output ratio. India's five-year plan (1951–1956), for example, owes a great deal to the Harrod-Domar model, which provides a framework for economic progress.

Empirical Literature

Araga, Sufian, Mac-Ozigbo, and Olusanya (2022) looked at the effect of microfinance banks on poverty reduction and economic growth in Nigeria across two time periods, 1980 and 2020. In order to estimate the data, the study used error correcting methods. It was discovered that fighting poverty had no appreciable effect on GDP growth, but that microfinance bank assets did have an appreciable effect on both poverty reduction and GDP growth.

Microfinance banks have been studied by Obadire (2022), for its potential to reduce poverty in Nigeria. Eighty people filled out the study, which was conducted in Ogbomoso City, Oyo-State, Nigeria. Chi-square, Pearson correlation, and Analysis of Variance (ANOVA) were used to examine the data. Microfinance banks were found to have a beneficial and statistically significant effect on the respondents' standard of living. Microfinance banks in Nigeria were studied by Gonji, Dapim, and Shodeinde (2022). From 2005 to 2019, the researchers analysed data. The Ordinary Least Squares Method was used to analyse the data. Capital growth, microfinance interest rate, employment, and microfinance loans were all found to be key factors in Nigeria's economic development. Business expansion was found to have a negligible effect on the growth of the Nigerian economy.

Falade (2022) looked at how using microfinance bank services affected small and medium enterprise growth in Nigeria. The study had 200 total participants and employed correlation analysis to decipher the results. Microfinance bank services were found to have a significant positive link with SMEs.

Babarinde, Abdulmajeed Angyu, and Abu (2022) used annual data from 1992 to 2019 to analyse the impact of microfinance banks on economic growth in Nigeria. For this analysis, we used a technique called Autoregressive Distributed Lag (ARDL). Microfinance banks' lending and depositing activities were proven to significantly and positively impact economic expansion over the long term. Microfinance bank investment had no discernible effect on long- or short-term economic growth.

Microfinance banks have been studied by Otekunrin, Kenechukwu, Eluyela, John, and Ibrahim (2022) for their impact on economic growth. The research included data from 1996 through 2019. The information was examined with the use of the Vector Autoregressive

(VAR) method. Microfinance bank activities have a favourable and very little impact on Nigeria's economic growth, according to the results.

According to Onyele (2022), MFBs have helped reduce poverty in Nigeria between 1992 and 2018. In order to examine the information, an ARDL analysis was performed. Longitudinal research on MFBs indicated that improving their loan-to-deposit and liquidity-to-deposit ratios helped alleviate poverty. Short-term poverty reduction could not be guaranteed by the MFBs, the study revealed.

From 1999 to 2018, Cole & Akintola (2021) analysed data on microfinance banks and economic growth in Nigeria. The data was analysed using the ordinary least squares regression method. The study's results demonstrated a correlation between microfinance bank lending and GDP per capita. Akinadewo (2020) looked at how microfinance institutions in Nigeria have contributed to the expansion of SMEs. In total, 250 participants were used for the analysis. Small Scale Financial Services (SSFS), Financial Sustainability (FST), Absence of Assets-based Collateral (AAC), and Advisory Services (ADS) were used as stand-ins for microfinance institutions. In order to examine the data, logit regression was used. The study's results demonstrated a strong favourable correlation between microfinance banks and the expansion of SMEs.

Banto & Monsia (2020), analysed the data to determine the role that microfinance institutions and banks play in the economic growth of underdeveloped nations. The research included the years 1999 through 2016. The information was examined with a method called generalised panel data analysis. Even after accounting for the performance of banks, the results demonstrated that microfinance organisations contributed to economic growth and development. Growth in investment, consumer spending, and human capital were all found to benefit from banks' efficiency. Ofeimun (2020) analysed the impact of financial inclusion measures implemented by Microfinance Banks on Nigeria's economic expansion between 2009 and 2018. The information was analysed using an OLS (ordinary least squares) regression model. There was a strong positive influence on economic growth and development from microloans and loans to SMEs. Bank deposits were determined to have a negative and negligible effect on economic growth and development.

Microfinance institutions in Nigeria were studied by Ekpenyong and Nnamocha (2019), who looked at data from 1992 to 2017. Data was analysed using descriptive statistics and visual methods in this study. The results demonstrated that the selected macroeconomic sector benefited from microfinance loans and that national sectoral productivity was raised as a whole. Khalaf & Saqfalhait (2019) looked at the effect of MFIs on economic growth in Arab nations from 1999 to 2016. Ordinary Least Square (OLS) analysis was used in this investigation. Microfinance banks were shown to have little effect on economic growth in Arab countries.

Wachukwu, Onyema, and Amadi (2019) investigated how microfinance institutions influenced Nigeria's GDP growth. They ranged from 1992 until the present day. Income per person was used as a metric for economic expansion. Cochran-Orcutt was used as a regression model to evaluate the data. Microfinance bank asset growth was found to be positively associated with higher per capita income. Microfinance bank lending expansion was found to be significantly inversely related to per capita income. Microfinance bank deposit growth was also positively and significantly correlated with per capita income. Wachukwu, Onyema, and Amadi (2018) analysed the effect of microfinance institutions on economic growth in Nigeria using per capita Income as a metric. The time frame of the research was from 1992 to 2016. We used both descriptive and inferential statistics to examine the time series data. Microfinance bank credit growth was found to negatively affect GDP per capita. The rise of deposits at microfinance banks was correlated positively and statistically significantly with increases in per capita income. Furthermore, a favourable and statistically significant correlation between the expansion of microfinance banks' assets and the country's per capita income was discovered.

Microfinance institutions' effect on Nigeria's economic growth from 1992 to 2012 was studied by Murad and Idewele (2017) using the ARDL model method. Microfinance loans were found to have a large and beneficial effect on economic expansion. There was a notable effect on long-term and short-term economic growth from microfinance investment.

Researchers Lacalle-Calderon, Chasco, Alfonso-Gil, and Neira (2015) used an unbalanced panel of 67 developing countries to analyse the effect of official development assistance (ODA) and microfinance - gross loan portfolio on economic growth from 2001 to 2011. The data was analysed using the GMM (Generalised Method of Moments) method. Compared to getting foreign help, microfinance was proven to have a greater impact on economic growth. Private investment was found to benefit from microfinance, and the overall effect on economic growth was favourable and statistically significant.

Apere (2016) looked at how microfinance institutions affected GDP growth in Nigeria between 1992 and 2013. For this statistical analysis, we used the error correction model (ECM). It was discovered that loans from microfinance banks and domestic investment had a large and beneficial effect on the expansion of Nigeria's economy. Ayodele & Arogundade (2014) used the Ordinary Least Square method to analyse the effect of microfinance on GDP growth in Nigeria between 1981 and 2013. In contrast to loans and advances to the public, the study found that asset base and deposit liability had no discernible effect on economic growth.

Model Specification

We analysed the data using a multiple regression method. Goals one, two, and three are outlined below, along with the functional form of the model required to achieve them:

$$RGDP = (MFBLIAB,\ MFBLOAN,\ MFBDEP,\ GFCF,\ GXP) \quad \ldots \quad (1)$$

were
RGDP = real GDP growth
MFBLIA = microfinance banks' liabilities
MFBLOAN = microfinance bank loans
MFBDEP = microfinance banks deposits
GFCF = domestic investment, measured by gross fixed capital formation
GXP = government total expenditure

The estimation model is as follows, after calculating the log of the variables:

$$RGDP = \alpha_0 + \alpha_1 LogMFBLIAB + \alpha_2 LogMFBLOAN + \alpha_3 LogMFBDEP + \alpha_4 LogGFCF + \alpha_5 LogGXP + \varepsilon_1 \quad \ldots \quad (2)$$

where:
ε_1 = the stochastic error terms
$\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4 and\ \alpha_5$ are parameters to be estimated and other variables remain as defined previously. All of the variables are kept in a log. The RGDP is not recorded because it is a rate variable. Each independent variable will likely improve the performance of the latter.

Descriptive Statistics of the Variables
We looked at the variables' descriptive statistics. We took into account the average, standard deviation, extreme values, range, skewness, and kurtosis. Below, the descriptive statistics are summarised in Table 1.

Table 1: Mean, Standard Deviation, Minimum Values, Maximum Values, Skewness, and Kurtosis of the Variables

Variables	Obs.	Mean	Standard Deviation	Minimum value	Maximum value	Probability (Skewness)	Probability (Kurtosis)
GDPG	30	4.2043	3.8445	-2.04	15.33	0.2973	0.1954
MFBDEP	30	6101.206	7344.381	53.1152	25648.26	0.0103	0.4602
MFBLOAN	30	6322.855	6727.976	76.0987	23931.8	0.0356	0.8625
MFBLIA	30	11602.51	13507.13	75.97027	43818.47	0.0335	0.7359
GFCF	30	8777.853	1239.851	6860.444	11445.86	0.3397	0.1709
GXP	30	710505.5	983960.7	4194.577	3456925	0.0011	0.0680

Source: Author's Computation

The standard deviations of the mean rates of real GDP growth and microfinance bank loans are relatively close to one another. When compared to their respective standard deviation values, the means of the remaining variables (microfinance bank deposits, microfinance bank liabilities, gross fixed capital creation, and government aggregate expenditure) are significantly different. This suggests that the data values for real GDP growth rate and microfinance bank loan are concentrated around their respective means.

However, data values are not clustered around their respective means for microfinance bank deposits, microfinance bank liabilities, gross fixed capital creation, and government aggregate expenditure. All the variables have lowest values that are less than the mean and maximum values that are more than the mean. As a result, it is confirmed that some of the data values of the variables are above the mean values, while other values are below the mean values.

Probability values for deposits, loans, liabilities, and total government spending at microfinance institutions are all significant at the 5% level for skewness. As a result, we find that the data for those variables do not follow a normal distribution and hence reject the null hypothesis. This indicates that the values of government aggregate expenditure, microfinance bank deposits, microfinance bank loans, and microfinance bank liabilities are skewed to the right or left. However, the growth rate of real GDP and the rate of gross fixed capital formation are both negligible. Therefore, the normal distribution null hypothesis is accepted at the 5% level for these variables. This indicates that the variable data values follow a normal distribution. That is, they display perfect symmetry. None of the factors are significant at the 5% level for the Kurtosis. As a result, we accept the null hypothesis that all the variables follow a normal distribution with zero kurtosis. This indicates that there is little to no difference between the extremes of the data values for the variables and the tails of a normal distribution.

Unit Root Test

The variables' stationarity was examined using the Augmented Dickey-Fuller and Phillips-Perron tests. Table 2 shows the final result.

Table 2: Augmented Dickey-Fuller and Philips–Perron unit root test results

Variable	Augmented Dickey-Fuller Result		Philips–Perron Result		Lag order	~I(d)
	Level	1st Difference	Level	1st Difference		
GDPG	-2.424	-5.083*	-2.648	-7.602	2	I(1)
LogMFBDEP	-1.076	-4.245*	-0.770	-4.473*	2	I(1)
LogMFBLOA	-1.144	-3.614*	-1.221	-4.507*	2	I(1)
N	-1.036	-3.784*	-1.086	-4.123*	2	I(1)
LogMFBLIA	-2.573	-4.722*	-2.455	-5.592*	2	I(1)
LogGFCF						
LogGXP	-2.130	-3.885*	-2.182	-5.258*	2	I(1)

Where * indicates rejection of the null hypothesis of the presence of the unit root and significance at the 5% level. The best lag times were determined using Akaike's information criteria and Final Prediction Error (FPE). The ADF 5% critical values at level and 1st difference are -3.592 and -3.596, while the Philips–Perron critical values at level and 1st difference are -3.584 and -3.588. The trend component is present in the estimated models of the Augmented Dickey–Fuller and Philips–Perron unit root tests.

Source: Author's Computation

According to the Augmented Dickey-Fuller test, the variables at level have test statistics that are greater than the critical value by 5%. This justifies accepting the null hypothesis that there is no unit root when working with levels. The test was done at the point where the variables were differenced for the first time. The 1st difference test data for the variables are statistically significant above the 5% level. Because of this, we cannot accept the alternative hypothesis that there is no unit root at the 5% significance level. The variables are stable at the first-difference level. They are a first-order integration system. The same holds true for the Philips-Perron procedure. There is no steady state among the variables. However, as we reached the first difference, nothing changed.

The Impact of Microfinance Banks' Liabilities, Microfinance Bank Loans, and Microfinance Banks Deposits on Economic Growth

The first objective of this study is to investigate the effect of microfinance banks' liabilities on economic expansion in Nigeria. The second goal is to find out if microfinance bank loans have any bearing on economic expansion, and the third goal is to investigate the effect of microfinance banks' deposits on expansion. In this section, we give and debate the estimates for Objectives 1, 2, and 3. First, we provide the outcome of the cointegration test, and then we present and explain the regression results. A long-term link between the variables was demonstrated by means of a cointegration test. The results of a Johansen test for cointegration are presented in Table 3.

Table 3: Result of Johansen test for cointegration

Maximum Rank	Eigenvalue	Trace Statistics	5% critical value
0	-	88.6219	82.49
1	0.7025	54.6713*	59.46
2	0.6153	27.9208	39.89
3	0.3955	13.8232	24.31
4	0.3012	3.7862	12.53
5	0.1128	0.4323	3.84
6	0.01532		

Source: Author's computation

We found a single cointegrating equation by comparing the trace statistics to a crucial value of 5%. The rank 0 (first) trace statistic is the only one that exceeds the 5% threshold. Thus, it is reasonable to assume that there is a long-term connection between the factors affecting objectives 1, 2, and 3. In order to estimate the equation, the OLS method was employed. The data is presented in Table 4.

Table 4: Economic growth as influenced by microfinance banks' liabilities, loans, and deposits are estimated.

GDPG	Coefficients	Standard Errors	t-stat	P-value
LogMFBLIA	-5.5911	5.5728	-1.00	0.326
LogMFBLOAN	6.3526	5.9418	3.07	0.000
LogMFBDEP	1.0984	0.5085	2.16	0.044
LogGFCF	11.3358	3.3538	3.38	0.000
LogGXP	0.3091	0.5244	0.59	0.561
Constant	90.9593	73.3575	1.24	0.227
R-Squared	0.6273			
Adj. R-Squared	0.4872			
F(5, 24)	22.34 (0.0000)			
Durbin-Watson d-statistic (6, 30) =	2.4605			
Breusch-Godfrey LM chi	1.895 (0.1687)			

Source: Author's computation

A negative coefficient of -5.5911 and a t-value of -1.00 were observed for microfinance banks' liabilities. A rise in microfinance bank liabilities is directly correlated with a 5.59 percentage point decline in real GDP growth. In absolute terms, a t-value of -1.00 is greater than 2. Therefore, at the 5% significance level, we accept the null hypothesis that microfinance bank liabilities do not affect real GDP growth. The null hypothesis can be accepted with a 5% level of confidence due to the small probability value of 0.326.

The t-value for microfinance bank loans is 3.07, and the corresponding coefficient is 6.3526. Microfinance bank loans do not significantly affect GDP growth, yet the t-value is large enough to reject this null hypothesis. Because the p-value is less than 0.05, rejecting the null hypothesis with a 5% margin of error is not a huge deal. Therefore, microfinance bank loan significantly affects real GDP expansion. Real GDP growth is significantly boosted by 6.35% when microfinance bank loans are increased.

A t-value of 2.16 indicates that microfinance bank deposits are positive at 1.0984. The t-value is significant at the 5% level of probability. Therefore, at the 5% significance level, we reject the null hypothesis that microfinance bank loan has no effect on real GDP growth. In addition, the significance of the probability value of 0.044 lies in the fact that it is smaller than 0.05. This result confirms that the null hypothesis can be rejected with a 95% degree of confidence. Microfinance bank loan increases are associated with a 1.10 percent boost in real GDP growth, according to the study. Increases in gross fixed capital formation are associated with 11.34 percentage points more growth in real gross domestic product. Both the t-value and the p-value for the correlation between an increase in gross fixed capital formation and a rise in real GDP are significant at the 5% level. Therefore, at the 5% significance level, the null hypothesis that gross fixed capital production does not affect real GDP growth is rejected.

Spending by the government as a whole contributes positively and marginally to real GDP expansion. More specifically, every percentage point the government spends results in 0.31 percentage points more real GDP growth. The t-value of 0.59 is not statistically significant at the 5% level. As a result, we accept the null hypothesis that there is no relationship between real GDP and government aggregate spending. The probability value of 0.561 is too small to be statistically significant, thus there is little risk in adopting the null hypothesis at the 95% confidence level.

R2 is a statistical indicator of how much of the total variance in the dependent variable can be accounted for by the independent variables. R2 is calculated to be 0.6273. That suggests the model's independent variables might account for 62.73 percent of the variation in real GDP. Other variables not included in the regression model account for the remaining variation in the dependent variable. The probability of 22.34 (0.0000) is less than 0.05, making the F-statistics (5, 24) value noteworthy. This means that the model's variables have a considerable impact on real GDP growth when taken together. Using the Durbin-Watson statistic, we get a value of 2.4605. The model's variables don't exhibit any autocorrelation, as this value is close to 2 to the nearest whole number. The p-value for the Breusch-Godfrey LM chi2 test is 0.1687, and the value of the test is 1.895. Since the p-value is less than 5%, we accept the null hypothesis that there is no serial correlation.

Multicollinearity Test

To examine whether or not the variables are multicollinear, the variance inflation factor (VIF) test is used. The final tally is displayed in Table 5.

Table 5: Estimates of The Variance inflation factor (VIF) test for multicollinearity

Variable	VIF	1/VIF
LogMFBDEP	1.15	0.869565
LogMFBLIA	3.26	0.306748
LogMFBLOAN	2.13	0.469483
LogGXP	4.25	0.235294
LogGFCF	3.18	0.314465
Mean VIF	2.79	

Source: Computed by the researcher

Variable information fidelity (VIF) values are below 10 as seen in the table. If the VIF is less than 10, then multicollinearity is not present, and if it is larger than 10, then multicollinearity is present. We accept the null hypothesis of no multicollinearity because the VIF values of the variables are small. In other words, multicollinearity is not an issue due to the independence of the variables. The outcome of a Breusch-Pagan/Cook-Weisberg test for heteroskedasticity of the variables is also reported below.

Heteroskedasticity Test

To check if the variables are heteroskedastic, the Breusch-Pagan / Cook-Weisberg test is used. The final tally is displayed in Table 6.

Table 6: Estimates of Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Ho: Constant variance
chi2(1) = 6.90 Prob > chi2 = 0.1086

Source: Computed by the author

Since the p-value is insignificant (greater than 0.05), the null hypothesis that the independent variables have constant variance is accepted at the 5 per cent level. This means that the variables have no heteroskedasticity. That is, they are homoskedastic. They have constant variance.

Conclusion and Recommendations

Microfinance institutions' contribution to Nigeria's expanding economy has been studied. The results indicate that microfinance bank obligations negatively affect real GDP growth in Nigeria, although only slightly. It is also found that real GDP growth in Nigeria is positively and significantly impacted by microfinance bank loans. Deposits at microfinance banks are also a major factor in Nigeria's expanding economy. Investment at home is a major factor in GDP expansion. Although government spending is associated with higher GDP growth, this is not the case in Nigeria, where spending is either insufficient or misdirected.

The following policy recommendations are made:

i. The Central Bank of Nigeria (CBN) and other monetary authorities should exert more effort to guarantee that microfinance banks lend more money to the appropriate people and industries. Regarding this matter, we propose that the loans be primarily aimed at low-income groups in the household sector, as well as micro, small, and medium businesses in the commercial sector.
ii. Also, it is recommended that the none banking population should be encouraged to bank in microfinance banks. This will increase bank deposits. Also, the microfinance banks interest rate for deposits should be increased to encourage the increase in microfinance banks deposits.
iii. The microfinance banks should be monitored closely to ensure that the banks are not over burdened with liabilities besides banks deposits.

References

Akinadewo, I. S. (2020). Microfinance banks and growth of micro, small and medium enterprises in emerging economies: Evidence from Nigeria. *The Business and Management Review*, 11(2), 1 – 12.

Apere, O. T. (2016). The impact of microfinance banks on economic growth in Nigeria, *International Journal of Academic Research in Economics and Management Sciences*, 5(4), 53 – 61.

Araga, A. S., Sufian, J. B., Mac-Ozigbo, A. & Olusanya, S. O. (2022). Microfinance bank as a predictor of poverty alleviation and economic growth in Nigeria, *Lafia Journal of Economics and Management Sciences*, 7(2), 45 – 61.

Ayodele, A. E. & Arogundade, K. (2014). The impact of microfinance on economic growth in Nigeria, *Journal of Emerging Trends in Economics and Management Sciences*, 5(5), 53 – 67.

Babarinde, G. F., Abdulmajeed, T. I., Angyu, P. A. & Abu, P. J. (2022). Effect of microfinance banks on the economic growth of Nigeria: An empirical investigation, *Online Journal of Arts, Management and Social sciences*, 5(2), 55 – 68.

Bank of Industry (2023). *Bank of Industry microfinance bank*, Available at: https://www.boi.ng/our-subsidiaries/boi-micro-finance-bank/

Banto, J. M. & Monsia, A. F. (2020). *Microfinance institutions, banking, growth and transmission channel: A GMM panel data analysis from developing countries*, Available at: https://www.sciencedirect.com/science/article/pii/S1062976920300788

Central Bank of Nigeria – CBN (2020). *Guidelines for the regulation and supervision of microfinance banks in Nigeria*, Available at: https://www.cbn.gov.ng/out/2020/fprd/mfb%20regulation%20draft%20merged.pdf

Chugtai, M. S., Malik, M. W. & Rashid, A. (2015). Impact of major economic variables on the economic growth of Pakistan, *Journal of Emerging Trends in Economics and Management Sciences*, 11(2), 94 – 106.

Cole, A. A. & Akintola, A. F. (2021). Microfinance banks and economic growth of Nigeria (1999 – 2018). *International Journal of Scientific and Research Publications*, 11(3), 311 – 316.

Ekpenyong, O. B. & Nnamocha, P. N. (2019). The impact of microfinance institutions on economic growth in Nigeria, *(ACE) Acta Economical*, VXVII (3), 129 – 147.

Falade, O. O. (2022). Effects of microfinance bank services on the development of SMES in Nigeria, International *Journal of Management, Social Sciences, Peace and Conflict Studies (IJMSSPCS)*, 5(2), 27 – 37.

Gonji, P. B., Dapim, K. M. & Shodeinde, A. D. (2022). Micro-finance banks, nexus to Nigerian economic growth, *Discovery*, 58(316), 361 – 369.

Khalaf, L. S. & Saqfalhait, N. I. (2019). The effect of microfinance institutions' activities on economic growth in Arab countries, *Academy of Accounting and Financial Studies Journal*, 23(1), 139 – 157.

Lacalle-Calderon, M., Chasco, C., Alfonso-Gil, J. & Neira, I. (2015). A comparative analysis of the effect of aid and microfinance on growth, *Canadian Journal of Development Studies*, 36(1), 72 – 88.

Murad, A. B. & Idewele, I. E. O. (2017). the impact of a microfinance institution in the economic growth of a country: Nigeria in focus, *International Journal of Development and Management Review (INJODEMAR)*, 12(1), 1 – 17.

Obadire, A. M. (2022). Analysis of the impact of microfinancing on poverty alleviation in Nigeria. *Journal of Financial Risk Management*, 11, 648 – 657.

Ofeimun, G. O. (2020). Effect of microfinance banks financial inclusion strategies on the economic growth of Nigeria (2009-2018), *Noble International Journal of Economics and Financial Research*, 5(1), 14 – 23.

Otekunrin, A. O., Kenechukwu, O. P., Eluyela, D. F., John, O. N. & Ibrahim, A. (2022). Do microfinance banks' activities affect Nigeria's economic development*? Banks and Bank Systems, 17*(2), 1 – 12.

Onyele, K. O. & Onyekachi-Onyele, C. (2022). The effect of microfinance banks on poverty reduction in Nigeria, *Management Dynamics in Knowledge Economy*, 8(3), 257 – 275.

Teeboom, L. (2019). Role of microfinance institutions, *Hearst Newspaper*s. Available at: https://smallbusiness.chron.com/role-microfinance-institutions-13233.html

The Guardian (2022). Special focus on leading and value-driven microfinance banks growing SMEs in Nigeria, *The Guardian Publication*, Available at: https://guardian.ng/features/special-focus-on-leading-and-value-driven-microfinance-banks-growing-smes-in-nigeria.

Trading Economics (2023). Nigeria GDP annual growth rate. Available at: https://tradingeconomics.com/nigeria/gdp-growth-annual#:~:text=GDP%20Annual%20Growth%20Rate%20in,the%20second%20quarter%20of%202020.

Wachukwu, I. P., Onyema, J. I. & Amadi, S. N. (2019). Effects of microfinance banks and economic growth in Nigeria, *Journal of Finance and Marketing*, 3(1),15 – 19.

Wachukwu, I. P., Onyema, J. I. & Amadi, S. N. (2018). Effects of microfinance banks and economic growth in Nigeria, *Journal of Finance and Marketing*, 3(1),15 – 19.

World Bank (2017). *Nigeria's microfinance bank sector: review and recommendations. World Bank Group Finance and Markets*, Available at: https://openknowledge.worldbank.org/bitstream/handle/10986/31320/134708-WP-P160136-PUBLIC-15-2-2019-11-10-55-NigeriaMicrofinanceBankSectorReviewandRecommendations.pdf?sequence=1&isAllowed=y