MICROFINANCE BANKS AND ECONOMIC DEVELOPMENT IN NIGERIA

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Background: Microfinance banks play a crucial role in promoting economic growth and financial inclusion by offering credit and financial services to underserved populations. **Aims:** This study examines the relationships between Per Capita Income (PCI) and selected financial indicators, including Loans and Advances (LA), Deposit Liabilities (DL), Total Assets (TA), and Total Earnings (TE), to assess the contribution of microfinance banks to economic growth. **Methods:** Econometric techniques, including descriptive statistics, unit root tests, Johansen cointegration analysis, and the Fully Modified Ordinary Least Squares (FMOLS) model, are employed to examine both short- and long-term relationships among the variables. Sample: The dataset comprises quarterly financial records from microfinance banks, providing insights into the interaction between financial performance indicators and per capita income. **Results:** The cointegration analysis reveals no long-term equilibrium relationships. However, FMOLS results indicate that Loans and Advances and Total Assets have significant positive effects on Per Capita Income, while Deposit Liabilities and Total Earnings do not. **Conclusions:** Loans and Advances, along with Total Assets, are key drivers of per capita income growth in the microfinance sector. **Implications:** Policymakers should prioritise reforms to improve credit accessibility and asset management, fostering sustainable economic growth through microfinance institutions.

Keywords: Per Capita Income (PCI), Loans and Advances (LA), Total Assets (TA), Econometric Analysis, Microfinance Banks

JEL Classification: G21, E44, C22, O16, D53

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Introduction

The Nigerian economy is currently experiencing significant stagnation, characterised by a clear downturn in economic activity. This situation has raised considerable concern among economists and researchers. The economic challenges are multifaceted, encompassing business finance, rising poverty levels, high interest rates, declining living standards, increasing inflation rates, low per capita income, and a troubling surge in unemployment (Smith, 2023). However, understanding these complex issues requires a nuanced and detailed analysis.

Recent data highlights the gravity of the situation: Nigeria's poverty rate stands at a staggering 71%, based on the World Bank's benchmark of $3.20 a day, as reported by the Conversation Journal (2021). Additionally, about 56% of the national income is spent on food, reflecting the consequences of inadequate investment in productive sectors and limited access to affordable investible loans.

Economic development is often measured by per capita income, which is the ratio of gross domestic product (GDP) to the total population. In many African countries, including Nigeria, the problem arises from a population increase without a corresponding rise in GDP, leading to poor economic development (Okolo & Wen, 2023). Addressing this issue requires efforts to boost GDP in line with population growth. Therefore, this study aims to provide a detailed examination of Nigeria's economic development, with a specific focus on per capita income.

To address these economic challenges, this study proposes exploring microfinance as a potential solution. Microfinance, offered by microfinance banks, provides financial services, including loans and advances, to economically underserved households that lack access to formal financial institutions. While microfinance has shown positive contributions, it is crucial to recognise that it may not fully address broader systemic issues, and its impact can be context-dependent.

Current research on the relationship between microfinance and economic development in Nigeria is limited, with most studies focusing on economic growth, small-scale business, and entrepreneurial development. This study aims to fill this gap by critically examining the influence of microfinance banks on economic development in Nigeria. It will utilise comprehensive measures, including loans and advances, deposit liabilities, total assets, and earnings, as proxies for microfinance banks. Meanwhile, per capita income will serve as a proxy for economic development.

Despite certain limitations, including the need for a more focused examination of specific economic challenges and enhanced data precision, this study aims to offer valuable insights into the existing literature. By addressing these shortcomings, the research aspires to provide a deeper understanding of Nigeria's economic landscape and the potential effects of microfinance interventions.

Theoretical background

Microfinance banks (MFBs) have become pivotal institutions within Nigeria's economic framework, playing a substantial role in enhancing financial inclusion, alleviating poverty, and fostering economic growth. This literature review aims to provide a comprehensive evaluation of existing studies exploring the connection between microfinance banks and economic development. It assesses key indicators, including loans and advances, deposit liabilities, total assets, and earnings, in relation to per capita income, focusing on the period from 2013 to 2022.

The emergence of microfinance in Nigeria dates back to the early 2000s, coinciding with the establishment of microfinance banks as essential tools for advancing financial inclusion and combating poverty (Mia, 2022). These institutions were primarily established to provide financial services to underserved populations, particularly those in rural areas. Ogbonna (2022) contends that microfinance goes beyond offering financial services; it promotes a holistic approach to empowering individuals,

generating income, and stimulating economic development. The overarching goal is to create systems that uplift impoverished populations and contribute to broader economic well-being.

Chukwujindum (2023) highlights the evolution of microfinance, noting its expansion to offer credit, savings programs, insurance, and money transfers. This progression reflects the recognition that economically disadvantaged groups, often excluded from traditional banking systems, require a variety of financial products to improve their economic activities.

Lwesya and Mwakalobo (2023) observe that microfinance institutions have adapted to address the evolving needs of their clients. In addition to financial services, these institutions now offer supplementary resources, including savings accounts and training programs. This adaptability highlights the dynamic role of microfinance banks in meeting diverse client needs.

Microfinance banks play a critical role in providing loans and advances, a key service (Boman, Tijani & Orji, 2018). Their study emphasises that loans are vital for businesses to meet long-term needs, including capital investments and construction. Interest rates and collateral requirements have a significant impact on the economic benefits of these loans. Ekpenyong and Nnamocha (2019) assert that microfinance loans, often referred to as microcredits, drive job creation, self-sufficiency, and income growth. The impact of loans on economic development, particularly on per capita income, remains a subject of investigation, focusing on interest rates and collateral requirements. Nevertheless, these studies are limited by their failure to account for regional economic variations and loan default rates.

Deposit liabilities are fundamental to the financial stability of microfinance banks. Beyond facilitating transactions, deposits help build trust and promote financial inclusion (Aladejebi, 2019). Aladejebi (2019) argues that deposit services enhance financial literacy, enabling individuals to make more informed financial decisions. Nwajei, Oziwele, and Agbogun (2023) assert that deposit liabilities reflect community confidence in microfinance banks. Analysing the influence of deposit liabilities on economic development offers insights into the resilience of the financial ecosystem. However, existing research does not sufficiently examine the risks linked to deposit liabilities, such as liquidity constraints and depositor confidence during economic downturns.

Total assets include both tangible and intangible properties owned by microfinance banks. Ochonogor (2022) states that the composition of total assets, such as physical infrastructure and intellectual property, reflects the overall health and capacity of microfinance institutions. Investing these assets in productive ventures supports economic development. Nisa, Rita & Chalid (2022) emphasise that the size and structure of total assets affect the range and quality of financial services offered by microfinance banks. A detailed evaluation of total assets provides a deeper understanding of their role in driving economic growth. However, existing studies often overlook the challenges related to asset liquidity and the ability to quickly convert assets into productive investments.

Earnings represent a crucial indicator of the financial strength of microfinance banks. Godfrey (2022) defines earnings as income generated through daily deposits and commercial operations. Efficient utilisation of earnings supports the sustainability of microfinance institutions, enhancing economic development in the communities they serve. Hadidi (2021) highlights that effective use of earnings can accelerate poverty alleviation efforts. Examining earnings as a measure of economic impact sheds light on the financial strategies adopted by microfinance institutions and their alignment with broader economic goals. Nevertheless, the potential for earnings volatility and external economic fluctuations poses challenges to earnings stability.

Ahamad, Al-Jaifi, and Ehigiamusoe (2023) explored the role of intellectual capital (IC) in enhancing the financial and social efficiency of microfinance institutions (MFIs). Using a truncated regression model and Data Envelopment Analysis (DEA), along with the Tobit model and Generalized Method of Moments (GMM), they analysed panel data from 661 MFIs in 86 countries between 2010 and 2018. Their findings indicate that MFIs generally exhibited greater financial efficiency than social efficiency. Institutions with higher intellectual capital demonstrated superior financial efficiency.

However, the study underscores the need for localised research to capture better the diverse challenges and contexts faced by MFIs across regions.

The literature revealed the critical role of microfinance banks as catalysts for economic development. Nonetheless, gaps persist in understanding regional disparities, liquidity risks, and the long-term sustainability of microfinance banks, emphasising the need for more localised and comprehensive studies.

Methodology

This research employed an ex-post facto survey design, selected to control for variables affecting economic development, with a specific focus on microfinance bank indices in Nigeria. The study covered an eleven-year period from 2013 to 2022, capturing all microfinance activities since the establishment of microfinance banks in 2013. The sample included various microfinance banks, assessing measures such as loans and advances, deposit liabilities, total assets, earnings, and per capita income. This period was chosen due to the increase in microfinance activities and a concurrent decline in economic development. Purposive sampling was used to deliberately select relevant data, and secondary data were obtained from the statistical bulletins of the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS) for the years 2013 to 2022.

Model Specification

Based on the theoretical framework of this study and the submission of Ogbonna (2022), the model for this study is presented thus:

$PCI = f(LA, DL, TA, TE)$ ..... (1)

$PCI = \beta_0 + \beta_1 LA + \beta_2 DL + \beta_3 TA + \beta_4 TE + \mu_1$ ..... (2)

PCI = Per Capital Income (dependent variable). It serves as a proxy for economic development.

LA = Loans and advances of microfinance bank (Independent variable). It serves as a proxy for microfinance banks.

DL = Deposit Liabilities of microfinance bank (independent variable). It serves as a proxy for microfinance banks.

TA = Total assets of microfinance banks in Nigeria (Independent variable). It serves as a proxy for microfinance banks.

Table 1: Description of Variables

S/N	Variables	Meaning	Description	Source
1	PCI	Per Capital Income	This ratio of gross domestic product to population.	NBS
2	LA	Loan and Advances	Additions of loans and advances by microfinance banks in a year.	CBN
3	DL	Deposit Liabilities	Total deposits held by microfinance banks in a year	CBN
4	TA	Total Assets	Total assets, in terms of fixed and non-fixed assets held by microfinance banks in a year.	CBN
5	TE	Total Earnings	This is the profit after tax made by microfinance banks in a year.	CBN

Source: Authors compilation (2024)

Results

This section presents the results of statistical analyses conducted on the key variables, including descriptive statistics, unit root tests, cointegration analysis, and findings from the Fully Modified Ordinary Least Squares (FMOLS) model. The objective is to interpret the findings in relation to the research goals and relevant literature, offering insights into how variables such as Per Capita Income, Loans and Advances, Deposit Liabilities, Total Assets, and Total Earnings interact within the context of microfinance banks.

Table 2: Descriptive Analysis

	PCI	LA	DL	TA	TE
Mean	2.196669	2.197068	2.395910	2.682681	2.314355
Median	2.185697	2.149418	2.401801	2.783960	2.311033
Maximum	2.323396	2.360101	2.469130	2.930496	2.343468
Minimum	2.021231	2.038342	2.303628	2.306318	2.282441
Std. Dev.	0.107389	0.110837	0.054178	0.246338	0.020786
Skewness	-0.104998	0.234048	-0.233154	-0.436823	0.076407
Kurtosis	1.564169	1.530744	1.727334	1.522380	1.670743
Jarque-Bera	3.509515	3.963047	3.061869	4.911031	2.983793
Probability	0.172949	0.137859	0.216333	0.085819	0.224946
Sum	87.86675	87.88272	95.83640	107.3072	92.57419
Sum Sq. Dev.	0.449764	0.479107	0.114476	2.366618	0.016850
Observations	40	40	40	40	40

Source: Authors Compilation (2024)

The descriptive statistics provide a summary of the distribution for five variables: PCI (Per Capita Income), LA (Loans and Advances of microfinance banks), DL (Deposit Liabilities of microfinance banks), TA (Total Assets of microfinance banks), and TE (Total Earnings of microfinance banks) based on 40 observations. Key measures include the mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and the Jarque-Bera test.

The means of the variables are quite similar, with PCI (2.197), LA (2.197), DL (2.396), TA (2.683), and TE (2.314). The median values are also close to the means, indicating that the data is largely symmetric, with minor deviations observed in LA and TA. The range (difference between the maximum and minimum values) is relatively narrow across all variables, suggesting limited variability in the data. TA has the highest maximum value (2.930), while DL records the lowest minimum (2.304).

Standard deviation reflects the spread of the data. TA has the highest standard deviation (0.246), showing greater variability, whereas TE has the lowest (0.021), indicating very little spread in the data. Skewness measures the asymmetry of the distribution. PCI (-0.105), DL (-0.233), and TA (-0.437) are slightly negatively skewed, indicating longer tails to the left, while LA (0.234) and TE (0.076) are slightly positively skewed, indicating rightward tails. Kurtosis gives insight into the "tailedness" of the distribution. All variables have kurtosis values below 3, indicating flatter distributions than the normal curve (platykurtic). The Jarque-Bera test, applied to assess normality, reports p-values greater than 0.05 for all variables. This indicates that the null hypothesis of normality cannot be rejected at the 5% significance level, implying that the data does not significantly deviate from a normal distribution. Additional details such as the sum and sum of squared deviations, highlight the overall totals and variance. TA has the largest cumulative value (107.31), while TE has the smallest sum of squared deviations (0.017), indicating low variability around its mean.

The descriptive analysis indicates that the variables are generally symmetric with minimal skewness and no significant deviations from normality. The variability is moderate, with TA showing the highest spread. The Jarque-Bera test results support the use of parametric methods for further analysis, as the data follows a normal distribution.

Unit Root Test

Table 3: Augmented Dickey-Fuller (ADF) Unit root test

Variables	**Level**	**First Difference**	**Order of Integration**
	Constant	**Constant**	
PCI	-2.9389	-2.9411*	I(I)
LA	-2.9389	-2.9411*	I(I)
DL	-2.9484	-2.9484*	I(I)
TA	-2.9389	-2.9604*	I(I)
TE	-2.9484	-2.9484*	I(I)

Note: *P< 0.01, **P < 0.05 **Source: (Author's Compilation 2024)**

The table presents the results of the Augmented Dickey-Fuller (ADF) unit root test, which was used to assess the stationarity of the variables: PCI (Per Capita Income), LA (Loans and Advances of

microfinance banks), DL (Deposit Liabilities of microfinance banks), TA (Total Assets of microfinance banks), and TE (Total Earnings of microfinance banks). The test was conducted at both the level and first difference, incorporating a constant term in the model.

Interpretation of Results

The results indicate that all variables (PCI, LA, DL, TA, and TE) are non-stationary in their levels, as the ADF test statistics do not exceed the critical values at standard significance thresholds. However, after the first differencing, all variables become stationary, with ADF test statistics at the first difference level being significant at the 1% level ($p < 0.01$). This suggests that each variable is integrated of order one, I(1), meaning they achieve stationarity after first differencing.

None of the variables are integrated of order two, I(2), indicating that further differencing is unnecessary. As a result, the Johansen Cointegration test and Fully Modified Ordinary Least Squares (FMOLS) can be confidently applied, as the variables meet the requirement of being integrated in the same order, I(1), reducing the risk of spurious results.

Table 4: Johansen Cointegration Test Results

Test	Hypothesised No. of CE(s)	Eigenvalue	Statistic	Critical Value (0.05)
Unrestricted Cointegration Rank Test (Trace)				
None	0.328398	39.81937	69.81889	0.9503
At most 1	0.307470	24.69197	47.85613	0.9266
At most 2	0.155765	10.73062	29.79707	0.9673
At most 3	0.086395	4.296293	15.49471	0.8782
At most 4	0.022447	0.862717	3.841466	0.3530
Trace test conclusion				
Result	No cointegration at 0.05 level			
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
None	0.328398	15.12740	33.87687	0.9736
At most 1	0.307470	13.96135	27.58434	0.8253
At most 2	0.155765	6.434324	21.13162	0.9727
At most 3	0.086395	3.433577	14.26460	0.9137
At most 4	0.022447	0.862717	3.841466	0.3530
None	0.328398	15.12740	33.87687	0.9736
Max-eigenvalue test conclusion				
Result	No cointegration at 0.05 level			

Source: Author's Compilation (2024)

Notes: Trace test and Maximum eigenvalue test indicate no cointegration at the 5% significance level.

The Johansen cointegration test was conducted to examine the long-term relationship between the variables PCI (Per Capita Income), LA (Loans and Advances of microfinance banks), DL (Deposit Liabilities of microfinance banks), TA (Total Assets of microfinance banks), and TE (Total Earnings of microfinance banks). The test was carried out using both the trace and maximum eigenvalue statistics, with the results presented below.

Unrestricted Cointegration Rank Test (Trace)

The trace test evaluates the null hypothesis of no cointegration between the variables. The test statistics for the hypothesised number of co-integrating equations are compared against the critical values at the 5% significance level:

None shows that the trace statistic (39.819) is less than the critical value (69.818), with a probability of 0.9503. This indicates no evidence of cointegration.

At most 1 shows that the trace statistic (24.691) is below the critical value (47.856), with a probability of 0.9266.

At most 2 shows that the trace statistic (10.731) is below the critical value (29.797), with a probability of 0.9673.

At most 3 shows that the trace statistic (4.296) is below the critical value (15.494), with a probability of 0.8782.

At most 4 shows that the trace statistic (0.863) is below the critical value (3.841), with a probability of 0.3530.

Based on the trace test results, there is no evidence of cointegration at the 5% significance level, suggesting no long-term relationship between the variables.

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

The maximum eigenvalue test also evaluates the null hypothesis of no cointegration between the variables. The test compares the largest eigenvalue statistic with the critical value:

None: The maximum eigenvalue statistic (15.127) is below the critical value (33.877), with a probability of 0.9736.

At most 1: The maximum eigenvalue statistic (13.961) is below the critical value (27.584), with a probability of 0.8253.

At most 2: The maximum eigenvalue statistic (6.434) is below the critical value (21.132), with a probability of 0.9727.

At most 3: The maximum eigenvalue statistic (3.434) is below the critical value (14.265), with a probability of 0.9137.

At most 4: The maximum eigenvalue statistic (0.863) is below the critical value (3.841), with a probability of 0.3530.

The maximum eigenvalue test also indicates no cointegration at the 5% significance level.

The result revealed that both the trace and maximum eigenvalue tests have no cointegration among the variables at the 5% significance level. This implies that there is no long-term equilibrium relationship between PCI, LA, DL, TA, and TE during the study period.

Table 5: Fully Modified Ordinary Least Squares (FMOLS) Results

Dependent Variable: PCI				
Method			Fully Modified Least Squares (FMOLS)	
Sample (adjusted)			$2013Q^2$ - $2022Q^4$	
Included observations			39	
Long-run covariance estimate			Bartlett kernel, Newey-West fixed bandwidth = 4	
Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LA	0.497509	0.062062	8.016299	0.0000
DL	0.406226	0.337079	1.205135	0.2362
TA	0.131323	0.040107	3.274300	0.0024
TE	-0.096701	0.274087	-0.352811	0.7263
Model Summary				

Statistic	Value
R-squared	0.986668
Adjusted R-squared	0.985526
S.E. of regression	0.012621
Mean dependent var	2.201167
S.D. dependent var	0.104905
Sum squared resid	0.005575
Long-run variance	0.000198

Source: Author's Compilation (2024)

The fully modified OLS results show that LA (Loans and Advances) has a statistically significant positive impact on PCI (Per Capita Income) at the 1% level, with a coefficient of 0.4975. TA (Total Assets) also has a significant positive impact on PCI, with a coefficient of 0.1313. However, DL (Deposit Liabilities) and TE (Total Earnings) do not have significant effects on PCI, as indicated by their higher p-values (0.2362 and 0.7263, respectively).

The high R-squared (0.9867) and adjusted R-squared (0.9855) suggest that the model explains a large proportion of the variance in PCI. The model appears to be a good fit for the data, given the low standard error of the regression (0.0126).

Discussion

The results of this study are consistent with prior research, which highlights the stability and predictability of performance indicators in microfinance banks. For instance, Berger and Humphrey (1991) emphasise the role of firm size in improving technical efficiency, which aligns with the consistency observed in the mean and median values of the variables analysed. The limited variation, reflected in the narrow range of values and low standard deviations, supports previous findings that microfinance banks operate within stable financial parameters (Cummins & Weiss, 2009). Furthermore, Ochonogor (2020) notes slight deviations in Loan Assets (LA) and Total Assets (TA), which suggest asymmetric patterns, reinforcing earlier research that points to growth disparities in asset accumulation and lending practices among microfinance banks.

The descriptive statistics offer a comprehensive view of the distribution patterns for five variables: PCI (Per Capita Income), LA (Loans and Advances of microfinance banks), DL (Deposit Liabilities of microfinance banks), TA (Total Assets of microfinance banks), and TE (Total Earnings of microfinance banks). These variables were evaluated across 40 observations, with key measures including the mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and the Jarque-Bera test.

The mean values across the variables are quite consistent, with PCI and LA both averaging around 2.197, DL at 2.396, TA at 2.683, and TE at 2.314. The median values closely align with the means, indicating a near-symmetric distribution. However, LA and TA show slight deviations, suggesting some asymmetry in these variables.

The range of values is relatively narrow, with TA showing the highest maximum of 2.930 and DL recording the lowest minimum of 2.304. This narrow range across all variables suggests limited variation within the data set.

In terms of data dispersion, TA (Total Assets) exhibits the highest standard deviation, at 0.246, indicating the greatest variability, whereas TE (Total Earnings) has the lowest standard deviation, at 0.021, meaning its values are closely clustered around the mean.

Skewness values reveal how the data is distributed relative to the mean. PCI (-0.105), DL (-0.233), and TA (-0.437) exhibit slight negative skewness, indicating that their distributions have longer tails to the left. On the other hand, LA (0.234) and TE (0.076) display positive skewness, with tails extending to the right. Despite these differences, the skewness values are close to zero, indicating mild asymmetry in the distributions.

All variables exhibit kurtosis values below 3, indicating that their distributions are flatter than the normal curve (platykurtic). This indicates that the data has thinner tails and fewer outliers compared to a normal distribution.

The Jarque-Bera test, which assesses the normality of the data, shows p-values greater than 0.05 for all variables. This indicates that the null hypothesis of normality cannot be rejected, implying the data does not significantly deviate from a normal distribution. The descriptive statistics indicate that the variables are predominantly symmetric, with minimal skewness and no significant deviation from normality. TA shows the greatest variability among the variables. Based on the Jarque-Bera test results, parametric methods are appropriate for further analysis, as the data adheres to normality assumptions.

Conclusion

The descriptive analysis and econometric tests conducted on the variables of Per Capita Income (PCI), Loans and Advances (LA), Deposit Liabilities (DL), Total Assets (TA), and Total Earnings (TE) of microfinance banks revealed several important insights. The descriptive statistics show that the variables are relatively symmetric, with minimal skewness and no significant deviations from normality, as confirmed by the Jarque-Bera test results. However, TA exhibited the highest variability among the variables.

The Augmented Dickey-Fuller (ADF) unit root test results indicate that all the variables are non-stationary at their levels but become stationary after first differencing, meaning they are integrated of order one, I(1). This finding supports the application of further cointegration and regression analyses.

Despite testing for cointegration using the Johansen cointegration test, both the trace and maximum eigenvalue tests showed no evidence of a long-term relationship between the variables at the 5% significance level. This implies that there is no long-term equilibrium connection among PCI, LA, DL, TA, and TE during the period under study.

The Fully Modified OLS (FMOLS) results indicate that LA and TA have a significant positive impact on PCI. The coefficients of LA (0.4975) and TA (0.1313) indicate that an increase in loans and advances, as well as total assets, of microfinance banks can positively influence per capita income. However, DL and TE do not significantly affect PCI in the same way. The high R-squared value (0.9867) indicates that the model explains most of the variability in PCI.

Since the FMOLS results indicate that LA (Loans and Advances) has a significant impact on PCI, microfinance banks should prioritise expanding their loan portfolios, as this is likely to enhance the country's per capita income. Given the significant positive relationship between Total Assets (TA) and PCI, microfinance banks should aim to expand their asset base. Investments in productive assets could further strengthen their ability to impact economic growth and enhance per capita income. Policymakers should continue to support the growth of microfinance institutions, particularly in areas such as asset expansion and loan distribution, as these factors directly influence economic welfare, as measured by per capita income.

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References

Abebe, A., & Kegne, M. (2023). The role of microfinance institutions on women's entrepreneurship development. Journal of Innovation and Entrepreneurship, 12(17), 1-24.

Adegbami, A., & Uche, C. I. (2016). Poverty and crimes in Nigeria: Indices of governance failure. Public Administration Research, 5(1), 37-44.

Ahamad, R., Al-Jaifi, H. A., & Ehigiamusoe, K. U. (2023). The influence of intellectual capital on the efficiency of microfinance institutions: Evidence from a cross-country analysis. Journal of Financial Research, 45(2), 210–229. https://doi.org/10.1016/j.jfineco.2023.02.015

Aladejebi, O. (2019). The impact of microfinance banks on the growth of small and medium enterprises in Lagos metropolis. European Journal of Sustainable Development, 8(3), 261-274.

Babarinde, J. F., Abdulmajeed, T. I., Angyu, P. A., & Abu, P. J. (2021). 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.

Berger, A. N., & Humphrey, D. B. (1991). The dominance of market structure and its consequences for efficiency in the financial services industry. The Journal of Financial Services Research, 5(2), 65–106. https://doi.org/10.1007/BF00121291

Boman, A., Tijani, A., & Orji, A. (2018). The impact of loans and advances on economic development: Evidence from Nigeria's microfinance sector. International Journal of Financial Studies, 6(4), 90–108. https://doi.org/10.3390/ijfs6040090

Chukwujindum, F. (2023). Expanding financial inclusion through microfinance services: A case study of Nigeria. Economic Development Journal, 11(1), 45–59.

Cummins, J. D., & Weiss, M. A. (2009). Convergence of insurance and financial markets: Hybrid and securitised risk-transfer products. Journal of Risk and Insurance, 76(3), 493–530. https://doi.org/10.1111/j.1539-6975.2009.01317.

Ekpenyong, O. B., & Nnamocha, P. N. (2019). The impact of microfinance institutions on economic growth in Nigeria. Acta Economica, XVII (1), 129-147.

Godfrey, R. (2022). Earnings as a sustainability driver for microfinance institutions: Evidence from Nigeria. Journal of Development Finance, 18(4), 305–319.

Hadidi, T. (2021). Earnings utilisation and poverty alleviation through microfinance institutions. Journal of Finance and Economics, 16(3), 223–237.

Lwesya, F., & Mwakalobo, A. (2023). Adaptability of microfinance institutions to evolving client needs: A Tanzanian perspective. African Journal of Economic Studies, 14(1), 178–195.

Mia, K. (2022). The role of microfinance in Nigeria's economic development: An assessment of financial inclusion and poverty alleviation strategies. Journal of African Finance, 10(2), 90–105.

Murad, A. B., & Idewele, I. E. O. (2017). The impact of microfinance institution in economic growth of a country: Nigeria in focus. International Journal of Development and Management Review, 12(1), 34-43.

Nisa, R., Rita, O., & Chalid, M. (2022). Evaluating the role of total assets in microfinance bank operations. International Journal of Financial Economics, 15(4), 200–214.

Nwajei, E., Oziwele, A., & Agbogun, R. (2023). Deposit liabilities and financial ecosystem resilience: Insights from Nigeria's microfinance banks. Journal of Banking and Finance, 20(1), 58–75.

Ochonogor, J. (2022). Total assets and economic development: Assessing microfinance banks' contributions in Nigeria. African Finance Review, 19(3), 215–230.

Ochonogor, H. M. (2020). Microfinance institutions and economic development in Nigeria. NDIC Quarterly, 35(1). Nigeria Deposit Insurance Corporation.

Ogbonna, M. (2022). Holistic approaches to poverty alleviation through microfinance services: Evidence from Nigeria. Journal of Development Economics, 17(2), 134–1

Ugochukwu, O. G., & Onochie, J. K. (2017). Impact of microfinance banks on developing economies– Evidence from Nigeria. Journal of Economics, Finance and Management Studies, 5(4), 1147-1158.