Microcredit as a Strategy for Nigeria's Economic Recovery in Post Covid-19 Pandemic Era

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The economic growth recovery in Nigeria's post COVID-19 era should not only be the concern of government or top individuals in the society, but should also be the concern of individuals from below. The small producers could only be integrated into the key concerns of national economic recovery through microcredit. This study investigated the effect of microfinance bank's loan (used as a proxy for microcredit) on Banks' contributions to real GDP (used as a measure of economic growth) in Nigeria, with a focus on the quarterly aggregate data of all the MFBs operating in Nigeria as at 2011 to 2023, to serve as the basis for determining the effectiveness of microcredit as a strategy for Nigeria's economic growth recovery in post COVID-19 era. Ex-post facto research design was employed and secondary data were used. Autoregressive Distributed Lag (ARDL) long run form and bound test technique was adopted for data analysis/test of hypothesis. Results revealed a positive and non-significant effect of microfinance bank loans on banks contributions to GDP in Nigeria. This implied that microcredit could serve as a stimulant for Nigeria's growth

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recovery in post covid-19 era, in the long run. The study recommended the strengthening of the implementation capacity of already existed intervention programmes and schemes targeting the provision of credits to the poor and small producers in Nigeria, by the CBN. The recommendation above could be actionable through the creation of additional sensitization programmes by the CBN through microfinance banks, regarding such programmes. Also, strict penalty should be given to any MFB that default compliance to those programmes.

1. INTRODUCTION

The great concern of most developing nations including Nigeria, in post COVID-19 era, has been on how to recover the growth of the economy from 2020 COVID-19 pandemic-induced recession. According to Schumpeter (1934) as cited by Nwakanma, Nnamdi and Omojefe [1], "spontaneous and rapid growth of nations could only come from innovative entrepreneurship, made possible by the banking system's capacity to provide credit for the entrepreneurship". "Crucial to the economic growth of a country is the appropriate recognition of various economic strata of the country's citizens, including the active poor. Hence the need to also channel finance to the productive economic units in the low end of the nation's socio-economic strata. 'Active poor' could simply be referred to as the poor economically active population. While the poor are globally described as people whose basic earnings are below the minimum wages and whose sources of income are inadequate to finance their essential needs of food, shelter and clothing" [2,3] argued that "robust economic growth cannot be achieved without putting in place well focused programmes that increase access of poor and low-income earners to factors of production, especially credit".

"In recognition of the fact that skilled, but poor unbanked entrepreneurs in Nigeria, could gain entrance into the key concerns of national economic growth through the help of microcredit (small loan), successive government in Nigeria have over the years, initiated programmes aimed at providing microcredit to the unbanked and the active poor. Notably among these programmes are National Directorate of Employment (NDE), Agricultural Development Programs (ADPs) and Better Life for Rural Dwellers, which was subsequently called Family Support Programmes. The above programmes were subsequently scrapped because of several challenges that deviated them from achieving their set objectives" [4]. "Other establishments like rural banking scheme (1977-1990), People's Bank (1987-1990), Community Bank (1990-2007) have also attempted rendering micro-credit services to the citizens" [5]. Microcredit is referred to as small loans by relevant microfinance institutions, to low-income individuals or small businesses, who may not be able to access credit facilities from conventional financial institutions due to high transaction/operational cost, high risk involved in extending credit to them, as well as holding little or no tangible assets as collateral for credit, to aid them start up a business or expand the existing businesses. Presently, the provision of microcredit could be done by Non-Governmental Organization (NGO), informal moneylenders, friends, relatives, cooperative societies, credit unions and microfinance banks. But within the scope of this study, the provision of microcredit is the sole responsibility of microfinance banks under the supervision and regulation of CBN, hence microcredit is measured with microfinance banks' loan.

"Microfinance bank was established in Nigeria with the introduction of microfinance policy, regulatory and supervisory framework for Nigeria on December 2005, by the CBN. One of the major purposes for the establishment of microfinance banks is to provide veritable avenues for the administration of the micro credit programmes of government and high net worth individuals on a non-recourse case basis" [3]. Most of these programmes have their main objectives in providing small loans to small entrepreneurs and the active poor, to aid them alleviate from poverty, create employment (by establishment of new businesses or expanding the existing ones) as well as facilitate their positive contribution to the country's GDP. Furtherance to the need for expansion of financial infrastructure of the country, to meet the financial requirement of the micro, small and Medium Enterprises (MSMEs), the 2005 microfinance policy was revised in 2011 to bring the existing informal institutions within the supervisory purview of the CBN. As part of

National Financial Inclusion Strategy launched by CBN in 2012, ₦220 billion was earmarked by CBN for lending to MSMEs with 60% to women empowerment through rural microcredits [6,7].

In view of all the efforts in utilising microloan to create economic growth from below, there has been persistent public outcry regarding the challenges the microfinance bank loan has brought to small entrepreneur, active poor, microfinance banks and the economy as a whole. To many people, microloan has led to expansion of non performing loan in Nigeria's MFBs as the fund lend to the borrowers are being expended on consumption spending, instead of spending it on the reasons it was given, which would encourage self employment and enhance economic growth. The borrowers usually find it difficult to repay the loan since they may not have steady income sources. According to Arabi and Meisami [8], the poor can only be empowered by microfinance, where the low-income earners are appropriately recognized, and the micro loans utilized for job creation. On the other hand, some people maintained that economic growth has not been adequately created by the active poor because, small business in Nigeria are still constrained of fund to purchase critical inputs that enhances productivity. Omorede [9] attributed the failure of the microfinance schemes initiated by the government to gross mismanagement and corruption by erstwhile leaders. While others viewed inadequate awareness of the existence of the scheme as the reason for inability of microcredit to improve economic growth in Nigeria. Beside the points raised above, most of the studies conducted on microfinance banks credits and economic growth in Nigeria, that focused on banking sector, used total real GDP [10-13] as proxy for economic growth, ignoring the fact that banks' contribution to real GDP would generate more objective results than the total real GDP from all the sectors of the economy.

In view of the above issues, three critical questions arose, since Nigeria's economic recovery has in post COVID-19 era, progressed at a slower rate as the year-on-year growth rate of the economy rose to 3.4% in 2021, from -1.9% in 2020 (NBS as cited in FSR, 2021) which has reduced to 3.10% in 2022 (NBS, 2022). The critical questions now are how Nigeria's economic growth recovery could quickly be attained in post COVID-19 era? Whether the microloan provided to people in the lower pyramid of the society could serve as a strategy for a macroeconomic concern like national economic growth recovery in post pandemic era? And how the aforesaid gap from the previous studies could be bridged? Hence, the need for this study that made a difference in methodology by using banks contribution to real GDP as proxy to Nigeria's economic growth recovery through microcredit. Therefore, this study specifically aimed at assessing the effect of microfinance bank's loan (used as a proxy for microcredit) on Banks' contributions to real GDP (used as a measure of economic growth) in Nigeria, with a focus on the quarterly aggregate data of all the MFBs operating in Nigeria as at 2011 to 2023, to serve as the basis for determining the effectiveness of microcredit as a strategy for Nigeria's economic growth recovery in post COVID-19 era. To achieve the objective above, the hypothesis below was formulated:

> **Ho:** There is no positive effect of microfinance bank's loan on Banks' contributions to real GDP in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 An overview of microcredit in Nigeria

Microcredit is that part of microfinance that specifically involves the provision of small loans by relevant microfinance institutions, to low-income individuals or small businesses, who may not be able to access credit facilities from conventional financial institutions due to high transaction/operational cost, high risk involved in extending credit to them, as well as holding little or no tangible assets as collateral for credit, to aid them start up a business or expand the existing businesses. The small loan does not require the provision of an asset-based collateral from the borrowers, though it usually attracts very little interest. Agene [14] referred micro credit as a small credit facility offered to a micro entrepreneur or group of micro-entrepreneurs by a relevant finance institution often without a charge on any preferred security, but predicated on anticipated streams of cash inflows. Microfinance on the other hand deals with the provision of more financial services like mobilisation of small savings for intermediation, provision of micro lease, insurance, funds transfer/payment services, in addition to the provision of microcredit facilities to small producers.

"The conception of microcredit is not new in Nigeria. Government has in the past, initiated a series of publicly-financed micro/rural credit programmes and policies targeted at the poor. Notable among such programmes were the sectoral allocation of credits, Rural Banking Programme, a concessionary interest rate, and the Agricultural Credit Guarantee Scheme (ACGS). Other institutional arrangements were the establishment of the Nigerian Agricultural and Co-operative Bank Limited (NACB), the Peoples Bank of Nigeria (PBN), the Community Banks (CBs), the National Directorate of Employment (NDE), the Nigerian Agricultural Insurance Corporation (NAIC), and the Family Economic Advancement Programme (FEAP). In 2000, Government merged the NACB with the PBN and FEAP to form the Nigerian Agricultural Cooperative and Rural Development Bank Limited (NACRDB) to enhance the provision of finance to the agricultural sector" [5]. National Poverty Eradication Programme (NAPEP), which has the mandate of providing financial services to alleviate poverty was also created by the government. These schemes were confronted with challenges and some were scrapped, hence the emergency of microfinance bank as a medium for the provision of microcredit (termed microfinance bank's loan) to the poor and small producers in the economy, to aid them establish new businesses or expand the existing ones for sustainable economic growth.

2.1.2 Microfinance Bank in Nigeria

"Private sector-driven microfinance bank was established in Nigeria with the introduction of microfinance policy, regulatory and supervisory framework for Nigeria on December, 2005. Two categories of microfinance banks were recognised by the policy, including Micro Finance Banks (MFBs) licensed to operate as a unit bank (Community Banks) and Micro Finance Banks (MFBs) licensed to operate in a state. Microfinance Banks licensed to operate as a unit bank are required to obtain a minimum paid-up capital of N20 million and also operate branches and/or cash centres; while a Microfinance Banks licensed to operate in a State shall require a minimum paid-up capital of N1.0 billion and shall operate multiple branches within a State, subject to satisfactory prudential requirements and availability of free funds for branch expansion" [3]. "The existing community banks were required to transform to Microfinance Banks within 24 months of approval of the microfinance policy, by increasing their shareholders' funds unimpaired

by losses to a minimum of N20.0 million" [3]. The existence of credit-only, membership-based microfinance institutions (NGOs-MFIs) which shall not be required to come under the supervisory purview of the Central Bank of Nigeria, are also recognised by the CBN microfinance policy. Such institutions are required to engage in the provision of micro credits to their targeted population and not to mobilize deposits from the general public. Furthermore, any community bank which does not meet the new capital requirement within the stipulated period shall cease to operate as a community bank.

According to CBN [3], "one of the major purposes of establishing microfinance banks are to provide veritable avenues for the administration of the micro credit programmes of government and high net worth individuals on a non-recourse case basis. Microfinance banks can be established by individuals, groups of individuals, community development associations, private corporate entities, or foreign investors. No individual, group of individuals, their proxies or corporate entities, and/or their subsidiaries, would establish more than one MFB under a different or disguised name".

In 2011, the microfinance policy was revised to bring the existing informal institutions within the supervisory purview of the CBN that is aimed to enhance monetary stability, and expand the financial infrastructure of the country to meet the financial requirement of the micro, small and Medium Enterprises (MSMEs).

Credit facilities of microfinance banks in Nigeria involves micro loans which are offered by micro finance banks to individuals, small and medium scale enterprises (SMEs), who have no other access to financial services. Micro loans currently range from 15,000 to 5,000,000 with an interest rate of 5% to 15%. Before granting this loan; microfinance banks analyze the client's willingness and ability pay. They carry out survey to gather information not only from the client but also from people who know them. Depending on the amount, the criteria are relatively simple, for a huge amount, the client is to show proof of track of records and must have made repayments on small loans. Some documents required for getting a microfinance loan include: updated application form, copy of passport, bank statement for the past six months, track of records of repayments, proof of office address. Some of the advantages of microfinance loan

include; collateral free loans, disburse quick loan under urgency, help individuals meet their financial needs and also provides an extensive portfolio of loans. Micro finance loan offered by microfinance banks provide the stimulus for economic growth.

2.1.3 Nigeria's economic growth / recession in post-COVID-19 era

Generally, an economy is said to have grown, when there is rise in the country's capacity to produce goods and services, compared from one period to another. This definition of economic growth above places GDP as the best measure of economic growth. According to Ozoji and Ezechukwu [15] GDP refers to the monetary value of all goods and services produced within a nation's geographic borders over a specified period of time. It can be measured in real (inflation adjusted GDP) or nominal (non-inflation adjusted GDP) terms, but the measurement of GDP in real term is seen as the best measure of a nation's economic growth, since it controls for inflation, reflecting more accurately the actual economic growth [15]. Otherwise, a decline in the value of money could raise GDP without any extra-economic production.

The era of COVID–19 in Nigeria commenced in the year 2020 with the announcement of the first confirmed case of COVID–19 by the Federal Ministry of Health on 27th February 2020. The level of disease transmission was very high.

To decrease the spread of Corona virus in the country, lockdown measures were taken, and this depressed the country's economic activities, which in effect brought a sharp drop in Nigeria's GDP growth, evident in the contracted domestic economy to -2.18% in the first half of 2020 from 2.42% growth rate in the second half of 2019 as contained in the CBN financial stability report (FSR) (2020). In the wake of high economic costs, the lockdown was eased, yet the GDP growth rate could not return to its position prior to COVID–19 because Nigeria's economy has also been crippled by external factors as the coronavirus pandemic resulted in a near-total shutdown of economic activity around the world. This resulted in a clash in demand for oil resulting in a steep drop in oil prices, which in turn drastically depressed Nigeria's revenue cum country's GDP, given the country's dependence on oil as its biggest revenue source. For instance, the United States slashed its Nigerian crude oil imports by 11.67 million barrels in the

first five months of 2020, compared to what it bought in the same period of 2019 [16]. This was contrary to the planned price of oil as contained in the country's approved budget for 2020. In the budget, crude production is assumed at 2.18 million barrels a day with an oil price of $57 per barrel, according to the spending plan.

The COVID-19 pandemic-induced movement restrictions also triggered a fall in household consumption as this group's income-generating capacity was negatively affected. Massive decline in stock prices was also witnessed in the country with the pandemic crisis, as the Nigerian Stock Exchange recorded its worst performance since the 2008 financial crisis, which has eroded the wealth of investors. The negative profit outlook on investment projects, which was predicted by the uncertainty associated with the pandemic, made firms hold off on long-term investment decisions. The steep decline in oil prices also necessitated the Nigerian government to cut planned expenditures. This was evident in the 1.5 trillion naira ($4.17 billion) cut in nonessential capital spending in the country's approved budget for 2020, as announced by the then minister of finance. A decline in exports was also experienced during the pandemic peak period since countries of the world closed their borders to nonessential traffic; hence, the global supply chains for exports have been disrupted. Nigeria experienced a slight recovery in the declining economy from -2.18% in half one to -1.70% in half two of 2020 (National Bureau of Statistics as cited in FSR, 2020).

Nigeria's economic recovery has been identified to have progress at a slower rate in post COVID-19 era as the year-on-year growth rate of the economy rose to 3.4% in 2021, from -1.9% in 2020 (NBS as cited in FSR, 2021), which has reduced to 3.10% in 2022 (NBS, 2022). Hence the need for better strategy for quick recovery of the nation's economy.

2.2 Theoretical Review

This work is guided by the Classic Microfinance Theory (CMT) by Dunford Chris. CMT is one of the theories of microfinance that explained how low-level class can access micro credits, utilized the micro credits to start or expand a microenterprise.

Dunford (2012) as cited by Hambolu, Nwabufor and Tony-Okeme [17] refers "classic microfinance theory to a theory of change that

involves three steps, a poor person must take to make this theory true: Take a loan or save with a microfinance institution or similar entity, invest the money in a viable business and manage to yield major returns on the investment. Classic microfinance theory of Chris Dunford further explained that, taking a loan from or saving with a microfinance provides financial inclusion database that helps to be more productive on the evidence-based estimation of the percentage of a population that has access to financial services".

This work revolved around this theory, since Nigeria's economic growth could only be created from the low end of the nation's socio-economic strata with the provision of microcredit to the active poor as well as the borrower's utilisation of such funds for investment and employment creation.

2.3 Empirical Review

Apere [18] investigated on the impact of microfinance banks on economic growth in Nigeria, focusing on the period 1992 to 2013. Secondary data gotten from the Central Bank of Nigeria (CBN) statistical bulletin [3] was used to carry out the study. Model estimation was done with the use of the error correction model (ECM) and the parsimonious test. Results showed that the activities of microfinance bank have the capacity to influence the entire economy if it is well coordinated. Specifically, the results indicated that microfinance bank loans and domestic investment significantly and positively affect the growth of Nigeria's economy, hence a long-run relationship was found to exist between microfinance bank loans, investment and economic growth in Nigeria.

Idaba, et al, [10] evaluated the effect of microfinance bank credit on output performance in Nigeria, with focus on the period, 1991-2020. Real GDP was used as a proxy to output performance, while microfinance bank loan and advances, gross fix capital formation, lending interest rate and financial deepening were used as measures of independent variable, microfinance bank credit. Dynamic ordinary least square model estimation was used in the study. Results revealed among others, a positive and significant long run effect of microfinance banks loan and advances on Nigeria's economic growth.

Cole and Akintola [11] carried out a study on microfinance banks and economic growth of Nigeria. The study used data from 1999 to 2018. Secondary data were obtained from Central Bank of Nigeria statistical Bulletin. Data obtained were analysed using ordinary least square regression techniques. The result of the estimated regression shows that there is a positive relationship between microfinance bank credit and real gross domestic product which represent economic growth.

Gonji, et al, [13] studied microfinance banks, nexus to Nigerian economic growth. Capital growth, interest rate, employment level, business growth and loans were the independent variables used in the study. While the dependent variable is Gross Domestics Product (GDP). Data from two listed microfinance banks were obtained from annual reports of the microfinance banks as well as the review of the Central Bank of Nigeria from 2005-2019. Ordinary least simple regression was used to analysed the study's data, using STATA 13.0. The study disclosed capital growth, microfinance interest rate, employment level and microfinance loans to have significantly contributed to the progress of Nigerian economy. While business growth does not contribute significantly to the expansion of Nigerian economy. Hence, microfinance bank was concluded to be a catalyst to economic growth.

Wachukwu, Onyema and Amadi [19] carried out a study on the impact of microfinance banks on Nigeria's economic growth, focusing on the period 1992-2016. Secondary data (annual time series data) were utilised in this study. The independent variables were microfinance bank credit growth, asset growth, investment growth and deposit growth. While the dependent variable, economic growth was measured with per capita income. Model estimation was done with the use of Cochranorcutt regression mode estimation. Results disclosed a very strong negative relationship between microfinance bank credit growth and per capita income. While a positive and significant relationship was found to exist between microfinance bank deposit growth and per capita income. No relationship was found between investment and per capita income. Also, a very strong positive and significant relationship was found between microfinance bank asset growth and per capita income.

Andabai and Jessie [12] studied Microfinance bank's credit and the growth of small medium scale in Nigeria (1990-2016): Investigating the nexus. The study used data from 1990 to 2016. Secondary data were used and collected from the Central Bank of Nigeria statistical bulletin. The study used Microfinance Banks' Credit to Small and Medium Businesses, Interest Rate and Broad Money Supply as the independent variables; whereas Gross Domestic Product was used as proxy for the dependent variable, growth of small and medium scale businesses. Vector Error Correction Model estimation was used to test the formulated hypotheses. Results revealed that microfinance bank credit had no short-run equilibrium significant relationship with growth of small and medium scale businesses in Nigeria. Causality test indicated that microfinance bank credit had no causal relationship with growth of small and medium scale businesses in Nigeria.

While examining the impact of microfinance institution on Nigeria's economic growth, Murad and Idewele [20], employed secondary data (cross-sectional and time series) of all the commercial banks in the country from 1992-2012, which were gotten from the Central Bank of Nigeria statistical Bulletin and Annual Reports. Findings revealed microfinance loans to have a significant positive impact on the short run economic performance in Nigeria. It was also found out that Microfinance loans enhanced consumption per capita in short run, while no significant impact was found to exist between the microfinance loan and the growth of the economy in the long run. Also, in the long run, a significant impact was found to exist between microfinance investment economic performance in Nigeria.

Babarinde, Abdulmajeed, Angyu and Agu [21] empirically investigated the effect of Microfinance banks on economic growth in Nigeria, concentrating on the period 1992-2019. The study adopted annual time series data. While the Autoregressive Distributed Lag (ARDL) model estimation and Granger causality test were used for data analysis. Findings revealed a positive and significant effect of microfinance banks loans and deposits on Nigeria's economic growth in the long-run, Microfinance banks investment exerted non significant effect on Nigeria's economic growth in the long-run. Moreover, microfinance loans, investments, and deposits have no significant effects on Nigeria's economic growth in the short-run. Furthermore, this study confirmed unidirectional causalities running from economic growth to microfinance loans, and

government expenditure; and unidirectional causality flowing from inflation rate to economic growth in Nigeria. Bi-directional causalities was found between microfinance deposit and economic growth; and between microfinance investment and economic growth.

3. METHODOLOGY

The study's data were sourced secondarily. Ex-post facto research design was employed. Quarterly total data of the entire MFBs operating in Nigeria as at 2011 to 2023 was employed to serve as the basis for determining the effectiveness of microcredit as a strategy for Nigeria's economic growth recovery in post COVID-19 era. Although microfinance bank was established in 2005, but 2011 was chosen as the base year because of the 2011 microfinance policy revision, which expanded the financial infrastructure of the country, to meet the financial requirement of the micro, small and Medium Enterprises (MSMEs). While 2023 was chosen as the end year due to availability of data. Specifically, the study utilized quarterly aggregate data on independent variable – microcredit measured with microfinance banks' loans, gotten from CBN quarterly statistical bulletin [22-24] as well as data on dependent variable – economic growth measured with total quarterly Banks' contribution to real GDP in Nigeria as documented in CBN website, both from Q1 - Q4, 2011 to Q1 - Q4, 2023. Autoregressive Distributed Lag (ARDL) long run form and bound test techniques was utilized for data analysis/test of hypothesis with the aid of E-view 12.0. This test was preceded by the Augmented Dickey-Fuller (ADF) unit root test and Johansen Cointegration test. The regression model estimated in this study was developed by assuming a functional relationship between the independent variable and dependent variable as shown below:

$$BRGDP = F(TMFBL) \qquad (1)$$

Furtherance with the establishment of the suitable regression technique (ARDL long run form and bound test which was necessitated by the result of the cointegration test) and in consideration of the error term influence as well as lag functions of the series to the model, the long run model was stated in its econometric terms as:

$$\Delta BRGDP_t = a_{oi} + \sum_{i=1}^{p} b_{1i}\Delta BRGDP_{t-i} + \sum_{i=1}^{p} b_{2i}\Delta TMFBL_{t-i} + e_{it} \qquad (2)$$

Where: e_{it} is the error terms, Δ signifies change, a_{oi} = constant terms and a_{1i} - a_{2i} = coefficients, BRGDP = Banks contribution to real GDP, TMFL = total microfinance banks loan,

4. RESULTS

4.1 Descriptive Statistics

A general description of the research variables is given by the descriptive statistical analysis. Table.1 below shows the statistics result of each variable:

Table 1. Descriptive statistics

	TMFBL	BRGDP
Mean	425.7537	492.0331
Median	192.4750	446.9450
Maximum	1551.560	1014.150
Minimum	49.07000	267.1300
Std. Dev.	438.2331	153.1417
Skewness	1.245612	1.395011
Kurtosis	3.273914	4.974539
Jarque-Bera	13.60931	25.31322
Observations	52	52

Source: Authors' computation (2024) with the aid of E-view 12.0

Table 1 shows the descriptive statistics of the variables used in the study. The result shows that TMFBL has a mean of 425.7537, its standard deviation is 438.2331, the skewness is 1.245612. The present of a positive skewness means that it is skewed to the right, while the Kurtosis is 3.273914 which is greater than 3, meaning that it is more peaked and have a heavier tail. BRGDP has a mean of 492.0331, its standard deviation is 153.1417, the skewness is 1.395011 having a positive skewness which means that it is skewed to the right; while the Kurtosis is 4.974539 which is greater than 3 meaning it is more peaked and have a heavier tail [25-26].

4.2 Unit Root Test

Table 2 shows the ADF unit root test results of which the ADF statistics values for both variables

are less than the critical values at 5% level of significance, therefore the variables are stationary at this level. The p-values are all less than 5% level of significance. The result also shows that TMFBL is stationary at I(1) which is first difference making it an order 1 variable and BRGDP is stationary at I(2) which is second difference making it an order 2 variable thus co-integration is necessitated because we have a mixture of two orders and a I(2) data is seen as unusual and can be buffeted by shocks[27-28].

4.3 Co-integration Test

The Johansen cointegration test was found appropriate for the co-integration test, to know if the variables although stationary are cointegrated.

The Johansen cointegration test results in Table 3 (both the trace test and the maximum eigenvalue test) show that the variables in the equation are cointegrated therefore a correlation exist among the two variables. Hence the need to check for the presence of a long run relationship among the variables in the equation, using autoregressive distributed lags (ARDL) bound testing technique.

4.4 ARDL Bound Test Techniques

The Autoregressive distributed lags (ARDL) bound testing technique was used to establish if a long-run equilibrium relationship exists between the model's variables.

4.4.1 Decision Criteria for the Bound Test

Reject the null hypothesis of no long-run equilibrium relationship either at 10%, 5%, or 1% level of significance, if the calculated F-statistic is greater than the critical value for the upper bound1(1). This means that long-run equilibrium relationship exists between the explanatory variable and explained variable in the equation. In such case, the long-run model estimation (the ARDL Long Run Form and Bounds Test) is

Table 2. Result of augmented dickey-fuller (ADF) unit root test

S/N	Variables	ADF stat	Critical values			Order of integration
			1%	5%	10%	
1	TMFBL	-6.090778 PV (0.0000)	-4.192337	-3.520787	-3.191277	I(1)
2	BRGDP	-7.599636 PV (0.0000)	-4.192337	-3.520787	-3.191277	I(2)

Source: Authors' computation (2024) with the aid of E-View 12.0

applied. If the calculated F-statistic is lower than the critical values for the lower bound 1(0), there is no long-run relationship. In such case, the short-run model (Autoregressive Distributed Lag) is estimated.

Table 4 revealed that the f-statistics for the hypothesis is greater than the critical values at the upper bound limit 1(1) at either 10%, 5% or 1% significant level, hence the variables in equation specified for the hypothesis shows the presence of a long- run relationship. Based on the result, the long-run model estimation (the ARDL Long Run Form and Bounds Test) was applied.

To proceed to the ARDL long run form, there is need to determine the appropriate lag length for the study's hypothesis. Vector autoregressive (VAR) lag order Schwarz information criterion was employed for such purpose, which

disclosed the appropriate lag length to be four (4).

4.5 Estimation of the Long Run Model (ARDL Long Run Form and Bounds Test)

Table 5 shows the long run form of ARDL model estimation conducted for the study's hypothesis (eqn 1). It revealed a long run positive and non-significant effect of TMFBL on BRGDP with the positive coefficient value of 2.761820 and p-value of 0.4821 (see the level equation), which is higher than the 5% level of significance. Therefore, the study rejected the null hypothesis which states that there is no positive effect of microfinance bank's loan on Banks' contributions to real GDP in Nigeria. Hence, this study concluded that there is a positive and non-significant effect of microfinance banks' loans on banks contribution to Real Gross Domestic Product (RGDP) in Nigeria.

Table 3. Result of Johansen cointegration test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.429833	36.37772	15.49471	0.0000
At most 1 *	0.152723	8.286392	3.841465	0.0040
Trace test indicates 1 cointegrating eqn at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.429833	28.09133	14.26460	0.0002
At most 1 *	0.152723	8.286392	3.841465	0.0040
Max-eigenvalue test indicates 1 cointegrating eqn at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				

Source: Authors' computation (2024) with the aid of E-view 12.0

Table 4. Summary of the ARDL bound test result

Dependent variable	F- statistics value	Significant level	Lower bound I(0)	Upper bound I(1)	Decision
BRGDP	21.75657	10%	5.59	6.26	
		5%	6.56	7.3	Estimate the long-run model (ARDL long run form bound test).
		2.5%	7.46	8.27	
		1%	8.74	9.63	

Source: Authors' computation (2024) with the aid of E-view 12.0

Table 5. ARDL long run form model estimation

ARDL Long Run Form and Bounds Test
Dependent Variable: D(BRGDP)
Selected Model: ARDL(4, 4)
Case 5: Unrestricted Constant and Unrestricted Trend
Date: 06/03/24   Time: 11:01
Sample: 2011Q1 2023Q4
Included observations: 48

Conditional Error Correction Regression				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	83.24973	52.25763	1.593064	0.1197
@TREND	-3.150158	0.920125	-3.423618	0.0015
BRGDP(-1)	-0.095990	0.146566	-0.654925	0.5166
TMFBL(-1)	0.265106	0.049808	5.322528	0.0000
D(BRGDP(-1))	-0.807547	0.150435	-5.368063	0.0000
D(BRGDP(-2))	-0.769258	0.136286	-5.644431	0.0000
D(BRGDP(-3))*	-0.679763	0.120456	-5.643262	0.0000
D(TMFBL)	-0.043137	0.047318	-0.911639	0.3679
D(TMFBL(-1))	-0.378996	0.062536	-6.060448	0.0000
D(TMFBL(-2))	-0.203800	0.067045	-3.039727	0.0043
D(TMFBL(-3))	-0.125095	0.064927	-1.926692	0.0617

 * p-value incompatible with t-Bounds distribution.

Levels Equation				
Case 5: Unrestricted Constant and Unrestricted Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TMFBL	2.761820	3.889644	0.710044	0.4821

EC = BRGDP - (2.7618*TMFBL)

Source: Authors' computation (2024) with the aid of E-view 12.0

5. DISCUSSIONS

The findings from this work were discussed in relation to the study's specific objective. Considering the objective on assessing the effect of microfinance bank's loan on Banks' contributions to real GDP in Nigeria, to serve as the basis for determining the effectiveness of microcredit as a strategy for Nigeria's economic growth recovery in post COVID-19 era; the study revealed that there is a positive and non-significant effect of microfinance banks' loans on banks contribution to Real Gross Domestic Product (RGDP) in Nigeria. This means that increase in microcredit increases banks contribution to real GDP and vice versa. The non-significant nature of the relationship could be attributed to the small number of data points represented in the study after COVID era, as the utilized years in post covid-19 (2020-2023) is the only available years as at the time of the study. The discoveries of this study implied that microcredit could serve as a stimulant for Nigeria's growth recovery in post covid-19 era, in the long run.

The result of this study is in line with the findings of Cole & Akintola (2021) that revealed a positive relationship to exist between microfinance bank credit and real gross domestic product.

6. CONCLUSION AND RECOMMENDA-TIONS

There is urgent need to create a paradigm shift from seeking the strategy for Nigeria's economic rebound after COVID-19 period, through provision of credit facilities, from people in the higher pyramid of the society to the unbanked and the active poor, with the understanding that robust economic growth cannot be achieved without putting in place well focused programmes that increase access of poor and low-income earners to factors of production, especially credit (CBN, 2005).

In order to attain quick economic growth recovery in Nigeria's post COVID-19 era, this study recommended the strengthening of the implementation capacity of already existed intervention programmes and schemes targeting

the provision of credits to the poor and small producers in Nigeria, by the CBN, through:

1. The creation of additional sensitization programmes by the CBN through microfinance banks, regarding such programmes, with more focus on the need to use the microloan for productive purposes. This will help to create more awareness for such programmes, more especially to the prospective beneficiaries in the rural areas as well as stimulate creation of economic growth from below.
2. Strict penalty should be given to any MFB that default compliance to those programmes, by the CBN. This would help to ensure the absence of bias in lending such microloans as well as ensure that the loans are given to credible and promising entrepreneurs.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Nwakanma PC, Nnamdi IS, Godfrey O, Omojefe GO. From Rural to Microfinance Banking: Contributions of Micro Credits to Nigeria's Economic Growth – An ARDL Approach. International Journal of Financial Research. 2014;5(3):73-85.
    Available:www.sciedu.ca/ijfr
2. Reeves M, Sabharwal N. Microfinance and mobile banking for the bottom of the pyramid. Journal of enterprising communities: People and places in the global economy. 2013;7: 155-166.
    DOI: 10.1108/17506201311325805
3. Central Bank of Nigeria. Microfinance policy, regulatory and supervisory framework for Nigeria. Abuja: CBN; 2005.
4. Zulkhibri M. Regulatory governing non-profit organizations in developing countries. International Journal of Law and Management. 2014;56(4):251-273.
    DOI: 10.1108/IJLMA-10-2012-003
5. Ochonogor HM. Microfinance institutions and economic development in Nigeria. NDIC Quaterly. 2020;35 (1 & 2):62-101.
6. Central Bank of Nigeria:Guidelines for microfinance banks in Nigeria; 2013.
    Available:www.cenbank.org
7. Singh R, Bhar C. System dynamics to turnaround: An Indian microfinance institution. Kybernetes. 2016;45,411-433.
    DOI: 10.1108/K-05-2014-0111
8. Arabi, S. H. & Meisami, H. (2013). The concept and fundamentals of Islamic microfinance and prospects for its introduction in Iran. Journal of Islamic Finance and Business Research, (2)1, 1-12.
9. Omorede A. Exploration of motivational drivers towards social entrepreneurship. Social Enterprise Journal. 2014;10:239-267.
    DOI: 10.1108/SEJ-03-2013-0014
10. Idaba ET, Orji A, Ogbuabor JE, Nwodo IP, Anthony-Orji OI. Does Microfinance bank credit influence output performance in Nigeria? A new empirical evidence from the DOLS approach. Journal of Academic Research in Economics. 2024;15(3):612-626.
11. Cole AA, Akintola AF. Microfinance banks and economic growth of Nigeria. International Journal of Scientific and Research Publications. 2021;11(3):311-316.
12. Andabai PW, Jessie IC. Microfinance bank's credit and the growth of small medium scale in Nigeria (1990-2016): Investigating the nexus. Journal of Economics and Sustainable Development, 2018;9(6):28-33.
13. Gonji PB, Dapin KM, Shodeinde AD. Microfinance banks, nexus to Nigerian economic growth. Discovery. 2022;53 (316):361-269.
14. Agene CA. Microfinance banking: Principles and practice. Ibadan, Daily Graphics; 2011.
15. Ozoji AP, Ezechukwu BO. Effect of cashless banking on economic growth in Nigeria. International Journal of Interdisciplinary Business Strategy. 2021;1 (1):25-45.
16. Yomi K. Here's how COVID-19 has battered Africa's largest economy. World Economic Forum; 2020.
    Available:www.weforum.com
17. Hambolu AT, Nwabufor NB, Tony-Okeme AF. Influence of microfinance banks on

rural women's entrepreneurial success in Oyo State. European Journal of Business and Management Research. 2021;6(3):69-76.
Available:www.ejbmr.org

18. Apere TO. The impact of microfinance banks on economic growth in Nigeria. International Journal of Academic Research in Economics and Management Sciences. 2016;5(4):53-61.

19. Wachukwu IP, Onyema JI, Amadi SN. Effects of microfinance banks and economic growth in Nigeria. Journal of Financial Marketing. 2019;(3).
Available:http://www.alliedacademies.org/journal-finance-marketing

20. Murad AB, Idewele IE. The impact of microfinance institution in economic growth of a country: Nigeria in focus. International Journal of Development and Management Review (INJODEMAR). 2017;12(1):1-17.

21. Babarinde GF, Abdulmajeed TI, Angyu PA, Abu PJ. Effect of microfinance banks on the economic growth of Nigeria: An empirical investigation. Online Journal of Arts, Management and Social Sciences (OJAMSS). 2021;5(2):55-68.

22. Central Bank of Nigeria. Quarterly Statistical Bulletin - Tables. 2015;4(4)
Available:www.cenbank.org

23. Central Bank of Nigeria. Quarterly statistical bulletin – Statistical Table. 2019;8(4).
Available:www.cenbank.org

24. Central Bank of Nigeria. Quarterly statistical bulletin – Tables – final; 2023.
Available:www.cenbank.org

25. Financial Stability Report; 2020.
Available:www.cbn.gov.ng>Out>FPRD.

26. Schumpeter JA. Theory of economic development. Cambridge: Harvard University Press; 1911.

27. Illangakoon G. Risk management and performance of microfinance industry. S. Asian J. Soc. Stud. Econ. 2024;21(3):1-17. Accessed On;2024 May 22
Available:https://journalsajsse.com/index.php/SAJSSE/article/view/779

28. Adeola O, Igwe PA, Evans O. Women economic empowerment and post-pandemic recovery in Africa: Normalising the un-normal outcome of Covid-19. Gendered perspectives on Covid-19 recovery in Africa: Towards Sustainable Development. 2021: 305-27.