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Financial Inclusion and the Informal Sector in Nigeria: A Study of North-Central Geo-Political Zone

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Abstract

The study examined the impact of financial inclusion on the informal sector in the North Central Geopolitical Zone. The study adopted a cross-sectional survey research design. The study obtained its data from primary sources as a questionnaire. Multiple regressions were employed to analyze the data. The result indicated that the level of financial inclusion has a positive and significant impact on economic activities in the informal sector in North-central Nigeria. The functionality of the payment system has a positive significant impact on financial inclusion in the informal sector in North central Nigeria. The effectiveness of the channels for delivering financial services has a positive and significant impact on financial inclusion in the informal sector in North Central Nigeria. The study concluded that financial inclusion has a significant impact on the informal sector in the study area. The study recommended amongst others the need to Introduce and promote mobile money services tailored to the needs of the informal sector. Launch targeted financial literacy campaigns to educate informal sector participants about the importance of savings, budgeting, and formal financial services.

Keywords: Effective channel, Financial inclusion, functionality of payment, informal sector
JEL Classification: E26, R51, O17

Contribution to/Originality Knowledge

1.0 Introduction

Financial inclusion is the deliberate policy of the government to make available or create access to banking services or other financial products by the unbanked population of an economy. The focus of financial inclusion is to provide banking services at affordable rates to the low-income parts of society especially to the unbanked section of the economy, mostly in the rural areas (Simatele & Maciko, 2022). Its importance stems from the potential it holds as an instrument for economic development. Furthermore, access to financial services allows the poor to save money outside the house, which helps in mitigating the risks that the poor face as a result of economic shocks.

One of the targets of financial inclusion in Nigeria is to reduce financial exclusion that is the number of unbanked populations to 20% by 2020. A survey conducted in Nigeria by Enhancing Financial Innovation and Access (EFInA) in (2008) revealed that about 53% of adults were excluded from financial services. The global pursuit of financial inclusion as a vehicle for economic development had a positive effect in Nigeria as the exclusion rate reduced from 53% in 2008 to 46.3 % in 2010. Financial inclusion in Nigeria has grown significantly from 56% in 2020 to 64% in 2023, financial exclusion rate has reduced from 32% in 2020 to 26% in 2023. Encouraged by the positive development, the Central Bank of Nigeria (CBN, 2024: EFInA, 2024).

The channels for delivering the above financial services were equally targeted to improve, with deposit money bank branches targeted to increase from 6.8 units per 100,000 adults in 2010 to 7.6 units per 100,000 adults in 2020, Microfinance bank branches to increase from 2.9 units to 5.5 units; ATMs from 11.8 units to 203.6 units, POSs from 13.3 units to 850 units, Mobile agents from 0 to 62 units, all per 100,000 adults between 2010 and 2020. The targets were based on benchmarking exercises carried out with peer countries, while also taking into consideration critical growth factors in the Nigerian environment (CBN, 2012).

These targets are expected to occur mostly in the informal sector in Nigeria. The informal sector covers a wide range of market activities. The informal sector engages in activities that are not easily measured and it cuts across a wide range of areas of informality – environmental, spatial, economic, and social, covering business activities, employment, market settlements, and neighbourhoods. These activities include casual jobs, subsistence agriculture, and unpaid jobs. In countries with high rates of population growth or urbanisation, the informal sector tends to absorb most of the growing labour force in urban areas. The informal sector in Nigeria is over 60% of the Gross Domestic Product (GDP) and employs about 51.9% of the workforce (CBN, 2017).

Due to the level of financial exclusion in the economy especially in the rural areas to formal banking services, most underbanked people in the population resort to informal financial markets. These informal financial markets engage in the mobilisation of capital resources from small savers and simultaneous allocation to meet the needs of borrowers outside the framework of the formal regulations. Informal financial markets have a large chain of followers and players including money lenders, rotating savings and credit associations, mobile savings collectors, and mutual assistance groups – landlords, neighbours, friends, and family members who are active in financial intermediation.

Given the above, the problem, therefore, is that the presence of informal financial markets is an aberration because most of their activities are not captured in official records and thus are not reflected in the total aggregate output of the economy (Bakare, 2023). This reveals that the existence of financial markets is an indication that some segments of the population's financial needs are not met by the formal institutional arrangement and thus they have filled the void by patronizing informal channels. This hampers the effectiveness of monetary management as large amounts of money would be outside the control of the CBN. In addition, government policies are normally formulated on the basis of the formal sector, and due to the exclusion of the informal sector, the desired results are usually not achieved (Omri, 2020). This also shows that a large number of individuals and businesses do not have access to financial services such as payment systems and credit facilities which has directly and indirectly hampered the growth of economic activities in Nigeria (Saranu, et al, 2024). This study investigated the impact of financial inclusion on the informal sector in North-Central Nigeria. This paper was divided into five sections. Section 1 was the introduction, section 2 was the review of literature, the theoretical framework and empirical review of literature. Section 3 was the methodology, Section 4 was the result presentation and discussion of findings and section 5 is the conclusion and recommendations.

2.0 Review of Related Literature

2.1 Conceptual Framework

Financial inclusion means that adults have access to financial services and can effectively use a range of appropriate financial services. Such services must be provided responsibly and safely to the consumer and sustainably to the provider in a well-regulated environment (Demirguc-Kunt et al., 2015). At its most basic level, financial inclusion starts with having a deposit or transaction account at a bank or other financial institution or through a mobile money service provider, which can be used to make and receive payments and to store or save money.

Financial inclusion also encompasses access to credit from formal financial institutions that allow adults to invest in educational and business opportunities, as well as the use of formal insurance products that allow people to better manage financial risks (Berhanu-Lakew & Azadi, 2020)

Financial inclusion is defined as "the process of ensuring access to financial services and timely and adequate credit when needed by vulnerable groups such as the weaker sections and low-income groups at an affordable cost by mainstream financial institutions players". Financial services do not mean only banking products, but a host of other financial services like credit, insurance, and other types of equity products (Center for Financial Inclusion, 2024)

2.2 Theoretical Framework

The Vulnerable Group Theory of financial inclusion advocates tailoring financial initiatives to those most susceptible to economic hardship, such as the impoverished, youth, women, and elderly. This targets the integration of marginalized groups into formal financial systems, often achieved through government-to-person cash transfers into bank accounts. By incentivizing participation in formal finance among vulnerable demographics, inclusion rates can improve, mitigating income inequality's impact and fostering societal belonging. However, focusing solely on vulnerable groups may neglect non-vulnerable individuals outside the formal financial sector, potentially perpetuating exclusion. Additionally, characterizing women as inherently vulnerable overlooks gender dynamics, risking stereotype reinforcement and hindering broader gender equality efforts. Overprioritizing resources for vulnerable groups could exacerbate social and income inequalities, fostering resentment and further marginalization.

2.3 Empirical Studies

Cama et al. (2024) investigated the correlation between the informal sector and financial inclusion across 186 countries from 2004 to 2018, employing diverse estimation methods such as ordinary least squares, instrumental variables, fixed effects, and general method of moments.

Their findings reveal a significant reduction in the size of the shadow economy due to increased financial inclusion, evident through various indicators of financial service access and usage. These results remain robust even when controlling for income levels, underscoring the efficacy of financial inclusion in mitigating informality. Policy recommendations focus on enhancing financial infrastructure and fostering inclusive financial environments to effectively combat informality, advocating for dynamic, long-term strategies to sustain financial inclusiveness.

Sherwani et al. (2023) conducted an analysis of the determinants of financial inclusion among women-owned informal enterprises in India. Through a primary survey of 321 informal enterprises and employing chi-square tests and logistic regression models, they identified significant associations between business duration, resource capability, ICT usage, and financial inclusion. Notably, longer business duration and greater ICT utilization were negatively correlated with financial inclusion, highlighting the importance of addressing these factors to enhance financial access among women-owned informal enterprises.

Djaowe and Ako-Tiku (2022) assessed the impact of Mobile Money on the financial inclusion of rural women in the informal sector, administering questionnaires to 98 participants and analyzing data using SPSS software and binary logistic regression tests. Their findings indicate that Mobile Money positively influences the financial education and income of rural women in the informal sector, emphasizing the need to leverage mobile finance tools to promote financial inclusion among marginalized groups.

Kede and Zogning (2022) examined the effect of access to various financial products on reducing income inequalities between men and women in the informal sector in Cameroon, utilizing datasets from the World Bank and the National Institute of Statistics. Their empirical results underscore the persistent income inequalities between genders and highlight significant gaps in accessing credit, particularly disadvantaging women in informal activities. Policy recommendations emphasize the importance of economic policies to improve credit access and expand the use of mobile financial services among women in the informal sector to mitigate income inequality.

Kelikume (2021) explored the relationship between mobile phones, the internet, financial inclusion, the informal economy, and poverty reduction across 42 African countries from 1995 to 2017, employing the system generalized method of moments approach. Their findings suggest significant positive relationships between mobile penetration, internet usage, financial inclusion, the informal economy, and poverty reduction, underscoring the role of technological advancements and financial inclusion in socio-economic development.

Vos et al. (2018) investigated the effectiveness of current financial education and consumer protection efforts in enhancing the financial inclusion of entrepreneurs in the informal sector of the South African economy. Through qualitative research methodologies, they found evidence supporting the notion that effective delivery of financial and consumer protection initiatives promotes the financial inclusion of informal businesses. Based on their findings, they recommended the adoption of Fintech-based financial education solutions to enhance accessibility and impact assessment in addressing financial inclusion gaps.

Irannkunda (2017) examined financial inclusion among street vendors in Kigali, Rwanda, through a mixed-methods approach, combining quantitative surveys with qualitative interviews. Their results revealed varying levels of financial inclusion among street vendors, influenced by factors such as the presence of financial institutions in their villages, gender, education level, and barriers like limited capital and financial illiteracy. The study recommends tailored approaches to address barriers to financial inclusion and promote inclusive economic development among street vendors.

3.0 Methodology

3.1 Research design.

This study adopted a cross-sectional survey research design. A cross-sectional survey research design is a methodological approach used in social science research to gather data at a single point in time from a sample population. In this design, researchers collect information on variables of interest from individuals or entities within the population simultaneously. The primary objective of a cross-sectional survey is to examine the current status, characteristics, attitudes, behaviours, or opinions of the study population regarding specific research questions.

This design enables researchers to obtain a snapshot of the population's characteristics or phenomena of interest at a particular moment, allowing for the analysis of relationships between variables and making comparisons across different groups within the population. Cross-sectional surveys are often conducted using structured questionnaires or interviews to gather data efficiently from a large and diverse sample.

3.2 Description of the study area.

North Central Nigeria is a region in Nigeria, often referred to as the Middle Belt. It is one of the six geopolitical zones in the country, comprising states such as Benue, Plateau, Niger, Kwara, Kogi, Nassarawa, and the Federal Capital Territory (Abuja). Here's a brief description of the region. The region is also intersected by major rivers like the Niger and Benue, which provide water for agriculture and support various ecosystems. The climate in North Central Nigeria is predominantly tropical, with distinct wet and dry seasons. The rainy season typically lasts from April to October, while the dry harmattan season occurs from November to March. Temperatures can vary widely, with hotter conditions in the dry season and cooler temperatures during the rainy season. The region is known for its ethnic diversity, with various indigenous ethnic groups such as the Tiv, Nupe, Igala, Ebira, Idoma, and others. This diversity contributes to the rich cultural tapestry of the area, with different languages, traditions, and practices observed among the communities.

3.3 Data and sources

The study relied on both primary and secondary sources of data for the analysis. Primary data was sourced through the use of questionnaires to achieve the objectives of the study. The secondary data were sourced from the Central Bank statistical bulletins and National Bureau of Statistics websites.

3.4 Population of the study

The population of this study comprised all adults in North Central Nigeria (Benue, Kogi, Kwara, Nasarawa, Niger, Plateau, and Abuja) who work in the informal sector. The population of the study was justified since the study focused on financial inclusion and the informal sector in North Central Nigeria.

3.5 Sample size

The sample of this study comprised 700 participants from the informal sector across various states in North Central Nigeria. A purposive sampling technique was used where 100 participants in the informal sector were purposively selected in each State making the total of 700 participants that were used in this study

3.6 Instruments of data collection

A questionnaire was designed and administered to all the participants for the study to obtain the data. The questionnaire is made up of two parts. The first part was the demographic information of the respondents while the second part contained 20-item questions on financial inclusion and the informal sector in North Central Nigeria using a Likert scale for the respondents to choose from Reliability and validity of the instruments

The reliability of the instruments was established using Cronbach Alpha and a coefficient of 0.782 was obtained indicating that the instrument was reliable. The face validity of the instrument was established by two experts in economics.

3.8 Model Specification

In line with the work of Cama et al. (2024) investigating the correlation between the informal sector and financial inclusion across 186 countries from 2004 to 2018. The model for this study can be specified as follows

$$EA = \beta_0 + \beta_1 LFI + \mu_{it} \quad (1)$$

Where;

EA= Economic activities

Level of financial inclusion

β0=Intercept

μ=error term

$$FI = \beta_0 + \beta_1 FPS + \beta_2 ECDFS + \mu_{it} \quad (2)$$

Where;

FI=Financial Inclusion

FPS= Functionality of payment system

ECDFS= Effectiveness of the channels for delivering financial services

$\beta 0$=Intercept

μ=error term

3.9 Variables and their Units of measurement

Level of Financial Inclusion: This typically includes indicators such as the percentage of adults with access to formal financial services (bank accounts, credit, insurance), the percentage of the population with savings, borrowing, and insurance mechanisms, and the proportion of people using digital financial services. These indicators are often measured in percentages or ratios. For example, the percentage of adults with bank accounts, the percentage of GDP represented by credit to the private sector, or the percentage of adults with access to insurance services.

Economic Activities: Economic activities can encompass a wide range of indicators such as GDP (Gross Domestic Product), employment rates, labor force participation rates, investment levels, consumption patterns, and industrial output. GDP is typically measured in monetary units such as dollars or the local currency (e.g., Nigerian Naira). Employment rates and labor force participation rates are measured in percentages. Investment levels can be measured in monetary units or as a percentage of GDP.

Functionality of Payment Systems: This includes indicators such as the availability and accessibility of payment infrastructure (ATMs, POS terminals), the efficiency of payment processing (transaction speed, reliability), the variety of payment methods (cash, cards, mobile money), and the security of transactions. Availability and accessibility can be measured by the number of ATMs or POS terminals per capita or per square kilometer. Efficiency can be measured in terms of transaction processing time (e.g., seconds per transaction). Security can be measured by the incidence of fraud or unauthorized transactions.

Effectiveness of Channels for Delivering Financial Services: This includes indicators such as the reach and penetration of different delivery channels (branches, agents, mobile banking), the convenience and usability of these channels, and the satisfaction levels of users. Reach and penetration can be measured by the number of bank branches or agents per capita or per geographic area. Convenience and usability can be assessed through user surveys or usability testing. Satisfaction levels can be measured using satisfaction scores or indices.

3.10 Method of data analysis

The study used descriptive and inferential statistics in its analysis as the variables were described using tables depicting frequencies of occurrence, afterwards test of associations was conducted to reach valuable conclusions about the variables studied.

The descriptive statistics are shown under the demography of respondents, it also involved the use of simple percentages, to analyse the data obtained from the primary sources /questionnaires with the aid of SPSS version 23. These techniques were justified since they helped to achieve the objectives of the study

The inferential statics such as; simple regression and multiple regressions were used to analyze the data collected to test the hypothesis of the study.

4.0 Results, Presentation and Discussions

In this study, seven hundred (700) sample respondents were used. This involved selected 100 participants in each of the six states in north central Nigeria and the federal capital territory Abuja Nigeria. The questionnaires distributed are summarized in Table 1 below:

TABLE 1: Analysis of Responses from the Questionnaire

Questionnaires	**No. of Respondents**	**Percentage (%)**
Questionnaire distributed	700	100
Questionnaire retrieved	583	83.29
Un-retrieved Questionnaire	117	16.71
Wrongly filled Questionnaire	90	12.86
The questionnaire used in the analysis	493	70.43

Source: Authors Fieldwork 2024

Generally,700 questionnaires were administered to the selected 100 participants in each of the six states in north central Nigeria and the federal capital territory Abuja Nigeria for the study. From the total questionnaires distributed, 583 (83.29%) were retrieved while 117(16.71%) were not retrieved because every effort to collect them from the respondents failed. 90(12.86%) questionnaires retrieved were wrongly filled, and thus not used for analysis. Therefore, 493(70.43%) of the total questionnaires were used in the analysis of this study.

4.2 Results of Demographic Characteristics of Respondents

Table 2: Demographic Characteristics of the Respondents

Statement of Items		**Frequency**	**Percentage (%)**
Gender	Male	297	60.2
	Female	196	39.8
	Total	**493**	**100.0**
Marital status	Single	121	24.5
	Married	232	47.1
	Widow	77	15.6

	Separated	21	4.3
	Divorce	42	8.5
	Total	**493**	**100.0**
Age Range	Single	121	24.5
	Married	232	47.1
	Widow	77	15.6
	Separated	21	4.3
	Divorce	42	8.5
	Total	493	100.0
Educational Qualification	FSLC	61	12.4
	SSCE	211	42.8
	NCE/ND	99	20.1
	HND/B.SC	57	11.6
	M.SC/PH.D	22	4.5
	Others	43	8.7
	Total	**493**	**100.0**
Business Area	Trading	129	26.2
	Farming	231	46.9
	Hunting	27	5.5
	Mining	31	6.3
	Craft/Handwork	43	8.7
	Others	32	6.5
	Total	**493**	**100.0**

Fieldwork, 2024.

Table 2 on gender revealed that 60.2% of the respondents were male while 39.8% of them were female. This implies that the majority of the respondents were male. This may not be unconnected to the fact that the informal sector in North central Nigeria. On the Marital status of the respondent, 24.5% of the respondents were single while 47% were married, 15.6% were widows, 4.3% were separated, and 8.5% were divorced. This implies that the majority of the respondents were married. On the age of respondents, out of 493 respondents used in this study, 17.8% of them are between 18-29 years. 29.2% were between 30 - 39years; 31.6% were between 40-49years, 13.4% were between 50-59years and 7.9% were 60 years and above. The majority of the respondents were between 40 and 49 years old, this implies that the majority of the respondents were mature to provide reliable data.

On the educational qualification of the respondents, 12.4% had FSLC, 42.8% had SSCE, 20.1% had NCE/ND, and 11.6% had HND/B.SC, 4.5% had M.SC/Ph.D and 8.7% had other qualifications such as trade test certificates, adult literacy certificates, and Islamic education. This implies that the majority of the respondents had SSCE and were experienced to provide reliable data. On the business area of the respondents, 26.2% of the respondents were in trading, 46.9% were in farming, 5.5% were in hunting, 6.3% were in mining, 8.7% were in craft/handwork and 6.5% were in others such as petty-petty business. This implies that the majority of the respondents were in farming because farming has the largest number of people in the informal sector.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.915[a]	.838	.838	.579	1.847

Source: Authors' Computations SPSS 23.0

From the result in Table 3, which shows the summary of the model, the r=0.915 indicated that the correlation coefficient between the level of financial inclusion and economic activities in the informal sector in North-central Nigeria is 91.5%. Thus, there is a strong positive correlation between the level of financial inclusion and economic activities in North-central Nigeria. The R Square of 0.838, indicated that 83.8% of the variation in the dependent variable(economic activities) can be accounted for by the independent variable(level of financial inclusion), and only 16.2% of the variation can be accounted for by error term. This implies that the model is a good fit. The Durbin-Watson statistics of 1.85, which is approximately 2 indicated that there is no auto-correlation.

Table 4: F-statistics

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	851.627	1	851.627	2542.268	.000[b]
	Residual	164.479	491	.335		
	Total	1016.105	492			

Source: Authors' Computations SPSS 23.0

Table 4 shows the f-statistics of the model, the f. statistics shows the joined effect of the independent variables on the dependent variable, the f-statistics is 851.627 and the p-value of the f-statistic is 0.000, this indicates that the f-statistic is significant

Table 5: The regression Result

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-.240	.082		-2.940	.003
	LFI	.974	.019	.915	50.421	.000

Source: Authors' Computations SPSS 23.0

Table 5 shows the regression result, From the result, the coefficient of the level of financial inclusion(LFI) was 0.971 and the p-value is 0.000<0.05. Thus, we reject the null hypothesis and accept the alternative hypothesis. We then conclude that the level of financial inclusion has a positive and significant impact on economic activities in the informal sector in North-central Nigeria.

Table 6 **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.987[a]	.974	.974	.21093	2.055

Source: Authors' Computations SPSS 23.0

From the result in Table 6, which shows the summary of the model, the r=0.987 indicated that the correlation coefficient between the functionality of the payment system, effectiveness of the channels for delivering financial services, and financial inclusion in North-central Nigeria is 98.7%. Thus, there is a strong positive correlation between the functionality of the payment system and financial inclusion in the informal sector in North-central Nigeria. The R Square of 0.974, indicated that 97.4% of the variation in the dependent variable(financial inclusion) can be accounted for by the independent variables (functionality of payment system and effectiveness of the channels for delivering financial services), only 2.6 % of the variation can be accounted to error term. This implies that the model is a good fit. The Durbin-Watson statistics of 2.055, which is approximately 2 indicated that there is no auto-correlation.

Table 7: F. Statistics

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	824.483	2	412.241	9265.454	.000[b]
	Residual	21.801	490	.044		

Total	846.284	492

Source: Authors' Computations SPSS 23.0

Table 7 shows the f-statistics of the model, the f. statistics shows the joint effect of the independent variables on the dependent variable, the f-statistics is 9265.454 and the p-value of the f-statistic is 0.000, this indicates that the F-statistic is significant.

Table 8: The regression Result

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	.120	.029		4.172	.000
	FPS	.402	.053	.381	7.531	.000
	ECDFS	.641	.053	.609	12.030	.000

Source: Authors' Computations SPSS 23.0

Table 8 shows the regression result, From the result, the coefficient of the functionality of payment system (FPS) was 0.402 and the p-value is 0.000<0.05. Thus, we reject the null hypothesis and accept the alternative hypothesis. We then conclude that the functionality of the payment system has a positive significant impact on financial inclusion in the informal sector in North Central Nigeria.

Table 8 shows the regression result, From the result, the coefficient of the effectiveness of the channels for delivering financial services (ECDFS) was 0.641 and the p-value is 0.000<0.05. Thus, we reject the null hypothesis and accept the alternative hypothesis. We then conclude that the effectiveness of the channels for delivering financial services has a positive and significant impact on financial inclusion in the informal sector in North central Nigeria.

4.3 Discussion of Major Findings

The result indicated that the level of financial inclusion has a positive and significant impact on economic activities in the informal sector in North-central Nigeria. The findings of the study underscore the critical role of financial inclusion in driving economic activities within the informal sector of North-central Nigeria. By providing access to financial services such as credit, savings, and insurance, individuals and businesses operating in the informal sector can better manage their finances, invest in productive assets, and expand their operations. This access to finance stimulates economic growth, creates employment opportunities, and ultimately contributes to poverty reduction by empowering individuals to participate more actively in economic activities. These findings agreed with the work of Cama et al (2024) that financial inclusion significantly reduces the size of the shadow economy through indicators of access and usage of financial services

The finding revealed that the functionality of the payment system has a positive significant impact on financial inclusion in the informal sector in North central Nigeria. Furthermore, the functionality of payment systems emerges as a pivotal factor in enhancing financial inclusion within the informal sector. Efficient and accessible payment systems enable individuals and businesses to conduct transactions seamlessly, fostering trust and confidence in financial services. In North-central Nigeria, where a significant portion of economic activities occur within the informal sector, the availability of reliable payment systems facilitates business transactions, promotes savings mobilization, and encourages participation in the formal financial system. These findings agreed with the work of Kelikume (2021) that mobile penetration and internet usage play significant roles in the relationship between financial inclusion and the informal economy

The finding indicated that the effectiveness of the channels for delivering financial services has a positive and significant impact on financial inclusion in the informal sector in north-central Nigeria. Moreover, the effectiveness of channels for delivering financial services emerges as another key determinant of financial inclusion in North-central Nigeria's informal sector. Utilizing appropriate channels such as mobile banking, agent banking, and digital financial platforms can bridge the gap between financial service providers and underserved populations in remote areas. These channels not only improve accessibility but also reduce transaction costs and enhance convenience, thereby encouraging greater adoption of financial services among individuals and businesses operating in the informal economy. Overall, the study underscores the importance of policies and interventions aimed at strengthening financial inclusion by addressing barriers to access, enhancing payment system functionality, and optimizing delivery channels for financial services within North-central Nigeria's informal sector. These findings agreed with the work of Djaowe and Ako-Tiku (2022) that mobile finance, mobile wallet, and mobile payment positively accelerate the access of rural women in the informal sector of Yagoua to financial services.

5.0 Conclusion and Policy Recommendations

This study underscores the pivotal role of financial inclusion in driving economic activities within the informal sector of North-Central Nigeria. The findings affirm that a higher level of financial inclusion positively impacts economic dynamics in this region, highlighting the importance of accessible financial services to informal sector participants. Moreover, the functionality of payment systems emerges as a critical factor in enhancing financial inclusion, emphasizing the need for reliable and efficient channels for conducting transactions. Additionally, the effectiveness of channels for delivering financial services emerges as a significant determinant, indicating that the accessibility and usability of such channels are instrumental in expanding financial inclusion. As Nigeria seeks to bolster its informal sector and foster economic growth, policymakers, and financial institutions must prioritize strategies that promote broader access to financial services and strengthen payment systems to catalyze inclusive economic development in the North-Central region. The study concluded that financial inclusion has a significant impact on the informal sector in the study area

Based on the findings the following recommendations were made;

1. There is a need to introduce and promote mobile money services tailored to the needs of the informal sector. Collaborate with telecom companies to expand network coverage and enhance the accessibility of mobile financial services in rural and peri-urban areas. Simplify registration processes and provide training to ensure widespread adoption among informal sector participants.
2. There is a need to encourage the establishment of community-based financial institutions such as savings and credit cooperatives (SACCOs) and village savings and loan associations (VSLAs). These institutions can provide small-scale loans, savings facilities, and financial education to individuals and small businesses operating in the informal sector. Government support in terms of regulatory frameworks and capacity building can facilitate their growth and sustainability.
3. There is a need to launch targeted financial literacy campaigns to educate informal sector participants about the importance of savings, budgeting, and formal financial services. Workshops, seminars, and information sessions can be organized in local languages and tailored to the specific needs and challenges faced by informal sector workers. Empowering individuals with financial knowledge will enable them to make informed decisions and effectively utilize available financial services.
4. There is a need toto collaborate with microfinance institutions (MFIs) and non-governmental organizations (NGOs) to increase access to credit for informal sector entrepreneurs. Provide financial support for MFIs to expand their operations and offer affordable microcredit products to small businesses and self-employed individuals. Simplify loan application processes and establish mechanisms to accept alternative forms of collateral such as group guarantees or asset financing.
5. There is a need to review and streamline regulations governing the informal sector to reduce barriers to entry and promote formalization. Develop policies that recognize and accommodate the unique characteristics of informal businesses while ensuring consumer protection and financial stability. Engage stakeholders including government agencies, financial institutions, and informal sector representatives in the regulatory reform process to ensure inclusivity and relevance.

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