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Effect of Microfinance Bank Branches as Financial Inclusion indicator on Performance of Micro, Small and Medium Enterprises in Nigeria

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Abstract
Financial inclusion, a critical subset of financial development, prioritizes access to financial products and services over the mere proliferation of financial institutions. Microfinance banks (MFBs) have become instrumental in promoting financial inclusion by providing alternative credit systems for micro, small, and medium-sized enterprises (MSMEs) that often face barriers to accessing traditional financial services due to high risk and lack of collateral. MSMEs are a cornerstone of Nigeria's economy, contributing significantly to employment and tax revenues, yet their growth is stifled by limited access to capital. The establishment of the Small and Medium Enterprise Development Agency of Nigeria (SMEDAN) and the introduction of Nigeria's microfinance policy framework in 2005 were pivotal in addressing these challenges by fostering an enabling environment for MFBs to thrive. MFBs offer tailored financial services such as microcredit, savings accounts, and business loans, specifically designed for the underserved active poor in rural and urban areas. Despite their potential, challenges such as low financial literacy, inadequate banking infrastructure, and a distrust of formal banking systems hinder the full realization of financial inclusion in Nigeria. This study investigates the relationship between financial inclusion, facilitated through MFB branches, and the performance of MSMEs in Nigeria. It aims to explore how the distribution and availability of MFB branches influence MSME performance and addresses the hypothesis that no significant relationship exists between the number of MFB branches and MSME performance. Findings from this research are expected to inform policy decisions, enhance MSME growth, and contribute to poverty alleviation and economic development in Nigeria.

Keywords: Financial inclusion, Microfinance banks, MSME performance, Poverty alleviation
Word count: 251

Introduction

Financial inclusion is a subset of financial development that places more importance on the accessibility of financial products and services to more individuals than on the sheer number of financial institutions in each area (Richard, et al., 2018). There are 37,067,416 MSMEs in Nigeria, and they contribute to the economy by paying tax and employing over 84.02% of the labour force in both the formal and informal sectors, respectively (Richard, et al., 2018). However, lack of access

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to capital is a significant barrier to entry for micro, small, and medium-sized enterprises (MSMEs) in Nigeria. This can be related to their inability to raise funding from conventional banks because of their riskiness and the lack of asset-based collateral (Jacob & Endeley, 2018). The Small and Medium Enterprise Development Agency of Nigeria (SMEDAN) Act of 2003 established SMEDAN with the goal of ensuring that micro, small, and medium-sized enterprises (MSMEs) in Nigeria have access to the resources necessary for their growth and development. The overarching goal of SMEDAN is to boost Nigeria's economy. The Agency is the primary government body in Nigeria concerned with the development of micro, small, and medium-sized enterprises. Microfinance banks have emerged as an alternative credit system for the poor because of the government's persistence in this area. Microfinance is a form of financial aid targeted at the poor, who are often overlooked by larger banks (Elkhuizen, et al., 2018). Microfinance stands out from conventional banking services in three keyways. The lack of collateralized assets, the low dollar amounts of loans and/or deposits, and the simplicity of the business model are all positive. Microfinance refers to the lending of money to low- and no-income self-employed people. These services include providing active poor in both rural and urban regions with access to small loans, savings accounts, checking accounts, and business finance. Microfinance is an umbrella word for a variety of approaches to provide low-income people with financial support. Microfinance is about the provision of timely, inexpensive, varied, and dependable financial services to the active poor which otherwise would have little or no access to financial services. It's an attempt to help those on the lowest income levels of society financially (Nursini, 2020).

The goal of all Microfinance Banks is to expand the pool of people who can use their services, especially those with lower incomes. Therefore, Microfinance Banks have been widely adopted as a tool for economic development, job creation, and poverty reduction due to their potential benefits. Microfinance banking services, which facilitate financial inclusion by issuing micro-credit loans to micro, small, and medium-sized farms and businesses, play a significant part in today's society. Since its 1960 declaration of independence, Nigeria's federal government has undertaken a number of different monetary and fiscal policies, including the import substitution industrialization (ISI) plan, the structural adjustment programme (SAP), and trade and financial market liberalization (Okere & Ozuzu, 2018). In Nigeria, a policy framework for microfinance regulation and supervision went live in December 2005. The framework acted as a guide for many stakeholders to take part in the distribution of microfinance. With a total of 980 MFBs as of January 9, 2017, the

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concept of microfinance was warmly embraced in Nigeria, leading in the conversion of 606 former Community Banks to MFBs by the end of December 2007. In addition, the framework for licensing, regulation, and supervision of privately owned Microfinance Banks was established with the introduction of the Microfinance Policy in 2005 (Peter & Ozuzu,2018). The policy also encouraged the use of a wide range of financial service providers, including Deposit Money Banks, non-profit microfinance institutions, and financial cooperatives. The CBN authorized the Microfinance Banks to engage in microfinance operations like public savings and deposit mobilisation, credit extension, and other financial activities. The Central Bank of Nigeria (CBN) recognises the following in its policy framework: (i) Sustained economic growth is impossible without a concerted effort to alleviate poverty. Which would be achieved by empowering the people, by boosting their access to productive elements, especially credit. Since the impoverished are often overlooked by regular financial institutions, microfinance services aim to fill that gap. Before the development of microfinance banking, only around 35% of the economically active population had access to the formal financial system's services. Non-governmental organisation (NGO) microfinance institutions, moneylenders, friends, family, credit unions, and economic cooperatives all provided services to the informal financial sector.

The non-regulation of these institutions' operations has significant repercussions on CBN's capacity to exercise its statutory duty of promoting monetary stability and a healthy financial system (Monye, 2021). The low availability of banking infrastructure, especially in rural areas, is identified as a major barrier in existing literature. Many distant places lack actual banks or ATMs, making it difficult for individuals to receive basic financial services. A sizable percentage of the population also lacks financial literacy to comprehend intricate banking products and services. Their ability to save, invest, and borrow wisely is limited as a result of this ignorance. A sizable percentage of the populace also has a fundamental distrust of conventional banks. People are hesitant to use formal banking institutions because trust has been damaged by past problems, scams, and a lack of transparency. However, this study aims to determine the relationship between financial inclusion and performance of micro, small and medium enterprises in Nigeria specifically to investigate the effect of micro finance bank branches on the performance of micro, small and medium enterprises in Nigeria. The research work tends to answer this fundamental question that, In what way can micro finance bank branches influence the performance of MSMEs?

To achieve the objective, the following hypothesis was thus formulated:

Ho1: there is no significant relationship between number of microfinance bank branches (NMB) and performance of micro, small and medium enterprises (MSMEs) in Nigeria.

Literature Review

MICRO, SMALL AND MEDIUM ENTERPRISES IN NIGERIA

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in Nigeria's economy, representing a diverse and vibrant sector that encompasses a wide range of businesses. These enterprises are characterized by their relatively small workforce and limited operational scale compared to larger corporations (Tanbunan, 2019). In Nigeria, MSMEs are not only significant contributors to the country's GDP but also serve as vital sources of employment, innovation, and economic development. At the grassroots level, micro-enterprises form the backbone of the Nigerian economy (Sedyastuti, et al., 2021). These tiny businesses, often family-owned, operate in various sectors, including agriculture, retail, crafts, and services. Micro-entrepreneurs, such as street vendors, artisans, and small-scale farmers, contribute significantly to local economies, providing essential goods and services within their communities (Mardikaningsih, et al., 2022). Due to their size, micro enterprises collectively have a substantial impact on employment and poverty alleviation. Small businesses in Nigeria range from small-scale manufacturing units to service providers, employing more people than micro-enterprises but still operating on a relatively modest scale. These enterprises often face challenges related to access to finance, technology, and market penetration. Small enterprises are found in sectors like manufacturing, agribusiness, hospitality, and retail (Tambunan,2021). They play a vital role in creating jobs and fostering entrepreneurship, contributing to economic growth and regional development. Medium-sized businesses in Nigeria represent a more advanced and structured segment of the MSME sector. These enterprises have a larger operational scale, employ a significant workforce, and often have a broader market reach. Medium enterprises are involved in diverse industries, including manufacturing, technology, export-oriented businesses, and specialized services (Maksum, 2020). They contribute substantially to the country's industrialization efforts, promoting innovation, and enhancing competitiveness in both domestic and international markets.

MSMEs in Nigeria face various challenges, including limited access to credit, inadequate infrastructure, regulatory constraints, and a lack of skilled labour (Maksum, 2020). However, the Nigerian government and various stakeholders recognize the importance of this sector and have implemented initiatives to support MSMEs. These initiatives include access to credit schemes, capacity-building programs, technology support, and market linkages, all aimed at empowering these enterprises to thrive and contribute significantly to the nation's economic growth. The micro, small, and medium enterprises in Nigeria represent a diverse and dynamic sector that drives economic activity, fosters innovation, and provides employment opportunities. As the government continues to invest in supportive policies and initiatives, MSMEs are poised to play an even more significant role in the country's economic transformation, fostering entrepreneurship, reducing unemployment, and promoting sustainable development (Wahyuni, 2023). A significant portion of MSMEs in Nigeria operates in the informal sector, which can hinder their ability to access formal financing, market opportunities, and government support. The informal sector in Nigeria, like in many other countries, plays a significant role in the economy, providing employment, income, and contributing to economic activities outside the formal regulatory framework. The informal sector encompasses a wide range of economic activities, from small street vendors and artisans to small-scale farming and household enterprises (Putro, et al., 2022). The informal sector is substantial in Nigeria, employing a significant portion of the population, it often serves as a safety net for those who are unable to find formal employment (Novikasari, et al., 2021)

The informal sector is a major source of employment, particularly in urban and rural areas where formal job opportunities might be limited. It provides jobs for a diverse range of workers, including youth, women, and those with low levels of education (Pandiangan, et al., 2022). Many individuals turn to the informal sector as a way to engage in entrepreneurial activities and generate income. Informal businesses can range from small trading operations to craft and service-based enterprises. The informal sector typically has lower entry barriers compared to the formal sector. This allows individuals with limited resources or skills to start their own businesses without the need for extensive capital or formal education, informal sector activities often operate outside the formal regulatory framework (Mukherjee, 2018). While this can provide flexibility, it can also result in challenges related to tax evasion, lack of legal protection, and difficulty accessing financial services. The sector workers and businesses face challenges such as limited access to credit, lack of social benefits, vulnerability to economic shocks, and exposure to health and safety risks due to

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inadequate working conditions. The informal sector's contribution to Nigeria's Gross Domestic Product (GDP) is difficult to accurately measure due to its informal nature. However, it is widely acknowledged that the sector contributes significantly to the overall economy (Tambunan, 2019).

MICROFINANCE BANK

Microfinance banks (MFBs) were established in Nigeria in 2007 to expand the availability of credit and other elements of production for the country's low-income population. The Central Bank of Nigeria (CBN) has authorised, regulated, and overseen the operations of about 942 MFBs across the country (Dewi, 2019). The primary objective of most MFBs is to fill a service gap in the financial sector by offering banking products and services to the underserved poor. MFBs also offer savings accounts, loans, domestic funds transfers, and other financial services to economically engaged poor, micro, small, and medium enterprises. Microfinance encompasses a wide variety of financial services for low-income people and their micro, small, and medium-sized businesses, such as loans, savings, insurance, remittances, and transfers. The People's Bank of Nigeria (PBN), founded in 1989, served as the ancestor institution from which MFB sprang in Nigeria. The Grameen Bank of Bangladesh, a government-sponsored financial organization established to extend loans to the country's underprivileged, serves as the inspiration for PBN's guiding principles (Pagaddut, 2021).

In 1992, Decree 46 of the Central Bank of Nigeria established Community Banks (CBs) to aid rural growth by expanding access to banking and financial services, boosting rural production, and boosting the financial standing of micro and small producers throughout the country and the city (Tekola & Gidey, 2019). To ensure that banks in Nigeria are operating in a safe and sound environment, the CBN decided to examine their capitalization levels. In 2007, governments ordered existing CBs to transform into MFBs by increasing their capital bases and implementing these changes. Microfinance institutions compete in a market already dominated by large commercial banks. Smallholder farmers often have trouble getting access to credit, but MFBs are interesting since they can give some credit, albeit in modest amounts. Microfinance organisations are crucial to the economic and social progress of a nation, contributing to the fight against poverty by providing essential financial services in developing nations. In Nigeria, there are five distinct categories of MFBs: those held by individual communities, by non-profit organizations, by the government, by foreign investors, and by for-profit corporations. Microfinance refers to the practice of lending money to small and medium-sized enterprises (SMEs) that are not served by large financial institutions. Access to capital is a major issue for small and medium-sized businesses in Nigeria, and many SMEs do not have sufficient collateral to qualify for available credit arrangements (Masiyandima, et al., 2017).

Microfinance Bank Service and Financial Inclusion

As a result of the persistent problem of people being unable to gain access to traditional financing (commercial banks), policymakers in a country like Nigeria have adopted a number of initiatives and policies aimed at expanding financial inclusion. Microfinance is one strategy that has been implemented. There is still no conclusive evidence of the applicability or impact of microfinance bank on MSMEs through financial inclusion, despite the widespread use of microfinance banks in Nigeria (Islam, et al., 2019). Despite a number of efforts to boost financial inclusion in the country, current strategies are not having the desired impact in Nigeria. Consider Nigeria (Africa's most populous nation), where initiatives like the Commercial Bill Financing Scheme (1962) and the Microfinance Policy of 2005 have worked to expand citizens' access to credit. Despite these efforts, the landscape of financial inclusion remains behind that of Latin America and the Caribbean and Asia and the Pacific (Islam, et al., 2019). Bribery and corruption, misallocation of credit resources, incompetent administration, and lax oversight, among other things, are said to stymie these attempts time and time again. There is a growing body of research in the region that empirically correlates financial inclusion to a wide range of economic, institutional, and political factors (Ajefu & Ogebe, 2019).

When investigating the relevance of the link between financial inclusion and certain variables of interest, the vast majority of studies have used primary data gathering methods (Jacob & Innocent, 2019). Using account ownership, account savings, and high account activity (defined as three or more withdrawals each month) as dependent variables of financial indicators. They conclude that factors including lower banking charges, closer proximity to financial providers, and less documentation requirements for opening an account are related to a more enabling environment for accessing financial services (Ajefu & Ogebe,2019). Those who are younger, lower-income, unemployed, not in school, and/or live in rural areas are less likely to hold a bank account than their more urban counterparts. However, just one study reflects the MFBs on the African continent, despite the aforementioned studies (Islam, et al., 2019). The effect of microfinance banks on financial inclusion in Nigeria; nonetheless, they cannot be considered definitive due to several methodological flaws (Farhad, et al., 2019). First, there is no scholarly backing for the method used to gauge financial inclusion. Secondly. Additionally, it appears that the analysis method (OLS) is overly simplistic for the complexity of the study subject at hand.

Theoretical Framework

Financial Intermediation Theory

The Financial Intermediation Theory, proposed by Gurley and Shaw[PG1], explains how financial intermediaries connect deficit expenditure units with surplus spending units, enabling investors to give money to banks and borrowers. This theory explains why banks can fulfill delegated monitoring tasks, while intermediaries provide services by issuing secondary financial assets to buy primary financial assets, allowing investors to save money by bypassing intermediaries and buying original securities directly. Market friction in the financial sector can perpetuate poverty and economic inequality, such as information asymmetry and transaction costs (Li, 2018). The theory has faced criticism for its assumptions about financial intermediaries' primary role in reducing information asymmetry and transaction costs, the assumption that financial intermediaries operate solely for efficiency and risk reduction, and the narrow focus on banks and traditional financial institutions. Critics argue that the theory may oversimplify the relationship between savers and borrowers, overlooking the intricate nature of financial transactions and the varying motivations of participants. Financial Intermediation Theory is a crucial economic theory that focuses on the role of financial intermediaries in facilitating the flow of funds between savers and borrowers, affecting the total income dynamics of MSMEs. It is crucial for financial inclusion in Nigeria, as it emphasizes access to capital, risk management, information asymmetry, and affordability of financial services.

Empirical Review

The number of microfinance bank branches can be used as a factor to measure financial inclusion due to its direct correlation with the accessibility of financial services, particularly in underserved or remote areas (Patel, et al., 2021). The number of microfinance bank branches reflects the extent of financial service provision in different regions (Sulong & Bakar, 2018). A higher number of branches indicates a wider geographic coverage, suggesting that more people, especially those in rural or marginalized areas, have physical access to financial services (Makina & Walle, 2019).

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This is particularly important in regions where traditional banking infrastructure is limited or absent.

The proximity of microfinance bank branches to potential clients is crucial for financial inclusion. A higher number of branches means that individuals and businesses have easier access to banking services, reducing the barriers to entry such as travel time and costs (Makina & Walle, 2019). This increased accessibility can encourage more people to use formal financial services, leading to greater financial inclusion. The presence of microfinance bank branches also indicates the range of financial products and services available to clients. A diverse portfolio of services, including savings, loans, insurance, and payment services, can cater to the diverse needs of clients and promote their financial well-being (Okereke & Onyia, 2021). The establishment of microfinance bank branches in underserved areas often involves community engagement and outreach efforts. These efforts can include financial literacy programs, capacity-building initiatives, and partnerships with local organizations. The presence of branches, therefore, reflects not only physical access but also the efforts to promote financial inclusion through education and empowerment (Makina & Walle, 2019).

By tracking the growth in the number of microfinance bank branches over time, policymakers and researchers can assess the effectiveness of financial inclusion policies and initiatives (Makina & Walle, 2019). A steady increase in branches may indicate progress in expanding financial access, while stagnation or decline may signal the need for targeted interventions (Klapper, et al., 2020). The number of microfinance bank branches serves as a valuable empirical factor for measuring financial inclusion, providing insights into the accessibility, availability, and effectiveness of financial services in promoting economic empowerment and poverty alleviation (Patel, et al., 2021).

The services provided by MFBs affect those at the base of the economic pyramid in developing countries. Millions of low-income people in developing nations still lack access to financial services despite the success of several MFBs. The MFB sector has been unable to keep up with the astronomical demand because of high operational expenses and a lack of funding. Additionally, the demand for loans by the impoverished is not inelastic (Makina & Walle, 2019). It's possible that MFBs' inability to serve the poor is because of the exorbitant interest rates they charge. Competition and financial sustainability are being pushed as means to increase reach by donor agencies, local

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governments, and others. MFBs are a special breed of financial institution that operate in a way that differs from conventional banks in terms of both risk and return. MFBs aim to do more than just increase profits; they also work to alleviate poverty in their communities. Therefore, the structure of institutions and the movement of finance to MFBs have become far more pressing concerns.

The Grameen Bank, which pioneered microfinance methods and lending practices in the 1980s, inspired the establishment of MFBs around the world. However, microfinance has been around for millennia in various forms. Microfinance, in its early beginnings, relied on social capital to address issues such limited access to credit history and inadequate collateral. There has been both internal and external pressure on MFBs to reduce their reliance on government subsidies and grants in recent years. ACCION International is one such organization that exists to aid MFBs; it assists MFBs in securing equity and debt finance.

Allowing MFBs to establish direct connections with financial backers and commercial institutions. Over the past decade, ACCION has been instrumental in convincing donors to fund start-up expenditure alone and in insisting that MFBs adopt a business-first approach.

Subsidized external debts are contracted under favourable circumstances, that is, below market rates. These are also known as soft loans or concessionary borrowings. Aid organizations like USAID, multilateral institutions like the World Bank, and top-tier philanthropies are common sources of these resources. Subsidized equity financing, often known as soft equity, is primarily distributed through micro investment vehicles (Klapper, et al., 2020). Donors' predicted returns are below the current rate of return. Donations and monetary subsidies are another source of financial aid for MFBs, with the givers not anticipating any sort of return on their investment. Equity includes subsidized equity. There has been a call for domestic solutions for MFB financing, since some have questioned the viability of donor monies continuing to flood into the industry in the wake of credit shocks. It is becoming increasingly unlikely that governments would continue to subsidize microfinance banks (MFBs) even though they are desperately needed in many developing countries with weak local constitutions and make-up, poor governance, and high levels of corruption (Sulong & Bakar, 2018).

Since donor funds are finite, MFBs cannot grow to meet increasing demand for services if they must rely solely on these donations (Pham & Doan, 2020). Whether or not MFBs can resist

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demands to run effectively when they rely on donor cash is another open subject. As a result of the profit motive, commercially sponsored MFBs strive to maximize revenues while minimizing costs in order to generate enough income to pay all expenses. Donor-funded MFBs may ignore these calls for leaner operations or may prioritize service to low-income or rural customers at the expense of cost-cutting measures (Giné, et al., 2018).

ACCION is an organization that advocates MFB autonomy. ACCION's mission is to assist MFBs in transitioning from NGO to commercialized MFI operations and thereby becoming self-sustaining (Hasan & Hoque, 2021). The ACCION Gateway Fund LLC backs MFBs that have shown they can make money in the past.

Summary of Gap in Literature Reviewed

The Nigerian financial landscape is characterized by a complex interplay of formal and informal financial institutions. The existing research tends to overlook the impact of this dual financial system on MSBs' ability to leverage financial services effectively. Understanding how MSBs navigate this intricate financial ecosystem and identifying the barriers they face in accessing formal financial channels is crucial for designing targeted interventions that can genuinely enhance their performance. Given this discussion, there is a pressing need for research that bridges the existing gap in understanding the link between financial inclusion and the performance of micro-small businesses in Nigeria.

Methodology

The *ex-post facto* research design was utilised as a quantitative approach to explore the relationship between financial inclusion and performance of micro, small and medium enterprises in Nigeria. Data employed was sourced from CBN statistical bulletin, world development indicators spanning between 1992 and 2022. The Dynamic Ordinary Least Square (DOLS) technique of estimation was employed and robustness check conducted with the Fully Modified Ordinary Least Square method (FMOLS). DOLS outperforms both the OLS and the FMOLS estimators in finite samples in terms of unbiased estimation. The DOLS estimator also has an additional advantage in controlling the endogeneity in the model, as augmentation with the lead and lagged differences of the regressor

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suppress the endogenous feedback1. Thus, the DOLS estimation method provides a robust correction of endogeneity in the explanatory variables.

Model Specification

The study analysed the effect of financial inclusion on MSME performance in Nigeria. In measuring the performance of MSME in Nigeria, the study makes number of microfinance banks against MSME performance in Nigeria. The model is specified based on the objective of the study.

$$LNMSME_t = \beta_0 + \beta_1 LNMFB_t + \beta_2 INF_t + \beta_3 INT_t + \beta_4 LNEXC_t + \beta_5 LNGFCF_t + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.2$$

3

Where:

LNMSME = log of MSME performance measured by contribution of wholesale and retail trade to GDP

LNMFB = log of number of microfinance banks in Nigeria

INF = Inflation

EXC= log of exchange rate

INT= Interest Rate

LNGFCF = log of gross fixed capital formation

RESULTS AND DISCUSSION OF FINDINGS

Descriptive Statistics

	EXC	GFCF	INF	INT	MFB	SME
Mean	152.52	8.82e+12	18.59	18.49	885.35	6747.86
Median	132,15	8.64e+12	12.88	17.58	883.00	6360.81

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Maximum	399.96	1.14e+12	72.83	31.65	1368.00	11943.70
Minimum	17.30	6.86E+12	5.39	11.48	401.00	2363.61
Skewness	0.68	0.29	2.10	1.19	0.51	0.09
Kurtosis	2.62	1.99	6.37	5.53	5.42	1.27
Jarque Bera	2.55	1.77	37.59	15.58	8.93	3.91

Source: Authors' Computation (2024)

From the summary statistics presented above, it is evident that each of the variables have a positive mean value. Also, the standard deviation of each variable gives a more accurate and comprehensive estimates of dispersion, because an outlier can largely overstate the range of observations. The probability values of the Jarque–Bera statistics suggest the non-rejection of the null hypothesis, for most of the variables implying the normality of the residual. Finally, the minimum and maximum values describe each variable as it appears, in terms of the lowest and highest values in each series.

CORRELATION MATRIX

	EXC	**GFCF**	**INF**	**INT**	**MFB**	**MSME**
EXC	**1**					
GFCF	**0.73**	**1**				
INF	**-0.40**	**-0.46**	**1**			
INT	**-0.67**	**-0.59**	**0.51**	**1**		
MFB	**-0.03**	**0.06**	**0.27**	**-0.12**	**1**	

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MSME	**0.85**	**0.78**	**-0.41**	**-0.71**	**-0.01**	**1**

Source: Authors' Computation (2024)

The correlation coefficient ranges from -1 to +1, where -1 means a perfect negative correlation, +1 means a perfect positive correlation, and 0 means there is no correlation between the variables. In the matrix it is evident that the correlation between MFB and MSME is only -0.01, which shows that MFB is not a strong predictor of performance of MSME. EXC and GFCF have a strong positive correlation of 0.73, this means that EXC levels tend to influence GFCF.

Table 4.3: ADF Unit root test result

Variable	**ADF Test Statistic at level (I_0)**	**ADF Test Statistic at first difference (I_1)**	**Decision value**
LNEXC	-1.38	-5.37	I(1)
LNGFCF	-0.92	-9.66	I(1)
LNMFB	-4.95	--------	I(0)
LNMSME	-0.76	-3.02	I(1)
INF	-2.17	-4.46	I(1)
INT	-3.99	---	I(0)
CRITICAL VALUES			
1%	-3.621	-3.627	
5%	-2.943	-2.946	
10%	-2.609	-2.611	

Source: Authors' Computation (2024)

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The unit rot test is pivotal in order to ensure that the variables are estimated in their stationary forms to avoid spurious result. To do this, both the Augmented Dickey-Fuller (ADF) unit root tests is used. The essence of this is to test the null hypothesis of unit root or non-stationary stochastic process. To reject this, the ADF statistic must be more negative than the critical values 5% significance levels respectively. The study reports unit root test for all variables using Augmented Dickey- Fuller test. It was found that all variables are integrated of order one while microfinance branches and interest rate are stationary at levels.

Cointegration test result

Model	ADF-Statistic	Prob.
MSME/MFB, INF, INT, EXC, GFCF	-5.591	0.01

Source: Authors' Computation (2024)

The cointegration test is carried out on the residual and it shows the presence of cointegration, given that the ADF statistic is less than the 5% critical value for all the models analysed. For the regression results, models are estimated based on the FMOLS and DOLS techniques. However, the DOLS provides a more reliable estimate than the FMOLS given its control over endogeneity. The FMOLS result are for robustness.

Effect of Microfinance bank branches on SME Performance (DOLS)

Dependent Variable: MSME PERFORMANCE				
Variable	Coefficient	Standard Error	T-Statistics	Probability
LNMFB	0.20	1.58	0.13	0.90
INT	0.05	0.07	0.74	0.48
INF	-0.04	0.02	-2.09	0.07*
LNEXC	0.10	0.23	0.45	0.67
LNGFCF	3.44	1,29	2,66	0,03**
C	-95,51	31.55	-3.03	0.02**

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R^2 = 0.99

Adjusted $R^{2.}$ = 0.95

SE of regression. = 0.14

Source: Authors' Computation (2024)

The regression result presented above shows that financial inclusion measured by number of Microfinance bank branches has no significant relationship with MSME performance. However, inflation has significant and negative relationship with MSME performance at 1, 5 and 10 percent level of significance respectively. This means that a percentage increase in inflation will reduce SME performance by 0.04 percent. Conversely, a percentage increase in Gross fixed capital formation will increase SME performance by 3.44 percent.

Table 4.8: Robustness Check with FMOLS

Dependent Variable: MSME PERFORMANCE				
Variable	Coefficient	Standard Error	T-Statistics	Probability
LNMFB	0.38	0.71	0.53	0.90
INT	0.03	0.06	0.47	0.48
INF	0.03	0.07	0.45	0.07*
LNEXC	0.57	0.16	3.63	0.67
LNGFCF	1.77	0.96	1.84	0,03**
C	-49.75	26.51	-1.88	0.02**

R^2 = 0.74

Adjusted $R^{2.}$ = 0.69

SE of regression. = 0.36

Source: Authors' Computation (2024)

The FMOLS regression result presented above deviates from the DOLS, by showing significant effects by inflation and investment as measured by gross fixed capital formation on MSME performance.

Discussion of Findings

The result of regression analysis for the Effect of Microfinance bank branches on MSME Performance established that the number of microfinance bank branches have strong positive and statistically significant relationship with MSME performance. Conceptually, MSME performance exists objectively and independent of number of microfinance branches, the pragmatist assumption suggests that unobservable performance of MSME’s exist objectively and independently of number of microfinance bank branches and implying that performance of MSME’s can only be found or discovered through behavioural actions of SME executives[6]. The Adjusted coefficient of determination (Adj R^2) of 0.950 shows that number of microfinance bank branches explained 95% of the variation in performance of MSMEs in Nigeria while the remaining 5% variation in MSME performance is explained by other exogenous variable different from number of microfinance bank branches considered in this study. This result suggests that number of microfinance bank branches to MSME’s influence 95% of MSME performance in Nigeria.

Conclusion and Recommendations

Based on the empirical findings, this study concluded that the number of microfinance bank branches significantly influences performance of SMEs in Nigeria. Theoretically, the outcome of this study is in line with the financial intermediation theory which provided the theoretical underpinnings for this study. The theory was selected because their viewpoint relates to the variables under investigation. Based on the findings, the study recommends the following:

i. That the Federal Government of Nigeria through the central bank should consider increasing the number of microfinance institutions in the areas that need further development in the informal sector.

ii. However, the characteristics of the MSME, its strategy, and the broader macroeconomic environment should be considered to avoid conflict of interest.

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iii. Additionally, it is recommended that more has to be done in the areas of educating and enlightening the public on internet banking as it could also boost the performance of MSMEs positively.

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