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Promotion of Micro, Small and Medium Enterprises for The Revival of Rural Economies in Etche Local Government Area, Rivers State, Nigeria

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***Abstract* – Micro, Small and Medium Enterprises (MSMEs) are widely recognised as important drivers of economic growth, job creation, and sustainable development, especially in rural communities where formal employment opportunities are scarce. This study explored how financial inclusion, government policy support, and technology adoption influence MSME growth and contribute to the revival of rural economies in Etche Local Government Area, Rivers State, Nigeria. A convergent parallel mixed-methods approach was adopted. For the quantitative component, structured questionnaires were administered to 150 MSME operators. The data were analysed using descriptive statistics and multiple linear regression. Complementing this, qualitative insights were gathered through semi-structured interviews with 12 key stakeholders and examined using thematic analysis. The regression results revealed that all three factors had statistically significant positive effects on MSME growth. Technology adoption emerged as the strongest predictor ($\beta = 0.612$, $p < 0.001$), followed by government policy support ($\beta = 0.311$, $p = 0.047$) and financial inclusion ($\beta = 0.287$, $p = 0.049$). Collectively, these variables accounted for 58.4% of the variance in MSME growth ($R^2 = 0.584$, Adjusted $R^2 = 0.575$, $F = 68.42$, $p < 0.001$). The study concludes that technology adoption stands out as the most powerful driver of MSME performance in the study area. It recommends integrated interventions aimed at improving digital infrastructure, expanding financial inclusion, and strengthening policy implementation to foster sustainable rural economic revival in Etche and similar communities across Nigeria.**

***Keywords* – Rural Economy; Financial Inclusion; Technology Adoption; Government Policy; Rural Development.**

I. INTRODUCTION

Background of the Study

Micro, Small and Medium Enterprises (MSMEs) are widely acknowledged as key drivers of economic growth, job creation, innovation, and poverty alleviation in both developed and developing economies. Their ability to create jobs, stimulate entrepreneurship, and support local production systems makes them essential components of inclusive economic development. In emerging economies, MSMEs often serve as important mechanisms for income generation and economic participation, particularly among vulnerable groups who have limited access to formal employment. Their ability to be flexible and quickly adapt allows them to respond quickly to market changes and contribute to innovation-driven development (Chibueze, 2022; Mahfud, 2025; David et al., 2026; Akhmetgareeva et al., 2025; Arora, 2025).

In developing countries, MSMEs play a particularly important role in strengthening local economic structures by promoting value creation, supporting supply chains, and improving household livelihoods. However, despite their recognised economic significance, many MSMEs continue to face growth limitations due to institutional weaknesses, limited access to resources, andoperational constraints. Research consistently shows that the survival and competitiveness of MSMEs are strongly influenced by their ability to access financial resources, adopt technological innovations, and operate within supportive policy environments (Musthafa et al., 2023; Mladenova et al., 2025; Bilal et al., 2025; Wang & Zhang, 2025).

In Nigeria, MSMEs represent a major component of private-sector activity and contribute substantially to employment creation and economic diversification. They operate across multiple sectors, including agriculture, manufacturing, trade, transportation, hospitality, and services, providing livelihood opportunities for millions of people. Nevertheless, empirical studies have shown that many Nigerian MSMEs remain constrained by inadequate financing, poor infrastructure, limited managerial capabilities, and restricted access to markets, all of which negatively affect their productivity and long-term sustainability (Okoyan & Keremah, 2026; Samira & Yakubu, 2018; Musthafa et al., 2023).

The contribution of MSMEs becomes even more significant in rural communities, where formal employment opportunities are limited, and agriculture remains the dominant economic activity. In these settings, rural enterprises provide alternative income sources through agro-processing, retail activities, transportation services, hospitality, and various artisan businesses. By creating employment, increasing local production, and supporting value addition to agricultural products, rural MSMEs contribute to poverty reduction and greater economic resilience at the community level. Studies have demonstrated that strengthening rural enterprises can improve household welfare and encourage broader participation in economic activities among rural populations (Meyer et al., 2022).

Despite their recognised importance, rural MSMEs in Nigeria continue to face constant challenges that restrict their ability to drive sustainable economic transformation. Access to finance continues to be one of the most critical constraints facing MSMEs. Many small businesses find it difficult to secure affordable credit because of strict collateral requirements, high transaction costs, and the

limited presence of financial services in rural areas. This financial exclusion restricts their capacity to invest in expansion, acquire productive assets, and enhance overall operational efficiency (Eweroke, 2025; Akintayo et al., 2025).

Beyond financial limitations, inadequate infrastructure and weak digital connectivity continue to constrain MSME development. The increasing importance of digital technologies has created new opportunities for enterprises to improve efficiency, access wider markets, and enhance competitiveness through digital payment systems, online marketing, and technology-enabled business processes. However, many rural MSMEs in developing economies face difficulties adopting these digital solutions due to limited digital skills, unreliable internet infrastructure, and high costs associated with technology adoption (Verhoef et al., 2021; Edim et al., 2025). Digital transformation therefore represents both opportunity and challenge for rural enterprises seeking sustainable growth.

Government policy support also remains a critical factor influencing MSME performance. Effective policies relating to taxation, enterprise development programmes, infrastructure provision, and access to financial incentives can create enabling environments for business growth. However, research indicates that the effectiveness of such policies is often undermined by poor implementation, bureaucratic procedures, limited awareness among entrepreneurs, and weak coordination between government agencies and business communities (David et al., 2026; Aremu et al., 2023).

These challenges are relevant in Etche Local Government Area of Rivers State, where MSMEs represent important contributors to local economic activities. Despite the area's rich agricultural resources and entrepreneurial potential, many rural enterprises continue to face significant obstacles, including limited access to finance, inadequate infrastructure, low technology adoption, and weak institutional support.

Such constraints restrict their ability to expand operations, create sustainable employment, and contribute meaningfully to rural economic revival. Consequently, examining the combined influence of financial inclusion, government policy support, and technology adoption on MSME growth is essential for formulating effective strategies that can drive sustainable rural economic transformation in Etche Local Government Area.

Statement of the Problem

Although Micro, Small and Medium Enterprises (MSMEs) are broadly acknowledged as primary engines of job creation, income generation, and rural economic advancement, numerous rural communities in Rivers State still encounter slow economic progress, reduced business productivity, and constrained private-sector growth. Within Etche Local Government Area, MSMEs confront ongoing obstacles including poor infrastructure, limited financial access, inadequate institutional backing, and minimal technology uptake. These barriers substantially hinder the ability of rural businesses to scale up and contribute effectively to local economic advancement (Nwabuatu, 2024; Udeh, 2025).

While various government programmes and financial inclusion initiatives have been introduced to support enterprise development, their impact on rural MSMEs has remained modest. Interventions are often implemented in isolation rather than as part of a comprehensive strategy. Recent evidence from Niger State shows that although digital financial services are expanding, digital financial inclusion among MSME operators continues to be constrained by low financial literacy, inadequate digital infrastructure, and limited access to suitable financial products (DikoKoce et al., 2025).

Similarly, although technology adoption is recognised as a key driver of competitiveness, many rural businesses in Rivers State still operate with minimal digital tools due to inadequate infrastructure, limited digital skills, and financial barriers (Nwabuatu, 2024).

The fundamental challenge, therefore, is not merely the scarcity of finance, inadequate policies, or limited technology adoption in isolation, but the lack of a coordinated strategy that effectively integrates these components to stimulate rural enterprise expansion and economic renewal. Although earlier research has explored these factors independently, there remains a scarcity of empirical evidence on their joint impact on MSME performance and rural economic revitalisation, particularly within Etche Local Government Area.

This study fills that gap by examining how financial inclusion, government policy support, and technology adoption jointly shape MSME growth and contribute to the revitalisation of rural economies in the study area.

Research Objectives

The study seeks to achieve the following objectives:

1. To determine the influence of technology adoption on MSME growth in Etche Local Government Area.
2. To evaluate the impact of government policy support on MSME performance in Etche Local Government Area.
3. To assess the effect of financial inclusion on the revival of rural economies in Etche Local Government Area.

Research Questions

The research questions of the study are:

1. What influence does technology adoption have on MSME growth in Etche Local Government Area?
2. What impact does government policy support have on MSME performance in Etche Local Government Area?
3. What effect does financial inclusion have on the revival of rural economies in Etche Local Government Area?

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II. METHODS

Research Design

This study employed a convergent parallel mixed-methods research design to investigate the impact of financial inclusion, government policy support, and technology adoption on MSME growth and rural economic revitalisation in Etche Local Government Area, Rivers State. Quantitative and qualitative data are gathered simultaneously, examined independently, and subsequently merged during the interpretation stage to offer a more comprehensive insight into the research problem (Creswell & Plano Clark, 2018; Shorten & Smith, 2017).

The choice of a mixed-methods approach was motivated by the complex and multidimensional character of rural MSME development. While quantitative data can establish relationships between variables, qualitative insights are essential for capturing the lived experiences, contextual realities, and underlying reasons that explain those relationships. By integrating both approaches, the study moves beyond determining whether these factors influence MSME growth to also examining how and why they are significant in the everyday experiences of rural entrepreneurs.

The quantitative component concentrated on examining the statistical relationships between the independent variables (financial inclusion, government policy support, and technology adoption) and the dependent variable of MSME growth and rural economic revival. Data were gathered through structured questionnaires and subsequently analysed using descriptive statistics and multiple linear regression.

The qualitative strand, on the other hand, explored the perspectives and experiences of key stakeholders through semi-structured interviews. This component provided deeper insight into practical issues such as barriers to financial access, the effectiveness of government programmes, challenges with technology adoption, and the role of infrastructure in supporting rural enterprises.

The convergent parallel design was appropriate for this study, as it enables findings from both data sources to be compared and integrated. For instance, while regression analysis may indicate that technology adoption is a strong predictor of MSME growth, qualitative accounts can clarify how digital tools assist businesses in overcoming infrastructural constraints or expanding their customer base. This integration enhances the overall credibility of the findings through methodological triangulation and provides an understanding of the factors influencing rural MSME development.

The convergent parallel mixed-methods design is well suited to the study's objectives, as it captures both the measurable effects and the contextual realities of MSME performance in Etche Local Government Area. This approach offers a more robust empirical foundation for the conclusions and recommendations advanced in the study.

Population of the Study

The target population for this study comprised all registered and unregistered Micro, Small and Medium Enterprises (MSMEs) operating in Etche Local Government Area of Rivers State. These enterprises cut across multiple sectors, including agriculture, agro-processing, retail trade, transportation, hospitality, and other small-scale commercial activities that form part of the rural economy.
For the qualitative component, the population comprised individuals with substantial knowledge of and involvement in MSME development and community economic activities, such as community leaders, cooperative society executives, market association officials, and trade union representatives.

Sample Size and Sampling Technique

A sample of 150 MSME operators was drawn for the quantitative phase through simple random sampling. This approach ensured that every eligible MSME operator had an equal opportunity of selection, thereby minimising bias and enhancing the representativeness of the findings.

For the qualitative phase, 12 key informants were purposively chosen based on their knowledge, experience, and active engagement in MSME development and rural economic activities within the area. These participants comprised community leaders, cooperative heads, market association executives, and trade union officials capable of offering rich, practical insights.

Data Collection Instruments

Quantitative data were collected using a structured questionnaire that was developed from existing literature on financial inclusion, government policy support, technology adoption, and MSME performance. The instrument was organised into five sections addressing demographic information, financial inclusion, government policy support, technology adoption, and MSME growth/rural economic revival. Each item was rated by respondents on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Qualitative data were collected using a semi-structured interview guide featuring open-ended questions. This guide enabled participants to discuss their experiences and perspectives on access to finance, government interventions, technology use, infrastructure challenges, and the contribution of MSMEs to rural development. The flexible structure also permitted follow-up questions to obtain deeper clarification when required.

Validity and Reliability of the Instruments

The questionnaire and interview guide were reviewed by experts in entrepreneurship, management, and research methodology to establish content and face validity. Expert feedback was incorporated before final administration.
The internal consistency of the questionnaire was evaluated using Cronbach's Alpha. All constructs recorded

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coefficients above the recommended 0.70 threshold, confirming acceptable reliability (Taber, 2018).

Data Collection Procedure

Following the receipt of ethical approval and the necessary permissions, the researcher, supported by trained research assistants, personally administered the questionnaires to MSME operators in selected communities within Etche LGA. Respondents were informed of the study's purpose, and participation was entirely voluntary.

Qualitative interviews were conducted face-to-face at venues convenient for the participants. Each interview lasted between 30 and 45 minutes, was audio-recorded with the participants' consent, and was complemented by field notes to capture relevant non-verbal cues.

Data Analysis Techniques

Completed questionnaires were coded and analysed using the Statistical Package for the Social Sciences (SPSS) Version 29. Descriptive statistics were employed to summarise the data, while multiple linear regression analysis was conducted to examine the influence of the independent variables on MSME growth, with statistical significance established at the 5% level ($p < 0.05$).

Interview recordings were transcribed verbatim and analysed thematically in accordance with Braun and Clarke's (2023) six-step framework. This process included familiarisation with the data, generation of initial codes, identification and refinement of themes, and the production of a coherent narrative supported by participant quotations. The qualitative findings were subsequently integrated with the quantitative results during the interpretation phase to yield a richer and more in-depth understanding of the factors influencing MSME growth and rural economic revival in Etche LGA.

III. RESULTS

Demographic Profile of Respondents

A total of 150 structured questionnaires were distributed to MSME operators. All questionnaires were fully completed and found suitable for analysis, resulting in a 100% response rate.

Table 3.1: Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Type of Business	Agro-processing	38	25.3
	Retail Trade	46	30.7
	Transportation	24	16.0
	Hospitality	18	12.0
	Manufacturing	14	9.3
	Others	10	6.7
Years in Operation	Less than 2 years	28	18.7
	2–5 years	54	36.0
	6–10 years	43	28.7
	Above 10 years	25	16.6
Business Ownership	Sole Proprietorship	96	64.0
	Partnership	36	24.0
	Cooperative	18	12.0

The results show that retail trade (30.7%) and agro-processing (25.3%) were the two most common types of businesses in the sample. A large proportion of enterprises (36.0%) had been operating for 2 to 5 years, indicating that many were relatively young but already established. Sole proprietorship was the dominant ownership structure, accounting for 64.0% of the surveyed businesses.

Multiple Linear Regression Analysis

For the quantitative analysis, multiple linear regression was conducted to examine the influence of financial inclusion, government policy support, and technology adoption on MSME growth and rural economic revival in Etche Local Government Area.

Table 3.2: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error
1	0.764	0.584	0.575	0.438

The model accounted for 58.4% of the variation in MSME growth ($R^2 = 0.584$), with an adjusted R^2 of 0.575, demonstrating strong explanatory power.

Table 3.3: ANOVA

Source	Sum of Squares	df	Mean Square	F	p
Regression	39.416	3	13.139	68.42	< .001
Residual	28.044	146	0.192	—	—
Total	67.460	149	—	—	—

The overall regression model was statistically significant, $F(3, 146) = 68.42$, $p < .001$, indicating that financial inclusion, government policy support, and technology adoption jointly explained MSME growth in the study area.

Table 3.4: Regression Coefficients

Predictor	B	SE	β	t	p
Constant	0.842	0.318	—	2.65	.009
Financial Inclusion	0.248	0.125	0.287	1.99	.049
Government Policy Support	0.271	0.136	0.311	2.01	.047
Technology Adoption	0.563	0.081	0.612	6.95	< .001

The three variables showed significant positive effects on MSME growth. Technology adoption emerged as the strongest predictor ($\beta = 0.612$, $p < .001$), followed by government policy support ($\beta = 0.311$, $p = .047$) and financial inclusion ($\beta = 0.287$, $p = .049$).

Qualitative Findings

Thematic analysis of the interviews revealed three major themes that supported and enriched the quantitative results.

Theme 1: Technology Adoption Improves Business Performance

Participants consistently noted that digital tools have enhanced communication with customers, expanded market reach, and increased efficiency. One cooperative leader explained: "Since many of our members started using smartphones and mobile banking, business has become much easier. Payments are faster, customers can order without coming to the shop, and sales have gone up."

A market association chairman added: "Businesses that use social media and digital payments are growing faster than those still operating manually."

Theme 2: Government Support Exists, but Implementation is Weak

While acknowledging the existence of government programmes, most participants highlighted implementation gaps. One community leader stated: "Programmes are announced regularly, but only a few people actually benefit. Many business owners don't even know how to access the support."

Theme 3: Financial Inclusion Promotes Enterprise Growth

Participants agreed that better access to finance helps businesses expand. A cooperative executive noted: "Many of our members can now receive payments through mobile banking and get small loans to buy more goods."

Integration of Quantitative and Qualitative Findings

The findings of the mixed methods design converged strongly, offering a consistent and complementary picture. While the regression analysis identified technology adoption as the strongest statistical predictor of MSME growth, the interviews provided vivid real-world examples of how digital tools, such as mobile banking, social media marketing, and digital payments, help businesses improve efficiency, reach more customers, and expand their operations.

Likewise, both sets of data confirmed that government policy support and financial inclusion have meaningful positive effects on MSME performance. However, the qualitative insights revealed that their impact is currently limited by practical challenges, including bureaucratic hurdles, low awareness of available programmes, and difficulties in accessing services in rural communities.

IV. DISCUSSION

Interpretation of Findings

The study's findings provide clear evidence on the relative influence of technology adoption, government policy support, and financial inclusion on MSME growth and rural economic revival in Etche Local Government Area. While all three variables demonstrated significant positive effects, technology adoption stood out as the strongest predictor ($\beta = 0.612$, $p < .001$). This indicates that digital capabilities have become the most powerful driver of business performance in this rural setting.

The strong influence of technology adoption suggests that rural MSMEs that actively incorporate digital tools are better positioned to overcome many of the traditional barriers they face. Technologies such as mobile banking, digital payment platforms, social media marketing, and online communication channels enable entrepreneurs to reach wider markets, reduce transaction costs, improve customer engagement, and operate more efficiently, even in areas with limited physical infrastructure. In Etche, where challenges like poor transportation, limited banking facilities, and restricted market access are common, these digital solutions offer practical ways to bridge these gaps and strengthen competitiveness.

This result also reflects the broader shift toward digital transformation in small business development. Technology adoption is not about using new tools; it represents a strategic capability that fosters innovation, flexibility, and resilience. Rural entrepreneurs who successfully integrate digital technologies tend to build stronger customer relationships, access new markets, and respond more effectively to changing business conditions.

Government policy support also had a positive and statistically significant effect on MSME growth ($\beta = 0.311$, $p = .047$). This confirms that government programmes, infrastructure initiatives, training, and incentives do contribute to enterprise development. However, the relatively modest coefficient suggests that existing policies are not achieving their full potential in the study area. Qualitative insights revealed that many entrepreneurs struggle to access government support due to bureaucratic procedures, limited awareness, and inconsistent implementation at the local level. This highlights a noticeable gap between policy intentions and their actual impact on the ground.

Financial inclusion similarly showed a significant positive relationship with MSME growth ($\beta = 0.287$, $p = .049$). Greater access to savings, credit, and digital financial services clearly helps businesses expand and manage operations. Yet its comparatively smaller effect size indicates that finance alone is often not enough in rural contexts. Without reliable infrastructure, digital skills, and supportive services, the benefits of financial inclusion remain limited for many entrepreneurs.

Taken together, the findings demonstrate that sustainable rural economic revival in Etche requires more than isolated improvements in any single area. Technology adoption appears to be the most powerful lever currently available, but its effectiveness is strengthened when supported by enabling government policies and accessible financial services. This integrated perspective offers important

guidance for designing more effective strategies to support rural MSMEs.

Integration of Quantitative and Qualitative Findings

The mixed methods data collection offered clarity of the situation in Etche. While the regression results identified technology adoption as the dominant factor, the interviews helped explain why. Participants described how mobile money, social media, and digital payments have transformed their daily operations by making transactions faster, expanding customer reach, and improving efficiency. At the same time, they highlighted barriers such as unstable network coverage, frequent power outages, and low digital skills.

The qualitative findings also shed light on why government policy support and financial inclusion, though significant, had weaker effects. Many respondents acknowledged the existence of government programmes and financial services but pointed out that bureaucratic processes, limited awareness, and poor reach into rural communities reduce their effectiveness.

Comparison with Existing Literature

The study's findings are consistent with a growing body of research that underscores the important roles of digital transformation, institutional support, and improved access to finance in strengthening MSME performance, especially in developing economies. However, this study adds depth by showing that, within the specific rural context of Etche Local Government Area, technology adoption exerts the strongest influence on MSME growth compared to financial inclusion and government policy support.

The dominant role of technology adoption in this study supports previous work emphasising how digital capabilities have become essential for small business competitiveness. For example, Nambisan et al. (2019) argued that digital technologies are transforming entrepreneurship by lowering traditional market barriers, enabling new forms of innovation, and allowing small businesses to connect with wider networks. Their research highlighted that digital platforms help entrepreneurs overcome geographical limitations through better information flow, customer engagement, and resource coordination. This is highly relevant to rural MSMEs in Etche, where digital tools offer practical ways to bypass challenges related to poor physical infrastructure and limited market access.

Similarly, Priyono et al. (2020) found that digital transformation enables small businesses to restructure their operations, build stronger customer relationships, and create more adaptable business models. They considered digital adoption not simply as a technical improvement, but as a strategic asset that fosters resilience and competitive strength. The current study builds on this perspective by showing that, even in resource-limited rural environments in Nigeria, technology adoption continues to serve as a catalyst for business growth.

These findings also align with the Resource-Based View of the firm (Barney, 1991), which argues that lasting competitive advantage arises from developing valuable, rare, and hard-to-copy resources and capabilities. In the context of rural MSMEs, digital skills, access to online markets, and the effective application of technology act as key strategic resources that can markedly enhance productivity and differentiation. The notably high regression coefficient for technology adoption in this study implies that digital capabilities may rank among the most critical resources for achieving long-term sustainability in rural enterprises.

Regarding government policy support, the results align with existing studies that emphasise the importance of a supportive institutional environment for MSME development. Lushaku-Elshania (2024) showed that both formal and informal institutional factors play a significant role in shaping SME growth. Their analysis found that tax rates, tax administration, customs barriers, and corruption were all statistically significant, illustrating how institutional environments can either facilitate or constrain enterprise development. While tax-related variables and corruption showed positive associations with firm growth, customs barriers exerted a negative effect. These results reinforce the broader evidence that institutional frameworks are essential, yet their effectiveness is frequently limited by inefficiencies, corruption, and regulatory burdens. The clear implication is that sustainable SME growth requires not only well-designed supportive policies but also stronger institutional quality and more effective enforcement mechanisms.

Eweroke (2025) examined the effect of financial inclusion on small and medium-scale enterprises (MSMEs) in Nigeria's South East geopolitical zone. Drawing on survey data from 400 valid responses out of 600 distributed questionnaires and analysed using the chi-square statistical tool, the study found that financial inclusion has a significant positive effect on both MSME performance and infrastructural development in the region. The findings highlight the crucial role of improved financial access in supporting enterprise growth. However, they also emphasise the need for complementary advancements in digital payment systems, ICT infrastructure, e-banking services, consumer protection frameworks, and basic public infrastructure, such as reliable power supply, transportation networks, and mobile connectivity, to fully maximise the benefits of financial inclusion for MSME development.

Almawishir (2018) investigated the role of institutional support in influencing SME growth in Saudi Arabia. The study demonstrated that effective institutional frameworks and support mechanisms are critical for enhancing SME performance and contribution to the national economy. Drawing on the Saudi context, where SMEs historically accounted for a relatively modest share of GDP, the research emphasised that well-designed institutional support, encompassing policy, financial, and developmental interventions, can foster enterprise growth and help realise broader economic diversification

objectives. The findings reinforce the view that sustainable SME development depends not only on the existence of support programmes, but also on their quality, accessibility, and relevance to the actual needs of small businesses.

This observation resonates with institutional theory (North, 1990), which argues that business performance is shaped by the quality of formal institutions, regulations, and support structures. In rural communities like Etche, government policies can create favourable conditions, but weak coordination, limited awareness, and bureaucratic obstacles often reduce their practical benefits. Therefore, improving policy outcomes may require stronger focus on local-level implementation rather than relying primarily on national or state-level policy formulation.

The positive effect of financial inclusion on MSME growth found in this study is consistent with earlier research. Lyons and Kass-Hanna (2021) showed that wider financial inclusion boosts economic participation by improving access to savings, credit, and digital financial services, especially among underserved groups. Likewise, Pesqué-Cela et al. (2021) reviewed how financial inclusion is measured and concluded that many existing indices fail to capture its multi-dimensional nature. They noted that the "access" and "use" dimensions are often closely linked, and that current measures tend to focus heavily on supply-side and numerical indicators while giving less attention to how fully lower-income people and small firms are integrated into the formal financial system.

Ozili (2021) further stressed that digital financial services, such as mobile banking and fintech solutions, have become powerful tools for expanding financial inclusion among small businesses in developing economies. The present study supports this positive relationship. However, the relatively modest coefficient observed here suggests that financial inclusion alone may not generate substantial enterprise transformation in rural contexts without improvements in technology capability, infrastructure, and institutional support.

The study contributes to the literature by illustrating the interconnected roles of technology adoption, government policy support, and financial inclusion in rural MSME development. While many previous studies have examined these factors in isolation, the current research provides evidence of their combined influence within a specific rural Nigerian setting. Most notably, the results highlight technology adoption as the most influential pathway for rural enterprise transformation in Etche. This implies that future MSME development strategies should move beyond traditional finance- and policy-focused approaches and instead prioritise digital capacity building, technology infrastructure development, and innovation support as core elements of rural economic revival.

Limitations of the Study

Although this research provides useful insights into the factors shaping MSME growth and rural economic revival in Etche Local Government Area, several limitations need to be considered when interpreting the results.

First, the study was geographically limited to Etche Local Government Area alone. As a result, the findings may not fully apply to other rural communities in Rivers State or elsewhere in Nigeria. Rural areas vary widely in terms of economic activities, infrastructure levels, institutional arrangements, cultural norms, and market opportunities. Therefore, the observed relationships between technology adoption, government policy support, financial inclusion, and MSME growth could differ in other locations with distinct socioeconomic conditions.

Second, the research depended largely on self-reported data collected from MSME operators and key stakeholders. Although participants shared valuable perspectives drawn from their real-life experiences, self-reported responses can be shaped by personal views, memory biases, or the natural tendency to portray one's business more positively. This may have influenced the accuracy of information regarding technology use, financial access, and actual business performance. Future research could combine survey data with objective indicators such as revenue records, employment figures, or digital transaction histories to strengthen results.

Third, the study shows clear links between the variables but cannot track how they influence MSME performance over the longer term. Business growth unfolds gradually, and the lasting effects of technology use or improved financial access may only appear after several years. Longitudinal research would therefore provide stronger evidence on the durability and changing impact of these factors.

In addition, practical difficulties during fieldwork affected data collection. Poor road networks, scattered settlements, and occasional security concerns in parts of Etche Local Government Area made it challenging to reach some communities and potential respondents. These logistical constraints may have influenced the final composition of the sample.

Finally, the study concentrated on three main independent variables, which are technology adoption, government policy support, and financial inclusion. Although these are key factors, other elements such as entrepreneurial orientation, managerial skills, innovation capacity, digital literacy, market access, and social networks may also significantly affect MSME performance. Their exclusion means that alternative explanations for enterprise growth may not have been fully considered. The study contributes to understanding rural MSME development in Etche and lays a solid foundation for future research and policy initiatives.

Suggestions for Future Research

The study makes the following suggestions for future research:

The geographical scope should be broadened for future research by including multiple local government areas

across Rivers State and other parts of Nigeria. A wider sample would improve the generalisability of the findings and offer a clearer picture of how regional differences in infrastructure, institutional quality, economic activities, and socio-cultural contexts influence MSME development.

Comparative studies between rural and urban MSMEs would also be highly valuable. Urban businesses typically enjoy better access to financial services, digital infrastructure, markets, and support systems. Such comparisons could reveal whether the main drivers of MSME growth differ according to location and help policymakers develop more tailored interventions for rural and urban contexts.

Longitudinal studies would further strengthen the literature by tracking how financial inclusion, government policy support, and technology adoption affect MSME performance over an extended period. The approach would provide deeper insight into how these factors evolve as businesses mature and whether early gains from technology adoption translate into lasting improvements in productivity, profitability, and business survival.

Researchers should also explore additional variables that may affect MSME outcomes in rural settings. Factors such as digital literacy, entrepreneurial orientation, innovation capability, managerial competence, market access, networking ability, and business resilience could provide a more complete picture of rural enterprise development. For instance, technology adoption may yield limited benefits if entrepreneurs lack the digital skills that are necessary to use these tools effectively.

Scholars should also study infrastructure quality as a possible moderating factor in the link between technology adoption and MSME performance. Even when digital tools are present, problems such as unstable electricity, weak internet access, and limited transport systems can lessen their benefits. Gaining insight into these interactions would support the design of more practical and useful interventions.

Future studies could also evaluate the effectiveness of specific government MSME support programmes by focusing on implementation processes, beneficiary experiences, and institutional coordination. Rather than simply assessing whether policies work, researchers could investigate why certain initiatives succeed while others fall short, especially in rural communities where awareness and accessibility remain significant barriers.

Finally, as newer technologies, including artificial intelligence, online marketplaces, improved mobile finance platforms, and e-commerce systems, keep advancing, future studies should investigate the most effective ways for rural MSMEs to adopt these innovations. A clear understanding of the opportunities and difficulties linked to these tools will be essential for creating forward-looking approaches that encourage inclusive and lasting rural economic growth.

V. CONCLUSION

This study explored how financial inclusion, government policy support, and technology adoption affect MSME growth and rural economic recovery in Etche Local Government Area, Rivers State. For the research design, a convergent parallel mixed-methods approach was used. The results showed that all three factors had clear positive effects on MSME performance. Technology adoption emerged as the strongest influence ($\beta = 0.612$, $p < .001$), underlining the rising value of digital tools in reshaping rural enterprises.

Qualitative insights reinforced this result, showing how mobile banking, digital payments, social media marketing, and online communication are helping entrepreneurs overcome infrastructural limitations, reach more customers, reduce costs, and improve efficiency. While government policy support and financial inclusion also contributed meaningfully to MSME growth, their impact was noticeably moderated by challenges such as bureaucratic hurdles, limited awareness of programmes, and uneven access in rural areas.

The study concludes that technology adoption has become the leading force behind MSME growth in Etche. Sustainable rural economic recovery, however, cannot rest on digital progress alone. It depends on a balanced system in which technology use is backed by sound government policies, readily available financial services, dependable infrastructure, and solid institutional structures. Only when these elements work together can MSMEs fully serve as drivers of inclusive growth, job creation, and lasting rural development.

Recommendations

The recommendations are as follows:

1. **Improvement of Digital and Internet Infrastructure** - The Rivers State Government, Etche Local Government Council, and telecommunication companies should work together to expand reliable broadband internet, mobile network coverage, and electricity supply in rural communities. Strengthening digital infrastructure is essential to enable MSMEs to fully benefit from technology adoption and compete more effectively.
2. **Expansion of Rural Financial Inclusion** - Financial institutions, fintech companies, and development agencies should develop more accessible micro-credit products tailored to rural MSMEs, especially those in agriculture and agro-processing. Simplifying loan processes, reviewing collateral requirements, and expanding digital banking services, alongside targeted financial literacy programmes, would significantly improve access to finance for rural entrepreneurs.
3. **Strengthening Grassroots Implementation of MSME Policies -** Government agencies should shift focus from policy formulation to effective grassroots implementation. Establishing local MSME support

centres to provide information, business advisory services, and assistance with accessing grants and incentives would help bridge the gap between policy and practice. Closer collaboration with community associations, cooperatives, and market groups would improve outreach and programme effectiveness.

4. **Promotion of Digital Capacity Building -** Regular, practical training programmes should be organised to build the digital skills of rural entrepreneurs. Training should cover digital marketing, e-commerce, mobile payments, online customer management, and basic digital bookkeeping. Enhancing digital literacy will help MSMEs maximise the benefits of technology and adapt more easily to evolving market demands.
5. **Integrated Rural Enterprise Development Strategy** – Stakeholders, including government agencies, financial institutions, telecommunication providers, development partners, and the private sector, should adopt a more coordinated approach to rural enterprise development. Rather than running isolated interventions, efforts should be integrated across technology adoption, financial inclusion, infrastructure development, and entrepreneurship training. Such a holistic strategy would create a more supportive environment for MSMEs, strengthen business resilience, and promote sustainable rural economic revival in Etche and similar communities across Nigeria.

REFERENCES

1. Akhmetgareeva, A. A., Gekhaeva, P. T., & Durnovtsov, P. K. (2025). The role of small and medium enterprises in the economic development of developing countries. Economics: Yesterday, Today and Tomorrow, 11(6), 004. https://doi.org/10.36871/ek.up.p.r.2025.01.06.004
2. Akintayo, A. A., Ibrahim, K. M., Oni, M. T., & Raheem, A. J. (2025). Financial inclusion and performance of small and medium enterprises (SMEs) in Osun State, Nigeria. International Journal of Economics and Business Management, 1(2), 250–268. https://doi.org/10.33003/fujafr-2026.v4i1.387.421-430
3. Almawishir, N. F. (2026). The role of institutional support in influencing SME growth: The case of Saudi Arabia (Doctoral thesis, Manchester Metropolitan University). Manchester Metropolitan University. https://doi.org/10.83056/mmu.32479569.v1
4. Arora, S. (2025). The role of small and medium enterprises (SMEs) in sustainable economic growth. International Journal of Advanced Research and Multidisciplinary Trends, 2(3), 1258–1267. Retrieved from https://www.ijarmt.com/index.php/j/article/view/1078
5. Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99–120. https://doi.org/10.1177/014920639101700108
6. Bilal, M., Xicang, Z., Jiying, W., & others. (2025). Digital transformation and SME innovation: A comprehensive analysis of mediating and moderating effects. Journal of the Knowledge Economy, 16, 1153–1182. https://doi.org/10.1007/s13132-024-02054-0
7. Braun, V., & Clarke, V. (2023). Thematic analysis. In H. Cooper, M. N. Coutanche, L. M. McMullen, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), APA handbook of research methods in psychology: Research designs: Quantitative, qualitative, neuropsychological, and biological (2nd ed., pp. 65–81). American Psychological Association. https://doi.org/10.1037/0000319-004
8. Chibueze, T. (2022). Promoting sustainable growth of MSMEs through inclusive financial technologies, strategic collaborations, and capacity-building within evolving banking landscapes. GSC Advanced Research and Reviews, 13(3), 231–251. https://doi.org/10.30574/gscarr.2022.13.3.0381
9. Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). SAGE Publications. Retreved from https://www.researchgate.net/profile/Rulinawaty-Kasmad/publication/342328830_THIRD_EDITION/links/5eed839ca6fdcc73be8d869e/THIRD-EDITION.pdf
10. David, N. C., Ogedengbe, F. A., & Gambo, N. (2026). Government policies and sustainability of small and medium enterprises (SMEs) in North Central Nigeria. ShodhKosh: Journal of Visual and Performing Arts, 7(7s), 312–331. https://doi.org/10.29121/shodhkosh.v7.i7s.2026.7969
11. DikoKoce, H., Mohammed, A., & Mohammed, H. (2025). Digital financial inclusion and business growth: A study of micro, small and medium enterprise operators in Niger State. Gusau Journal of Entrepreneurship Development, 3(2), 20–35. https://doi.org/10.57233/gujed.v3i2.02
12. Edim, E., Gbadegesin, A. A., Omigbodun, T. O., & Adeniran, A. O. (2025). Roles of digital transformation on SMEs performance in Nigeria. Transactions on Quantitative Finance and Beyond, 2(2), 91–108. https://doi.org/10.22105/tqfb.v2i2.60
13. Eweroke, V. N. (2025). Financial inclusion and small and medium scale enterprises in Nigeria. International Journal of Social Sciences and Humanities Reviews, 15(3), 21–33.
14. Grzybowski, L., Lindlacher, V., & Mothobi, O. (2023). Mobile money and financial inclusion in Sub-Saharan Africa. Information Economics and Policy, 65, 101064. https://doi.org/10.1016/j.infoecopol.2023.101064
15. Joseph, E. S., Chegere, M. J., & Mdadila, K. (2026). Financial inclusion in Sub-Saharan Africa: Does the mobile money adoption matter? Scientific African, 32, e03282.

https://doi.org/10.1016/j.sciaf.2026.e03282
16. Lushaku-Elshania, F. (2024). The role of institutional factors on SME firm growth. Multiscience Journal, 9(11), Article 249. https://doi.org/10.31893/multiscience.2025249
17. Lyons, A. C., & Kass-Hanna, J. (2021). A methodological overview to defining and measuring "digital" financial literacy. Financial Planning Review, 4(1), e1113. https://doi.org/10.1002/cfp2.1113
18. Mahfud, I. (2025). The role of MSMEs (micro, small and medium enterprises) in improving the national economy. Journal of Economics and Business Letters, 5(5), 13–23. https://doi.org/10.55942/jebl.v5i5.915
19. Mladenova, I., Vladimirov, Z., & Harizanova, O. (2025). Digital transformation, organisational capabilities, and SME performance: Size matters. Eastern Journal of European Studies, 16(1), 216–233. https://doi.org/10.47743/ejes-2025-0110
20. Musthafa, I., Handra, H., Bachtiar, N., Taifur, W. D., & Ariyanto, E. (2023). Financial literacy and performance of micro, small and medium enterprises: A literature review. Journal of Management, Accounting, General Finance and International Economic Issues, 3(1), 287–303. https://doi.org/10.55047/marginal.v3i1.956
21. Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges, and key themes. Research Policy, 48(8), 103773. https://doi.org/10.1016/j.respol.2019.03.018
22. National Bureau of Statistics. (2023). Nigerian statistical publications. https://nigerianstat.gov.ng
23. North, D. C. (1990). Institutions, Institutional Change and Economic Performance. Cambridge University Press. https://doi.org/10.1017/cbo9780511808678
24. Okoyan, K., & Keremah, S. C. (2026). Empirical investigation of small and medium scale financing and standard of living in Nigeria. FUDMA Journal of Accounting and Finance Research, 4(1), 320–333. https://doi.org/10.33003/fujafr-2026.v4i1.308.320-333
25. Oladimeji, M. S., & Abdullahi, A. (2021). Challenges affecting the sustainability of small and medium enterprises in Nigeria. Journal of Business and Economic Development, 6(3), 145–156.
26. Osei, A., Shao, Y., Forkuoh, K., & Osei, M. (2016). The impact of institutional support in SMEs marketing and growth: A case study of retail SMEs in Ghana. Open Journal of Business and Management, 4(3), 408–426. https://doi.org/10.4236/ojbm.2016.43043
27. Ozili, P. K. (2022). Financial inclusion and sustainable development: An empirical association. Journal of Money and Business, 2(2), 186–198. https://doi.org/10.1108/JMB-03-2022-0019
28. Pesqué-Cela, V., Tian, L., Luo, D., Tobin, D., & Kling, G. (2021). Defining and measuring financial inclusion: A systematic review and confirmatory factor analysis. Journal of International Development, 33(2), 316–341. https://doi.org/10.1002/jid.3524
29. Priyono, A., Moin, A., & Putri, V. N. A. O. (2020). Identifying digital transformation paths in the business model of SMEs during the COVID-19 pandemic. Journal of Open Innovation: Technology, Market, and Complexity, 6(4), 104. https://doi.org/10.3390/joitmc6040104
30. Samira, A. J., & Yakubu, I. (2018). Small scale enterprises and sustainable growth in Nigeria: Lessons from African countries. International Journal of Scientific Research in Social Sciences & Management Studies, 3(1). Retrieved from https://internationalpolicybrief.org/international-journal-of-scientific-research-in-social-sciences-management-studies-volume-3-number-1/
31. Schumpeter, J. A. (1934). The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle. Harvard University Press. Retrieved from https://cruel.org/books/hy/shortschumpeter/SchumpeterTheoryofEconDev.pdf
32. Shorten, A., & Smith, J. (2017). Mixed methods research: Expanding the evidence base. Evidence-Based Nursing, 20(3), 74–75. https://doi.org/10.1136/eb-2017-102699
33. Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) & National Bureau of Statistics (NBS). (2021). Micro, small and medium enterprises survey 2021: Key findings and statistics. https://nigerianstat.gov.ng/pdfuploads/MSMES.pdf
34. Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. Research in Science Education, 48, 1273–1296. https://doi.org/10.1007/s11165-016-9602-2
35. United Nations Conference on Trade and Development. (2021). Digital economy report 2021: Cross-border data flows and development—For whom the data flow. United Nations. https://unctad.org/page/digital-economy-report-2021
36. Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research, 122, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022
37. Wang, S., & Zhang, H. (2025). Digital transformation and innovation performance in small- and medium-sized enterprises: A systems perspective on the interplay of digital adoption, digital drive, and digital culture. Systems, 13(1), 43. https://doi.org/10.3390/systems13010043
38. Wernerfelt, B. (1984). The resource-based view of the firm. Strategic Management Journal, 5(2), 171–180. https://doi.org/10.1002/smj.4250050207