MICROFINANCE BANKS ACTIVITIES AND ECONOMIC DEVELOPMENT OF NIGERIA

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ABSTRACT

This study investigated the effect of microfinance banks on economic development of Nigeria from (1992-2021) using secondary data from Statistical bulletin of Central Bank of Nigeria and United Nations Development Programme (UNDP) annual report. The research work used the fully modified ordinary least square (FMOLS) regression analysis to test the effect between the independent variables (Microfinance Banks Loans and Credit, Investments and Deposits, Government Expenditure on Education and health) on the dependent variable (human development index). The study discovered that microfinance bank activities had a significant effect on Nigeria's human development index during the study period. Therefore, the study recommends that, microfinance banks should direct their loans to the productive sector in order to create more jobs and improve Nigeria's economic development. In addition, microfinance institutions should assist those who do not have access to traditional banking services in gaining access to their credit facilities. Microfinance institutions should incorporate training and capacity-building programs into their services. They should also contribute to women's empowerment, which will increase women's access to education and health care.

KEYWORDS: Microfinance banks activities, human development index

1. INTRODUCTION

United Nation's Sustainable Development Goals have one of its objectives, to end intense poverty by 2050; nevertheless, Nigeria's poverty rate is increasing and currently going in the wrong direction. According to a World Bank report (2020), Nigeria, a third-world nation, has surpassed India as the country where the majority of people are living in abject poverty. In Nigeria, 80% of the population

86.9 million people live in rural areas and are among the country's most impoverished residents (Johnson & Ifeoma,2018).

Egboro (2015) also observed apart from the number of people living in abject poverty the few active population is not covered by the formal financial sector. He claims that only around 35% of people who are economically active receive financial help from the formal financial sector, leaving the other 65% to rely on the unregulated financial activities of the unorganised sector of the economy. Microfinance organisations, credit unions, Non-Governmental Organizations (NGO), moneylenders, the Isusu system and others are among these sectors, abandoning their original social goal of assisting the most vulnerable people in favour of purely commercial goals which prompt most of these informal financial institutions to shift their priorities.

According to Nwude and Anyalechi (2018) Nigeria microfinance banks date back to the years before the nation gained its independence, when traditional group networks and thrift saving systems served as the administrators of a financial exchange run by conventional money lenders who were unable to meet the demands of rural towns' growing populations. The CBN oversaw the establishment of the rural bank programme in 1977. The scheme's mechanics required commercial banks to expand their branch networks into diverse rural areas in order to offer those areas basic financial services. By 1991, the program's goal of opening a branch at least in each local government area had been met, with more than 7000 rural branches established worldwide.

However, by mobilising deposits without extending credit to the vast majority of depositors, the large commercial banks were unable to meet the needs of the population for credit. Little or no change was made in the levels of rural inhabitants since the majority of the revenues generated by rural branches were used to satisfy the needs of clients of metropolitan commercial city branches. Following the Structural Adjustment Programme, the CBN deregulated the banking industry in 1986, including certain branches that are losing money in remote locations being closed down while others remaining cash centers. The Federal Government established the Peoples Bank of Nigeria in 1988 in response to the failure of rural banking.

The purpose of the Peoples Bank of Nigeria's founding was to encourage saving and provide loans to houses, small and medium-sized enterprises (SMEs) and other businesses across the country. The bank's loan approval process was ineffective, nevertheless, and this led to an increase in non-performing loans and a drop in asset quality. Charges on poor and categorized loans were also high, and rising overhead costs further hurt the bank's profitability. With all of these issues, the banks' financial standing declined, which ultimately led to their insolvency (Anyanwu, 2004).

To make financial services more readily available to low-income families and owners of small businesses who require these resources (investable cash and soft loans) to grow, a new set of regulations was introduced by the Central Bank of Nigeria in 2005 to encourage business owners to modernize in the operations and contribute to Nigeria's economic growth. The objective is in line with the institution's aim to foster financial inclusion for everyone, ensuring that the poor have access to financial services in both urban and rural locations. This would increase their level of production and boost the country's gross domestic product (GDP). In order to accelerate the rate of economic development and reduce number of people living in poverty in the country government is making concerted efforts through the micro finance banks to bring the populace out of poverty. Despite all these efforts microfinance banks continue to confront significant challenges like insufficient financing (poor financing), high operating cost, repayment problem, inadequate experience credit staff and problem of illiteracy.

Empirically various research embarked upon by various researchers shows that microfinance banks activities has significant effect on economic development (Wachukwu, Onyema & Amadi ,2019; Ochonogor,2020; Murad & Idewele,2017; Akingunola , Adekunle., Adegbesan & Aninkan ,2013; Akosile & Ajayi,2014; Ofeimun, Nwakoby & Izekor ,2018; Ogbonna,2022), others show that microfinance banks activities has insignificant effect on economic development (Babarinde, Abdulmajeed, Angyu & Abu, 2021; Nwude & Anyalechi, 2018; Okoye, Omankhanlen, Ahmed, Fezeji, & Ojo, 2019; Okafor ,2015). This implies that there is still much to be determined empirically about the relationship between these two economic variables, studies in these areas so seem to be lacking in evidence. The different results obtained by the empirical studies do not permit the researchers to draw an unequivocal conclusion on the subject matter thus, the need to re-examine the effect of microfinance banks on economic development of Nigeria from 1992 to 2021. Also, it has been observed that there was a decline in the performance of microfinance banks in 2020 and 2021 based on the data collected. Thus, it is inherent to examine how these changes affected economic development.

2. LITERATURE REVIEW

The concept of microfinance credit, according to Imran, Haq, and Ozcatalbas (2022), is giving modest loans to the underprivileged who lack the money to cover their basic necessities in order to give them access to employment. Poor borrowers who lack assets, stable employment, or a track record of good credit might receive relatively small loans through microfinance credit (Al-Amin and Mamun, 2022). Small and medium-sized businesses and smallholder farmers can receive shorter loans for agricultural production through microcredit (Imran, Haq, and Ozcatalbas, 2022). Its goal is to support people in launching small businesses or working for themselves in order to foster entrepreneurship and reduce poverty in developing countries (Al-Amin and Mamun, 2022). In order to combat poverty in

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developing nations, microcredit has become a cutting-edge strategy (Mustafa et al. 2018).

Concept of Microfinance Deposit

Microfinance deposits are sums of money or funds deposited in accounts and given to banks for safekeeping (Obialor, Ibe and Egungwu, 2022). Savings from consumers are turned into microfinance bank deposits, which serve as a source of loans for consumers (El Hadidi, 2021). In order to encourage depositors to increase their levels of deposits, microfinance draws them by providing them with attractive interest rates. All general savings products, including ordinary savings accounts, current accounts, and time deposits, are offered by microfinance banks as deposits; nevertheless, the savings account makes up the greatest portion of the deposit portfolio in a microfinance bank (Obialor, Ibe and Egungwu, 2022).

Concept of Microfinance Investment

Microfinance banks also engage in investment activities in addition to microcredit (Babarinde, 2022). To achieve their dual goals of financial prosperity and the fulfilment of their humanitarian mission, microfinance banks also participate in approved investment portfolios (Babarinde, 2022). When looking for ways to increase their earnings, microfinance banks concentrate on a variety of investment options (Olweny and Omondi, 2011). Through access to financial markets, they participate in mutual funds to boost possible revenue returns (Lengopito and Ngahu, 2022). Another way that microfinance banks make money is by investing in debentures (De Haan, Schoenmaker, and Wierts, 2020). Combining debt obligations with other long-term assets, such as bonds, lowers the default risks they carry because they are unsecured (Lengopito and Ngahu, 2022). The diversification of a portfolio should include long-term bond investments (Cremers, Pareek, and Sautner, 2017). When a firm buys government bonds, it is effectively lending money to the government and earning interest (Lengopito and Ngahu, 2022).

Concept of Government Expenditure on Education

The federal government's expenditure on education (current, capital, and transfers) is expressed as a percentage of all expenditures made by the government overall (including in the areas of health, education, social services, and other areas) (Okerekeoti, 2022). Spending financed by remittances to the government from abroad is also included (Gootjes, de-Haan and Jong-A-Pin, 2021). Public expenditures on education encompass all government spending on educational institutions, including public and private, administration of education, and financial aid for individuals, households, and other private entities (Nikiforos, 2021; Svitlana & Gridin, 2020). Spending on education helps to develop human capital, which can lead to a skilled workforce. The productivity of both physical and human resources can be boosted by this skilled workforce, leading to faster economic growth (Ratna, Rossieta and Martani, 2017). Government funding on education is essential because it is profitable. It serves as

a springboard for jobs with higher income and opportunities for bonuses and promotions. These financial benefits enable people to afford housing and healthcare, which improves their quality of life (Hugh, Brown and Cheung, 2018). Every country's development depends on education spending, which is essential for promoting growth and equity as well as eradicating low standards and enhancing equity via both channels (Leonardo, 2016; Postiglione and Wright, 2017).

Concept of Government Expenditure on Health

In a nation where human capital is accumulated, the government has a considerable impact on health care spending (Ndaguba, Hlotywa and Nsiah, 2021). Human capital accumulation is essential to boost endogenous growth, which is vital to increase capital accumulation for healthcare expenditure in a country (Gizem, 2018). A country's national development strategy, living standards, and economic growth may all be evaluated using health as a key indicator (Ercelik, 2018). As a result, there are two main objectives for health investment in a country: the first is to ensure that people's overall welfare is improving, and the second is to focus on economic growth that encourages inclusivity in development, as well as a sustainable approach to public financial management (Ndaguba, Hlotywa and Nsiah, 2021). According to Rajeshkumar and Nalraj (2014), health and economic metrics at a country-specific level imply that nations with a high standard of living and a long life expectancy have greater incomes per capita and spend more money on public health. It is well known that investing in health is a path toward progress (Ndaguba, Hlotywa and Nsiah, 2021).

Economic Development

Development was viewed as an economic phenomenon by Webster & Filder (2000), in which rapid increases in overall and per capita Gross National Product (GNP) growth would either "trickle down" to the population in the form of jobs and other economic opportunities or would create the conditions for a wider distribution of the economic and social benefits of growth. Therefore, it was thought that issues with income inequality, unemployment, and poverty were of secondary concern to achieving GNP growth. According to Lin, (2017) economic development is a structural change that comprises ongoing industrial and technological advancements that boost labour productivity as well as upgrades to the infrastructure and institutions that decrease transaction expenditure. It is the procedure by which economies transform from those in which the vast majority of individuals have few resources and choices to those in which they have a great deal more. Therefore, economic development encompasses practically all fields of economics, but with certain changes to account for the unique circumstances of emerging nations.

Economic development includes more than just economic growth. Development, which signifies social and economic advancement, depends on economic growth (Onochogo, 2020). Although growth is an essential and requirement for development, it does not ensure advancement on its own. To

determine the level of development in a country, variety of particular and general indicators can be employed, such as life expectancy, education, per capita income, and the severity of poverty.

Human Development Index

The United Nations Development Programme (UNDP) created the Human Development Index (HDI) as one such index to be used as a measurement of a country's performance that takes into consideration social characteristics such as longevity (measured by life expectancy at birth) and educational attainment (measured by literacy rates and combined mean years of schooling). As a result, Human Development Index (HDI) examines three aspects of development: the level of health, the level of knowledge and skill, and the availability of resources, all of which are gauged by income per capita that has been adjusted for buying parity in power (UNDP, 1998).

Because of this, some economists thought that the HDI statistic provided a more comprehensive assessment of economic performance than GDP. A country's overall wealth may rise as a result of growth-oriented policies, but this does not necessarily translate into improved "functioning and freedoms." The overall well-being of a country is largely influenced by issues like unemployment, difference in access to public goods and services like education, health, inequalities in income and wealth distribution.

The Human Development Index (HDI) thus, serves as a frame of reference for both social and economic development and the value the index takes value between 0 and 1. Score close to 0 or 1, shows low or high levels of human development, respectively. While this is going on, a sizable body of criticisms (Hicks, 1997) are worried about how the current Human Development Index (HDI) uses averages to hide significant inequalities in the distribution of human development throughout the population. Despite recent methodological advances in the Human Development Index (HDI), such as the use of new indicators and functional forms, it remains a more powerful indicator of well-being than GDP, and it is more frequently worn as a yardstick to contest national policy choices and results.

Roles of Micro Finance Bank in Nigeria

According to Apere (2016) the followings highlighted below are the major roles of microfinance bank in Nigeria.

A, granting of loans: Microfinance banks' main responsibility is to lend money to people or organizations who need it. People who want to borrow money from a microfinance bank must meet the criteria for doing so. Remember that borrowing money from commercial banks may be more difficult than through microfinance institutions.

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B, Poverty alleviation: A significant factor in a country's efforts to reduce poverty are microfinance banks. This is so because one of the main ways that the government tries to reduce poverty is by offering as many work possibilities as it can, along with a way for people to start their own businesses and make money.

C, Employment Opportunities Creation: The people, organizations, and enterprises that microfinance banks offer loan facilities to will use those facilities to hire other people to work for them in their businesses, creating jobs in the process.

D, Increasing Small and Micro-enterprise: The people, organisations, and enterprises that microfinance banks offer loan facilities to will use those facilities to hire other people to work for them in their businesses, creating jobs in the process.

E, Promoting Agricultural Production: Most poor people, live in rural areas, giving them the opportunities to do agriculture. Microfinance bank also provide credit facilities to farmers. They can get loans for buying modern day farming, like equipment such as tractor, plough e.t.c.

Challenges of Microfinance Bank in Nigeria

A. Misappropriation of microfinance bank funds: There have been numerous instances of unscrupulous public officials misappropriating funds intended for small-scale farmers. In certain situations, loans are also given to friends and family in ways that do not indicate they were intended for commercial purposes.

B. Inadequate funding: According to Microfinance Letter (2007), one of the major issues that microfinance institutions in Nigeria face is a shortage of funding for the expansion of financial services to customers. This issue is mostly caused by the institution's low capital base and subpar lending. It was observed that there is inadequate channeling of fund for real sector development especially agriculture and manufacturing firm.

C. Unfavorable changes in government policy and instability have had a negative effect on the effectiveness of the main institutions in charge of monitoring and implementing policy.

D. Microfinance institutions have low capital bases and technical expertise, especially at the management level, and little to no experience with microfinance banking and practise.

Since the introduction of the microfinance policy framework in December 2005, many difficulties have been faced by the microfinance business.

E. The current global financial crisis has a serious negative effect on microfinance institutions. Lending risk increased when credit lines dried up and competition grew more fierce. Many clients are discouraged from being able to repay facilities due to the unfriendly economic environment.

F. Lack of patronage, a problem shared by many MFB, particularly those in rural areas, and commercial banks with their rural branches. Due to a lack of support from the local communities they

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are located in as well as from the government (federal, state, or municipal), MFB incurred expensive overhead costs that over time eroded the profit and share

2.1 Theoretical Framework

The supply-leading theory

Schumpeter is credited with discovering the connection between finance and economic expansion (1911). Schumpeter (1911) argued that for economic growth to be facilitated, the financial sector must be in good working order. This, in turn, will allow for growth in the real sector. The depth or level of development of the financial sector, in other words, determines how effectively the economy grows. There is an expansion in the supply of financial services as the financial sector develops. The supply-leading hypothesis explains the mechanism by which deepening financial markets foster economic growth. An alternative name for the idea is "the finance-led growth hypothesis." The supply-leading theory's main justification is that the depth of the financial system is a key factor in economic expansion. According to the supply-leading theory, the financial sector's expansion results in the most efficient resource distribution. In relation to this present study, the supply-leading theory implies that economic development is dependent on the financial capability of Microfinance banks in the nation. According to McKinnon (1973) and Shaw (1973), a well-developed financial sector lowers transaction and monitoring costs as well as asymmetric knowledge, improving financial intermediation. It is simpler to build and obtain financial services in anticipation of demand from real-world players when there is a developed financial sector. Robinson (1952), who asserted that financial deepening is reliant on economic expansion, established a contrary theory to the supply-leading concept. The growth-led finance theory and the demand-following finance hypothesis both support this viewpoint. It implies that economic expansion and financial development are related in a causal way.

2.2 Empirical Review

Wachukwu (2019) examined the impact of microfinance institution on economic growth of Nigeria, using per capita Income as a measure of Economic Growth. The study is for the period covering 1992-2016. microfinance bank credit growth, deposit growth, investment growth and asset growth were used as predictor variables. The research estimated the specified models using the Cochran Orcutt regression model applied on time series annual data from the central bank of Nigeria statistical bulletin and annual reports 2017 edition and World Bank national account data. The study employed both descriptive and inferential statistic data in analyzing the time series data. The results garnered from the data analysis indicated among other things that a very strong but negative relationship was also found between microfinance bank credit growth and per capita income. But for microfinance bank deposit growth and per capita income, it was discovered that it is a positive and significant relationship, investment and per capita income didn't have any relationship at all. The study found a very strong

positive and significant relationship between microfinance bank asset growth and per capita income, we therefore recommend that credits advanced must be granted to productive areas of the economy that will enhance productivity and ultimately lead to increase in income of participants. Babarinde et al (2021) investigated the effect of microfinance banks on economic growth of Nigeria from 1992-2019 using annual time series data. The study adopts Autoregressive Distributed Lag (ARDL) model, and Granger causality test as methods of analysis. This study's empirical findings reveal that microfinance banks loans and deposits have long-run positive and significant effects on economic growth in Nigeria unlike microfinance banks investment which does not exert significant effect on economic growth in Nigeria in the long-run. However, in the short-run, microfinance loans, investments, and deposits have no significant effects on economic growth of Nigeria. Furthermore, this study confirms unidirectional causalities running from economic growth to microfinance loans, and government expenditure. Likewise, a unidirectional causality is established to flow from inflation rate to economic growth in Nigeria. This study also found bi-directional causalities between microfinance deposit and economic growth; and between microfinance investment and economic growth. It can therefore be concluded that microfinance banks have positive effect on the economic growth of Nigeria.

Ochonogor (2020) examined the performance of microfinance institutions (MFIs) and its impact in promoting economic development in Nigeria using error correction model. The OLS was used for long-run analysis following findings from the cointegration result that established the existence of a long run equation. The study found a positive relationship between human development index and microfinance loan. The findings suggest that microfinance institutions promote economic growth and social capital formation in Nigeria. The paper therefore recommends that relevant stakeholders should create more awareness to the general public on the importance of microfinance loans to the livelihood of the citizens

Murad and Idewele (2017) examined the impact of microfinance institution on economic growth of a country, thus using Nigeria as a case study. The study employs the multiple regression analysis given that the data are cross-sectional and time series in nature. Secondary data of all commercial banks were extracted from the Central Bank of Nigeria statistical Bulletin and Annual Reports. Data used in this model are time series secondary data for the period 1992 to 2012.The findings of the study show that microfinance loans have a significant positive impact on the short run economic performance in Nigeria. Microfinance loans enhanced consumption per capita in short run with an impressive coefficient, although these banks 'loans do not have a significant impact on economic growth in the long run. Microfinance investment however, has a significant impact on economic performance in Nigeria in the long run. Although micro finance loans are relevant in growth process in Nigeria, other measures such as boosting agricultural production and taking appropriate steps to enhance per capita

income are equally important in boosting the Nigerian economic growth.

Akingunola et al (2013) did a study on how microfinance impacts on entrepreneurship development in Nigeria with a special reference to Ogun State. The survey research design was adopted and data collected through questionnaires. The impact of microfinance on entrepreneurship development in Nigeria was analyzed using the Ordinary least squares (OLS) regression method. The study revealed the existence of positive relationship between microfinance and entrepreneurship development in Nigeria. It further revealed that microfinance contribute to entrepreneurial activities that can lead to sustainable development in Nigeria. The findings of this study show that microfinance institutions go a long way in the determination of the level of entrepreneurial productivity and development in the Nigerian economy. In order to enhance entrepreneurship which is a potent instrument of activating the economic growth in developing countries, job creation, wealth creation, poverty eradication, innovations, and its related welfare effects by microfinance.

Nwude and Anyalechi (2018) examined the impact of microfinance activities on rural economic growth and savings in Nigeria for the period 2000–2015. The ordinary least square regression was used as the technique of analysis. The findings show that the introduction of micro finance banking in Nigeria have not contributed to agricultural productivity but had assisted in increasing rural savings habits in Nigeria.

Okoye et al (2019) investigated the growth implications of the intermediation activities of microfinance banks in Nigeria. The study covered the period 1992 to 2016. Model estimation was based on the technique of autoregressive distributed lag (ARDL) using data from the Central Bank of Nigeria statistical bulletin. Traditional intermediation functions of microfinance banks (deposit mobilization and credit creation) were adopted as explanatory variables while inflation and asset base were introduced as controlled variables. The result showed that while deposit mobilization significantly enhanced growth, microfinance banks' loans and advances impeded the growth process. Akosile and Ajayi (2014). explored Impact of Microfinance Institutions (MFIs) in reducing poverty in Nigeria. It examines whether the credit and financial facilities provided by the MFIs especially the Microfinance Banks (MFBs) and Cooperative Investment and Credit Soceities (CICSs) to the informal sector and Micro Small and Medium Enterprises (MSMEs) are optimally used to reduce poverty and enhance economic development. The study adopts the survey and descriptive research designs. Five MFBs and three (CICSs) in the rural, semi-ban and urban centres constitute the population while forty (40) customers of MIFBs, twenty (20) members of CICSs and eighteen (18) officials of both institutions are the sample size. Primary and secondary data were collected through questionnaires, personal interview and related publications through desk research respectively. It was found out that credit and financial services provided by the MFBs and CICSs enable the poor and low-income group

and MSMEs to engage in economic activities that make them self-reliance, enhances their income and help them create wealth and thereby reduce poverty.

Ofeimun, Nwakoby and Izekor (2018) investigated the relevance of micro financing of small businesses in Nigeria. The data for the study was obtained from the Micro-finance banks and CBN annual reports for the period 1990 to 2015. The study adopted the ordinary least square regression as the basic techniques of analysis. The study also employed both normality and the multi-collinearity tests to examine the features of the data for analysis. The study, using the results of the micro financing of SMEs statistics and exploratory variables in a regression model showed that micro loan disbursed and micro loan spread have a significant positive relationship with small business growth in Nigeria during the period under review. The study also found a significant negative relationship between inflation rate and micro loan lending rate and small business growth as well as an insignificant relationship between micro loan spread and small business growth in Nigeria. The study therefore concludes that micro financing of small businesses by micro finance banks has a great effect in stimulating the economy.

Okafor (2015) examined the impact of microfinance banks activities on poverty alleviation in Nigeria. Annualized time series data for 20 years, covering the period 1993-2012, were collated from the Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS). Poverty Index (PI) was the dependent variable while microfinance banks activities was adopted as independent variable. Also, liquid liability (M2), Interest Rate (IR) and Federal Government Capital expenditure were the controlled variables. Multiple linear regression model was adopted for the test of the hypothesis. The result showed that microfinance banks activities do not have a significant positive impact on poverty alleviation in Nigeria. This portends that the operation of the microfinance banks activities in Nigeria need a review. It is fairly flawed. There is the need for the relevant authorities to go back to the drawing board.

Ogbonna (2022) studied the impact of micro finance banks on developing economies –evidence from Nigeria. The recent emphasis on micro, small and medium enterprises, and the licensing of microfinance bank in Nigeria viz-a-vis the dwindling economy of developing countries prompted this study. The data for the study was mined from the Central Bank of Nigeria's statistical bulletin from 1992 to 2020. The E-view tool of analysis, and the Autoregressive Distributed Lag model were used. The research answered a question of whether microfinance banks contribute to economic growth or not. The unit root test showed that all parameters were stationary at first difference. Consequently, it was established that generally, there was a long run relationship between microfinance banks and economic growth in Nigeria while specifically, loans and deposits of microfinance banks showed significant and positive coefficients. Similarly, a causality test indicates that there exists a

unidirectional causality between microfinance bank loans and economic growth, and microfinance bank   deposits   and   economic   growth.

3. METHODOLOGY

The study made use of time series data from the Central Bank of Nigeria (CBN) statistical bulletin and United Nations Development Programme (UNDP) annual report spanning the years 1992 to 2021. The research model was modified from one used by Okofor (2015) to evaluate the effects of microfinance bank activities on economic development in Nigeria. He used multiple linear regression model and the variables were as follows

$$PI_{it} = \beta_0 + \beta_1 RTD_{it} + \beta_2 RLL\_GDP_{it} + \beta_3 IR_{it} + \beta_4 RGE\_GDP_{it} + E_{it} \dots\dots\dots 1$$

PI = Poverty Index,
RTD_TC = Ratio of Total Deposit to Total Credit (microfinance banks activities),
RLL_GDP = Ratio of Liquid Liabilities to GDP,
IR = Interest Rate,
RGE_GDP = Ratio of Government Capital Expenditure to GDP.

The study adopted and modified the model by replacing PI with HDI (a proxy for economic development) and the decompose microfinance activities to MFL, MFI, MFD, GEXE and GTEH. The model is stated thus

$$HDI = f(MFL, MFI, MFD, GEXE, GTEH) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 2$$

In a bid to minimize explosiveness in the regression parameter driven by the high level of volatility in the variable's distribution, the independent variables in equation 2 were transformed into their natural logarithm forms. Thus, the semi log version of equation 2 is represented in equation 3.

$$HDI_{it} = \beta_0 + \beta_1 \ln MFL_{it} + \beta_2 \ln MFI_{it} + \beta_3 \ln MFD_{it} + \beta_4 \ln GEXE_{it} + \beta_5 \ln GTEH_{it} + U_{it} \dots 3$$

Where HDI =Index of Human Development is a proxy for economic development
MFL=Microfinance Banks Loans and Credit
MFI=Microfinance Banks Investments
MFD=Microfinance Banks Deposits
GEXE=Government Expenditure on Education
GTEH=Government Expenditure on Health

4. RESULTS AND DISCUSSION

Table 1: Descriptive statistics results

	Government Expenditures on Education (N' Billion)	Government Expenditure on Health (N' Billion)	Nigeria's Human development index	Microfinance Bank Deposit (₦' Billion)	Microfinance Banks Investments (₦' Billion)	Microfinance Bank Credit (N' Billion)
Mean	202.23	122.56	0.47	84.35	8.93	101.08
Std. Dev.	201.42	130.44	0.05	106.64	10.19	177.63
Skewness	0.84	0.93	-0.66	1.58	1.00	2.62
Kurtosis	2.49	2.68	2.78	4.79	2.85	9.50
Jarque-Bera	3.86	4.44	2.21	16.48	5.04	87.11
Prob	0.15	0.11	0.33	0.00	0.08	0.00
Obs	30	30	30	30	30	30

Source: Computer analysis using E-views 12.0

The result in Table 1 revealed that between 1992 and 2021, the Nigeria spent an annual average of about ₦202.23 billion in education and ₦122.56 billion on healthcare financing, respectively, in the said assessment period. Similarly, Nigeria ranked 0.47 (47%) on the average in terms of human development index, while the annual average Microfinance Bank deposit in Nigeria was ₦84.35 billion. The result further revealed that between 1992 and 2021, Microfinance Banks investments in Nigeria was about ₦8.93 billion, while Microfinance Bank loans and advances given to customers on an annual basis was around ₦101.08 billion.

Table 1 reports the descriptive statistics of the variables used in the study, from the results, all variables were positively skewed (left-right), indicating that they were distributed with frequent minor increases (growth) and frequent rare major drops. Furthermore, between 1992 and 2021, government expenditures on education, health expenditures, Nigeria's human development index, and Microfinance Bank investments were platykurtic (small kurtosis values less than 3), indicating the presence of small outliers in the distributions, whereas Microfinance Bank deposits and credits were distributed with large outliers when the kurtosis value was greater than 3. This suggests that there are

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huge outliers in the distributions. Government spending on education, government expenditure on health, Nigeria's human development index, and microfinance bank investments were normally distributed during the assessment period since their corresponding Jarque-Bera Probability values were greater than 0.05 (5%).

Table 1: Stationarity Tests results

Variables	Test statistic	Critical values			Remarks
		1%	**5%**	**10%**	
Panel A. Augmented Dickey Fuller Tests Results at Levels					
lnGEXE	-4.24***	-3.68	-2.97	-2.62	Stationary
lnGTEH	-3.42**	-3.68	-2.97	-2.62	Stationary
HDI	-2.41	-3.68	-2.97	-2.62	Non-stationary
lnMFD	-1.58	-3.68	-2.97	-2.62	Non-stationary
lnMFI	-1.36	-3.68	-2.97	-2.62	Non-stationary
lnMFL	-1.66	-3.68	-2.97	-2.62	Non-stationary
Variables	**Test statistic**	**Critical values**			**Remarks**
		1%	**5%**	**10%**	
Panel A. Augmented Dickey Fuller Tests Results at First Difference					
lnGEXE	-13.51***	-3.69	-2.97	-2.63	Stationary
lnGTEH	-14.07***	-3.69	-2.97	-2.63	Stationary
HDI	-8.39***	-3.69	-2.97	-2.63	Stationary
lnMFD	-7.96***	-3.69	-2.97	-2.63	Stationary
lnMFI	-6.02***	-3.69	-2.97	-2.63	Stationary
lnMFL	-6.91***	-3.69	-2.97	-2.63	Stationary

*NB: ** implies significance at 5%, and *** denotes significance at 1%.   Source: Author's computation (2022) using E views 12*

Granger and Newbold (1974) and Paravastu et al. (2019) founded that time series variables (such as HDI, government expenditures on education, government expenditures on health, Microfinance Bank Bank deposits, Microfinance Bank investments, and Microfinance Bank credit) trend non-stationarily over time most of the period. As a result, Lyócsa and Eduard, (2009) suggested that when using non-stationary data to construct regression estimates, the resultant impacts would be misleading, implying that such outcomes are inappropriate for policy initiatives. Considering the foregoing submissions, this study employed the Augmented Dickey-Fuller (ADF) stationarity test earlier utilised by Paparoditis and Politis (2013) to establish the extent to which the variables examined in this research were stationary.

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From the stationarity test results in Table 2, only government expenditures on education and health were stationary at both the level and first difference, whereas all variables became stationary at first difference, as both the ADF and PP test statistics (absolute values) are all greater than their accompanying probability values at the 1% and 5% levels. The conclusion is that the best results can be obtained only when the variables are employed at their corresponding first differences (Harvey, 1980; Nwakuya and Biu, 2019). Bashier and Siam (2014) contend that the fully modified ordinary least square (FMOLS) technique, with its power to integrate the variable both at the levels and first differences, could be employed to estimate the modelling basis of the study, which is an intriguing aspect of the stationarity outcomes as earlier demonstrated.

Co-Integration Text

Table 2: Cointegration Tests Outcome-Eagle-Granger and Philip-Ouliaris Approach

Series: lnGEXE HDI lnMFD lnMFI lnMFL lnGTEH

Null hypothesis: Series are not cointegrated

Dependent Variable	Eagle-Granger Approach				Philip-Ouliaris Approach			
	tau-statistic	Prob.*	z-statistic	Prob.*	tau-statistic	Prob.*	z-statistic	Prob.*
lnGEXE	-5.09	0.07	-47.95	0.00	-6.43	0.01	-28.34	0.06
lnGTEH	-5.99	0.01	-31.94	0.02	-6.12	0.01	-31.03	0.02
lnMFD	-5.07	0.07	-27.79	0.07	-5.20	0.06	-30.67	0.03
lnMFI	-4.04	0.32	-22.14	0.26	-4.19	0.27	-23.81	0.19
lnMFL	-4.62	0.15	-25.19	0.14	-4.69	0.13	-24.66	0.15
HDI	-4.08	0.30	-20.96	0.33	-4.13	0.28	-20.52	0.35

Source: Author's computation (2022)

The cointegration test is used to determine whether or not the variables in the regression model have a plausible long-run connection. To attain this goal, the researcher employed the single equation approach previously developed by Engle and Granger (1987) and Phillips and Ouliaris (1990) under the null hypothesis of no cointegration in any linear combinations. The results of the cointegration tests utilising the Eagle-Granger and Philip-Ouliaris methods are shown in Table 3. Table 3 demonstrates that the Engle-Granger and Phillips-Ouliaris tau-statistics (t-statistics) failed to disprove the null hypothesis of no cointegration concurrently. This finding suggests that the variables in the

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HDI model are not cointegrated (no long run relationship existing among them). However, since the FMOLS is intended to measure variables at their levels and first differences, it could be employed to quantify the model's short run parameters.

Table 4 Fully Modified Least Squares (FMOLS) Estimates

Dependent Variable: HDI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	26.40***	1.49	17.77	0.00
HDI(-1)	0.31***	0.04	8.61	0.00
lnMFD	-2.86***	0.37	-7.83	0.00
lnMFI	0.08	0.16	0.51	0.62
lnMFL	2.24***	0.24	9.35	0.00
lnGEXE	2.32***	0.32	7.19	0.00
lnGTEH	-0.23	0.27	-0.87	0.40
R-squared	0.94	Mean dependent var		48.14
Adjusted R-squared	0.92	S.D. dependent var		4.34

NB: ***Significant at 1%. Source: Author's Computation (2022) using E-Views 13

By determining that the variables were stationary, but there is no indication of cointegration, the researchers examined the coefficients in the HDI model using a fully modified version of the conventional ordinary least squares approach. The FMOLS method produces precise estimation for small sample sizes and validates the results for robustness (Bashier and Siam, 2014). Essentially, Philips and Hansen (1990) developed the FMOLS approach to address forecasting issues with a single equation with first order integrated variables (stationary at first difference). Table 4 illustrates the FMOLS estimation findings together with the coefficient of determination (Adjusted R-squared), indicating that the collective influence of government expenditures on education, government expenditure on health, Microfinance Bank deposits, Microfinance Banks investments, and Microfinance Bank credit contributed around 92% of the systematic variations in HDI to Nigeria. This means that the model adequately predicts the fluctuations in HDI in Nigeria over the period of investigation. Table 4 also indicates that government expenditures on education, Microfinance Bank deposits and Microfinance Bank credit have significant effect on human development index while government expenditure on health and Microfinance Banks investments have insignificant effect on HDI.

5. CONCLUSION AND POLICY IMPLICATION

The purpose of this research was to quantify the influence of microfinance banks activities on

economic development in Nigeria from 1992 to 2021, utilising yearly time series and quantitative secondary data from the Central Bank of Nigeria (CBN) and the United Nations Development Programme (UNDP). The dependent variable in the study was HDI, while the independent variables were Microfinance Bank deposits, Microfinance Bank credits, Microfinance Bank investment, government expenditures on education, and government expenditures on health. To achieve the specific goals of this research, the Fully Modified Ordinary Least Squares method was used, and the various empirical outcomes were presented and discussed, with relevant links and deductions to existing theories and previous empirical studies on microfinance activities and economic development. The finding from the study indicates that microfinance banks activity has significant effect on Nigeria economic development. The study therefore concludes that microfinance banks should support government efforts in the areas of education and healthcare funding for quicker economic development and expansion. Based on the finding the study makes the following recommendations that the existing microfinance banks operating across the Nigeria should ensure that all deposit received from the customers are properly channeled into productive activities such as portfolio creation in the form of mutual funds that will avail individuals and enterprises the opportunity to access funds from the fund managers so that they can use such funds for value-laden purposes such as education and training and healthcare financing will enable the country achieve significant improvement in health and talent development across all sectors of the economy. It is hoped that when this is achieved, the level of human capital development in Nigeria will grow, and the country will improve in her annual HDI rankings, which is a credible measure of a nation's social and economic Microfinance banks should provide financial services to the economically disadvantaged, particularly those who lack access to traditional banking services. Microfinance institutions should integrate training and capacity-building programs into their services. They should offer financial literacy training, entrepreneurial skills development, and specific vocational training to help individuals improve their employability and income prospects. Microfinance banks should facilitate access to basic services such as education and healthcare. Microfinance loans can cover expenses related to school fees, books, uniforms, or medical treatment, ensuring that individuals have access to essential services that contribute to their overall development. Microfinance banks should prioritize the inclusion and empowerment of women, recognizing their vital role in societal development. They should provide financial services and support to women entrepreneurs, which will enable them to invest in education, healthcare, and skill training. This empowerment will have direct positive impact on human capital development at both the individual and community levels.

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