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IMPACT OF SOCIAL MEDIA ADOPTION ON SALES PERFORMANCE OF MICRO-ENTERPRISES IN NORTH-WESTERN NIGERIA

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ABSTRACT
This study examines the effects of social media platforms on micro-enterprise sales, focusing on Facebook, Instagram, TikTok, and WhatsApp. A quantitative cross-sectional design was adopted, with 384 structured questionnaires distributed electronically through Google Forms, yielding 316 usable responses. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings reveal that Facebook significantly and positively influences micro-enterprise sales ($\beta = 0.345$, $t = 5.370$, $p < 0.001$, $f^2 = 0.148$), as do TikTok ($\beta = 0.237$, $t = 3.434$, $p = 0.001$, $f^2 = 0.055$) and WhatsApp ($\beta = 0.288$, $t = 4.319$, $p < 0.001$, $f^2 = 0.088$). Conversely, Instagram has no statistically significant effect ($\beta = 0.056$, $t = 1.036$, $p = 0.301$, $f^2 = 0.005$). Collectively, the platforms explain 69.5% of the variance in micro-enterprise sales ($R^2 = 0.695$). The study concludes that social media platforms have different effects on sales, with Facebook, WhatsApp, and TikTok demonstrating significant relationships. Micro-enterprises should therefore prioritise platforms demonstrating empirically supported sales effects while continuously evaluating platform specific performance. However, the cross-sectional design, self-reported measures, electronic data collection, and focus on four platforms limit causal inference and generalisability. Future studies should employ longitudinal or mixed method designs, incorporate additional platforms, and examine contextual factors that may explain platform specific differences.

KEYWORDS: Social Media; Micro-enterprises; Sales Performance; Digital Marketing; Social Media Platforms

INTRODUCTION

Social media has become an important digital channel through which businesses communicate with customers, promote products, build relationships and expand market reach. Its relevance to micro-enterprises is particularly strong because these businesses often operate with limited financial and marketing resources, making relatively low cost digital platforms attractive for customer acquisition and sales development. Nigeria's expanding digital environment reinforces this opportunity. In January 2024, the country had 103.0 million internet users and 36.75 million social media user identities, indicating a substantial digital audience that businesses can potentially reach through social media platforms (Kemp, 2024).

The importance of social media is heightened by the dominance of micro-enterprises in Nigeria's private sector landscape. The Price Waterhouse Cooper's (PwC) (2024) MSME Survey of 2024 on building resilience, strategies for MSME success in a changing landscape recorded 39,654,385 MSMEs, comprising 38,413,420 micro-enterprises, representing 96.9% of the total MSME population (Pwc, 2024). Despite their numerical significance, micro-enterprises operate under persistent constraints, including limited access to finance, inadequate infrastructure, informality, weak managerial capabilities and restricted market access. These conditions can constrain customer acquisition and sales growth, thereby increasing the potential value of affordable digital channels for market development (Ayokunmi et al., 2026).

The Nigerian government has increasingly recognised digitalisation as an instrument for enterprise development. The National Digital Economy Policy and Strategy (NDEPS) 2020–2030 identifies digital literacy and skills, solid infrastructure, digital services development and

promotion, and support for micro, small and medium enterprises as important components of Nigeria's digital transformation agenda (NITDA, 2019). Such policy direction provides an enabling basis for businesses to adopt digital technologies, including social media, to improve market participation and competitiveness.

Existing literature generally suggests that social media adoption can enhance business performance by improving customer relationships, reducing communication and marketing costs, increasing market visibility and facilitating access to market information. In North-Western Nigeria, Abdullahi et al. (2022) found that Facebook adoption positively influenced both financial and non-financial performance among service based SMEs. Similarly, (Ayokunmi et al., 2026) reported a significant positive relationship between social media adoption and the performance of construction SMEs in Nigeria, particularly through improved customer relationships, knowledge accessibility and cost reduction.

Empirical findings also suggest that the effect of social media is context dependent rather than universally established. Adejuwon (2022), for example, examined social media marketing and sales performance among selected SMEs in South West Nigeria, while Ilesanmi and Oyedepo, (2023) found that digital marketing, including social media marketing, email marketing, search engine marketing, mobile marketing and internet marketing, had a significant positive influence on the performance of SMEs in Nigeria, on SME performance.

The primary objective of this study is to investigate the effect of social media adoption on the sales performance of micro-enterprises in North-Western Nigeria. Specifically, the study seeks to:

RO1: Examine the effect of Facebook adoption on the sales performance of micro-enterprises in North-Western Nigeria.

RO2: Assess the extent to which Instagram adoption influences the sales performance of micro-enterprises in North-Western Nigeria.

RO3: Determine the effect of TikTok adoption on the sales performance of micro-enterprises in North-Western Nigeria.

RO4: Evaluate the effect of WhatsApp adoption on the sales performance of micro-enterprises in North-Western Nigeria.

In line with the specific objectives, the following null hypotheses are formulated and will be tested at a 5% level of significance:

H_{01}: Facebook adoption has no statistically significant effect on the sales performance of micro-enterprises in North-Western Nigeria.

H_{02}: Instagram adoption has no statistically significant effect on the sales performance of micro-enterprises in North-Western Nigeria.

H_{03}: TikTok adoption has no statistically significant effect on the sales performance of micro-enterprises in North-Western Nigeria.

H_{04}: WhatsApp adoption has no statistically significant effect on the sales performance of micro-enterprises in North-Western Nigeria.

LITERATURE REVIEW

Concept of Social Media Adoption in Micro-enterprises

Social media adoption refers to the extent to which businesses integrate social networking platforms such as Facebook, Instagram, WhatsApp, X (formerly Twitter), and TikTok into their operational and marketing activities. In the context of micro-enterprises, adoption is not only about usage but also about strategic integration into business processes such as customer engagement, branding, and sales promotion. Scholars argue that social media has transformed traditional business communication by enabling real time interaction between firms and customers (Kaplan & Haenlein, 2010). However, adoption levels vary significantly depending on digital literacy, infrastructure, and organizational readiness.

From a theoretical standpoint, social media adoption is often explained using the Technology Acceptance Model (TAM), which emphasizes perceived usefulness and ease of use as determinants of technology uptake. In micro-enterprises, owners' perception of social media as beneficial to sales and customer reach significantly influences adoption decisions. Davis (1989) highlights that perceived usefulness is a stronger predictor of adoption than external pressure, which is particularly relevant for informal and small scale businesses in developing economies.

In developing countries like Nigeria, social media adoption among micro-enterprises has been accelerated by increasing smartphone penetration and affordable internet access. Many small business owners now rely on platforms like WhatsApp Business and Instagram for marketing due to their low cost and wide reach. However, studies indicate that adoption is often informal and unstructured, limiting the full exploitation of digital marketing capabilities (Awiagah et al., 2015).

CONCEPT OF SOCIAL MEDIA

Social media refers to interactive digital platforms through which enterprises create and exchange information, communicate with customers, promote products and facilitate market transactions. In the Nigerian micro enterprise context, Facebook, Instagram, WhatsApp and TikTok represent important channels through which

businesses can extend market reach and customer engagement beyond conventional marketing. Their strategic value lies not merely in platform availability but in the extent to which enterprises integrate them into marketing and selling activities.

Evidence from Nigerian studies indicates that Facebook, Instagram and WhatsApp can positively influence enterprise performance, while adoption among micro businesses is shaped by organisational, technological and environmental conditions (Abdullahi et al., 2022; Charles et al., 2025; Eze et al., 2020). Recent evidence further suggests that TikTok is becoming part of the Nigerian SME social media landscape, although its contribution to sales performance specifically among micro-enterprises remains insufficiently established (Ala et al., 2026).

Facebook

Facebook provides micro-enterprises with a relatively inexpensive means of product promotion, customer interaction and market expansion. Nigerian evidence is predominantly positive. Abdullahi et al. (2022), studying 165 service based SMEs in North-Western Nigeria, found that Facebook adoption positively affected both financial and non-financial performance. Similarly, Charles et al., (2025) reported a significant positive effect of Facebook on SME performance in Aba. More recent evidence from Katsina also identifies Facebook as one of the platforms with the strongest positive influence on SME performance (Ala et al., 2026). However, these studies largely examine SMEs or aggregate performance rather than micro enterprise sales specifically.

Instagram

Instagram's visual orientation provides micro-enterprises with opportunities to display products, develop brand identity and interact with prospective customers. Evidence from Nigeria is similarly positive. Charles et al., {2025) found that Instagram significantly and positively influenced SME performance in Aba, with the platform providing a visual mechanism for product presentation and brand development. Ala et al., (2026) likewise reported a positive and statistically significant effect of Instagram on SME performance in Katsina State. Nevertheless, the existing evidence remains geographically concentrated and generally measures overall business performance rather than sales performance.

WhatsApp

WhatsApp may be particularly important for Nigerian micro-enterprises because it combines promotion, customer communication, order management and relationship development. PwC's (2024) Nigerian MSME survey shows that WhatsApp Business was used by 23% of surveyed MSMEs, compared with 19% for Facebook and 15% for Instagram, indicating its practical importance for business communication. Empirically, Bassey et al., (2025) found that WhatsApp had a significant positive effect on the marketing performance of SMEs in Cross River State, while Okechukwu et al. (2025) similarly reported a significant positive effect on SME performance in Aba. Ala et al. (2026) further identified WhatsApp among the strongest performing platforms.

TikTok

TikTok differs from the other platforms because its short form video format can generate product visibility and audience engagement without requiring an established customer network. Nigerian empirical evidence is, however, relatively new. Ala et al. (2026) found that TikTok had a positive and statistically significant effect on SME performance in Katsina State, alongside Facebook, Instagram and WhatsApp. This finding suggests that video based social media adoption can contribute to business outcomes. Nevertheless, TikTok's evidence base is considerably weaker than that of Facebook and WhatsApp, and the available Nigerian study examines general SME performance rather than sales performance among micro-enterprises. Therefore, its actual sales contribution remains uncertain and warrants direct empirical testing.

The Nigerian literature provides further evidence that social media adoption does not automatically translate into superior performance. Abideen et al. (2022); Ayokunmi et al. (2026), using Nigerian SME data, found that social media marketing did not significantly moderate the relationship between e commerce implementation and SME performance ($\beta = .001$, $p = .986$), although specific dimensions such as informativeness and interactivity were significant. This finding contrasts with the predominantly positive platform specific results reported by Abdullahi et al. (2022), Okechukwu et al. (2025), Bassey et al. (2025) and Ala et al. (2026). The inconsistency suggests that adoption alone may be insufficient; the effectiveness of social media may depend on how platforms are used, the quality of content, customer engagement and enterprise characteristics.

SALES PERFORMANCE OF MICRO-ENTERPRISES

Sales performance of micro-enterprises refers to the ability of very small businesses to generate revenue, maintain customer base, and achieve growth in market share over time. It is a key indicator of business success and sustainability, especially in developing economies where micro-enterprises dominate informal and semi-formal sectors (Ayyagari et al., 2011). Unlike large firms, micro-enterprises often rely heavily on short term sales cycles and direct customer relationships to sustain operations.

In the literature, sales performance is commonly measured using indicators such as sales growth rate, profitability, customer retention, and market expansion. Richard et al.

(2009) argue that sales performance is a multidimensional construct that reflects both financial and non-financial outcomes. For micro-enterprises, however, measurement is often informal due to limited accounting systems and weak record keeping practices.

Empirical studies show that micro-enterprises play a significant role in employment creation and economic development, particularly in developing countries. According to Beck and Demirguc-Kunt, (2006), small and micro firms contribute significantly to GDP and job creation despite their limited scale of operations. However, their sales performance is often unstable due to market volatility and resource constraints.

Technology adoption has increasingly become a key driver of sales performance in micro-enterprises. The use of digital tools, mobile platforms, and online marketing channels enables firms to expand their customer reach. Baptista and Oliveira (2015) argue that technology adoption enhances efficiency and market visibility, leading to improved sales outcomes.

EMPIRICAL REVIEW OF SOCIAL MEDIA ON SALES PERFORMANCE OF MICRO-ENTERPRISES

Social media has increasingly become a low-cost mechanism through which Nigerian enterprises promote products, interact with customers and expand market reach. The literature generally associates social media use with improved business outcomes, but the evidence is stronger for SMEs collectively than for micro-enterprises specifically. Abdullahi et al. (2022), for example, found that Facebook adoption had a positive effect on both financial and non-financial performance among 165 service based SMEs in North-Western Nigeria. Similarly, a systematic review by Abideen et al. (2022) concluded that existing evidence generally supports a strong relationship between social media marketing and SME performance in Nigeria. These findings provide a basis for expecting social media adoption to enhance sales, although they do not establish a direct effect for micro-enterprises.

More direct evidence links social media marketing to sales outcomes. Lawal and Adejuwon (2022), examining 376 SMEs in South West Nigeria, found that social media marketing was positively associated with sales growth. Importantly, however, their component level results were mixed: social interaction ($\beta = .472$, $t = 4.229$) and customization ($\beta = .252$, $t = 1.970$) were statistically significant, whereas branded entertainment ($\beta = .017$, $t = 1.110$), customer engagement ($\beta = .065$, $t = .493$) and electronic word of mouth ($\beta = .093$, $t = .548$) were not significant. This finding is important because it demonstrates that the commercial value of social media may depend less on mere adoption and more on the specific activities undertaken through the platforms.

Recent Nigerian evidence reinforces the predominantly positive but in difference pattern. For instance, Charles et al. (2025) examined social media marketing among SMEs in Aba and linked social media advertising, content marketing and customer engagement to performance dimensions including sales growth, market reach and customer retention. Likewise, evidence from Katsina State indicates positive effects of social media platforms on SME performance (Nasir et al., 2026). However, these studies remain predominantly SME focused and therefore provide only indirect evidence for micro-enterprises. The present study therefore addresses this gap by examining whether social media adoption translates into improved sales performance of micro-enterprises in Nigeria**.**

THEORETICAL REVIEW

This study is underpinned by two complementary theoretical perspectives that provide a foundation for explaining social media adoption and its relationship with micro-enterprise sales performance. The Technology–Organisation–Environment (TOE) framework, developed by Tornatzky and Fleischer (1990), serves as the underpinning theory because it explains technology adoption through technological, organisational, and environmental contexts. This framework is particularly relevant to understanding the conditions that shape micro-enterprises' adoption and utilisation of social media platforms. The Resource Based View (RBV) serves as the supporting theory, emphasising how valuable organisational resources and capabilities can contribute to competitive advantage and performance. Together, TOE and RBV provide complementary explanations by connecting the contextual determinants of social media adoption with the potential performance implications of developing and utilising social media capabilities. The subsequent sections critically examine these theories and establish their relevance to the study's proposed relationships.

Technology–Organisation–Environment (TOE) Framework

The TOE framework, developed by Tornatzky and Fleischer (1990) Tornatzky and Fleischer, explains organisational technology adoption through three contextual dimensions: technological characteristics, organisational conditions and the external environment. Recent research demonstrates its relevance to Nigerian enterprises because social media adoption is not determined solely by the availability of digital platforms; rather, adoption is influenced by perceived technological benefits and complexity, organisational readiness and

managerial support, and environmental pressures and government support (Abdullahi et al., 2022; Eze et al., 2020).

Applied to the present study, the TOE framework served as underpinning theory, it explains why Nigerian micro-enterprises adopt Facebook, Instagram, WhatsApp and TikTok and how contextual conditions may shape the sales benefits obtained from such adoption. The technological context encompasses perceived relative advantage, compatibility, complexity and cost; the organisational context includes financial resources, digital skills, managerial capability and readiness; while the environmental context includes customer pressure, competition, infrastructure and government support. Nigerian evidence confirms this logic: Abdullahi et al. (2022) found that relative advantage, perceived risk, top management support, organisational readiness and government support significantly influenced Facebook adoption, which subsequently improved financial and non-financial performance.

Resource Based View (RBV)

The RBV**,** formally introduced by Wernerfelt (1984) and further developed by Barney (1991), explains differences in enterprise performance through the possession, development and effective deployment of valuable organisational resources and capabilities. From this perspective, social media adoption does not automatically generate superior sales performance; rather, performance benefits are more likely to arise when enterprises possess and develop the capabilities required to deploy digital technologies effectively. For micro-enterprises, such capabilities may include digital marketing skills, content creation, customer engagement, responsiveness and the ability to use customer information to support marketing decisions. Thus, RBV provides a useful theoretical basis for explaining why enterprises using similar social media platforms may achieve different sales outcomes. Recent Nigerian research explicitly identifies digital marketing competencies and technological capabilities as strategic resources capable of enhancing enterprise performance (Ayokunmi et al., 2026).

The supporting theory for study is RBV which suggests that social media adoption becomes a productive resource when micro-enterprises possess the capabilities to convert platform access into customer relationships, market information, product visibility and ultimately sales. Relevant capabilities include digital marketing skills, content creation, customer engagement, responsiveness and the ability to analyse customer information. This perspective helps explain why enterprises using the same platform may obtain different sales outcomes.

Nigerian study found that Facebook adoption positively affected financial and non-financial SME performance, supporting the argument that digital resources can create performance benefits when effectively utilised (Abdullahi et al., 2022). More recent evidence also shows that only some social media marketing attributes particularly informativeness and interactivity significantly strengthened SME performance, while personalization, trendiness and word of mouth did not have significant effects (Ayokunmi et al., 2026).

This theoretical combination for this study is strong because TOE explains adoption, whereas RBV explains value creation from adoption**.**

RESEARCH METHODOLOGY

A survey method was utilized to capture respondents' perspectives, experiences, and opinions on the subject. This technique is widely applied by organizational researchers seeking to collect information from large populations that cannot be directly observed (Mazzocchi, 2008). Furthermore, it was deemed the most suitable for gathering primary data (Fisher, 2010). Because it enable the researcher to identify the key variables under investigation and explain the resulting outcomes of their interrelationships (Zikmund et al., 2013). The cross-sectional approach enabled all study variables to be measured at one point in time, consistent with established survey research practice (Creswell, 2014b).

The cross sectional survey was design to examine the impact of social media adoption on the sales performance of micro-enterprises in North-Western Nigeria. The target population comprised 38,413,420 micro-enterprises in Nigeria, based on the 2020 NBS/SMEDAN National Survey of MSMEs, a national population figure also referenced in PwC's MSME Survey 2024: Building resilience: Strategies for MSME success in a changing landscape (Pwc, 2024). The PwC report highlights the importance of digital and technology transformation to MSME productivity and profitability.

Given the very large population, the required sample size was determined using the Krejcie and Morgan (1970) sample size table. For populations substantially exceeding 1,000,000, the table approaches a sample requirement of approximately 384 respondents at the conventional 95% confidence level and 5% margin of error. Accordingly, a minimum sample of 384 eligible micro-enterprises was targeted.

A multi stage sampling procedure was employed to obtain geographical coverage across the seven North-Western states: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara. At the first stage, the study population was stratified by state to ensure coverage of the seven geographical strata. Stratification is appropriate where

researchers seek to ensure that important population subgroups are represented in the sample (Creswell, 2014a). At subsequent stages, eligible micro-enterprises were identified within the selected states. Where complete sampling frames and direct access to eligible enterprises were available, random selection was applied; where such frames or access were constrained, convenience and purposive (judgmental) sampling were employed to identify enterprises satisfying the study's eligibility criteria. Data were collected electronically through a structured questionnaire administered using Google Forms. The questionnaire was distributed through relevant social media platforms, enabling the researchers to reach respondents across the study area while maintaining a uniform format for data collection. All constructs were measured using a five-point Likert scale, with responses ranging from 1 = strongly disagree to 5 = strongly agree. The collected data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). This technique was considered appropriate because it enables the simultaneous assessment of the measurement model and structural model and is particularly useful for examining predictive relationships among latent constructs (Hair et al., 2019).

RESULTS AND DISCUSSION OF FINDINGS

Response Rate

This study distributed 384 copies of questionnaires, and a total of 321 were returned and 316 were found usable, representing 82.29% usable response rate. A reasonably better response rate was achieved as a result of the researcher‘s persistence for completion of each questionnaire. However, in the procedure of data screening and cleaning, 05 questionnaires were rejected as all questions were not completed and only the 316 valid questionnaires available on hand represent 95.9% of the returned questionnaires. Thus, overall, 316 copies of the questionnaire were used for the analysis.

Details of the questionnaires distributed are summarise in table 1 below:
Table 1

Demographic of the respondents

Gender	**Frequency**	**Percentage %**
Male	235	
Female	81	
Highest Educational Qualification		
ND/NCE	107	
HND/B.SC	191	
Postgraduate	18	
Age of the respondent		
18-25 Years	95	
26-35	183	
36-45	29	
46 and above	9	
Types of social media		
Facebook	91	
Instagram	83	
Tiktok	57	
WhatsApp	85	
Experience		
Less Than 1 Year	29	
Less Than 3 Year	73	
Less Than 5 Years	141	
5 Years and Above	73	

Sources Field survey 2026

A total of 384 structured questionnaires were distributed electronically through Google Forms using social media platforms, of which 316 were returned and found usable for the analysis. The demographic profile table 1 above indicates that 235 respondents (74.4%) were male, while 81 (25.6%) were female, suggesting a predominantly male representation in the study sample. Regarding educational attainment, 191 respondents (60.4%) possessed HND/B.Sc qualifications, representing the largest educational category, followed by 107 (33.9%) with ND/NCE qualifications and 18 (5.7%) with postgraduate qualifications. This distribution indicates that most respondents had at least tertiary-level education, which may facilitate familiarity with digital technologies and social media based business activities.

The age distribution shows that 183 respondents (58.0%) were aged 26–35 years, constituting the largest group, followed by 95 (30.0%) aged 18–25 years. Respondents

aged 36–45 years accounted for 29 (9.2%), while only 9 (2.8%) were aged 46 years and above. Thus, the sample was predominantly composed of young adults within the economically active population.

With respect to the social media platforms used, Facebook accounted for 91 respondents (28.8%), followed by WhatsApp with 85 (26.9%), Instagram with 83 (26.3%), and TikTok with 57 (18.0%). This distribution provides representation across all four platforms examined in the study.

The distribution of respondents by experience indicates that 141 respondents (44.6%) had less than five years of experience, constituting the largest proportion of the sample. This was followed by 73 respondents (23.1%) with five years and above**,** whil**e** 73 respondents (23.1%) had less than three years of experience. The smallest category comprised 29 respondents (9.2%) with less than one year of experience. Overall, the findings indicate that the sample comprised respondents with varying levels of experience, with nearly half having less than five years of experience. The presence of respondents across both relatively limited and more extensive experience categories provides a heterogeneous profile for examining social media adoption and its relationship with micro-enterprise sales performance.

Measurement Model Assessment

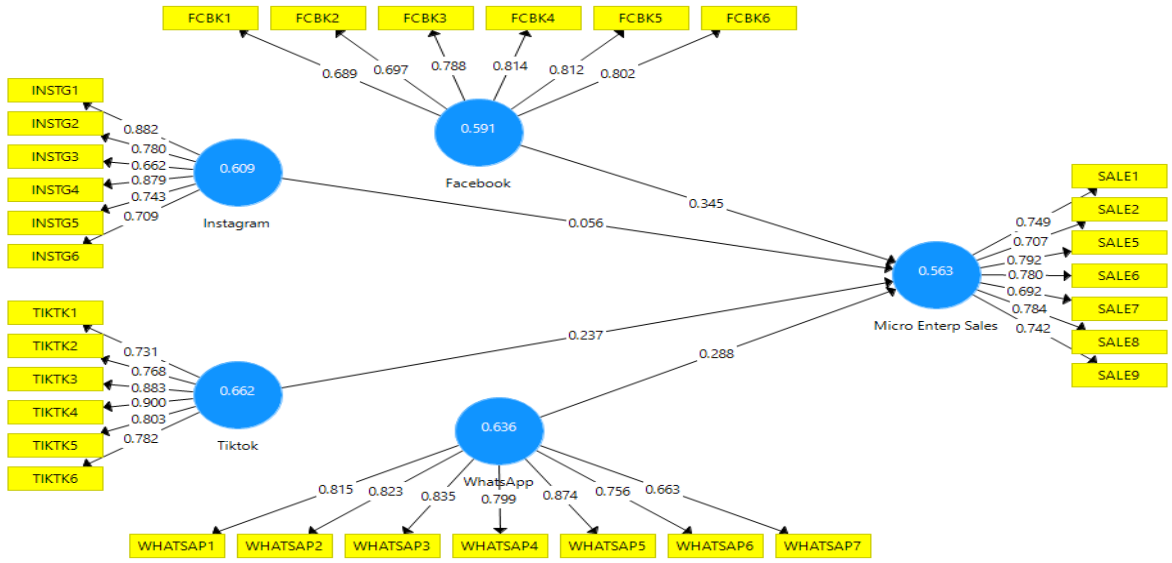

Figure 2

Measurement Model
Sources PLS-SEM Output 2026

Table 2:
Reliability and convergent validity

Variables	Cronbach's Alpha	rho_A	Composite Reliability	(AVE
Facebook	0.861	0.867	0.896	0.591
Instagram	0.868	0.874	0.902	0.609
Micro Enterp Sales	0.870	0.872	0.900	0.563
Tiktok	0.896	0.900	0.921	0.662
WhatsApp	0.903	0.906	0.924	0.636

Sources PLS-SEM Output 2026

Table 2 and figure 2 above shows the measurement model which was evaluated to establish the reliability and convergent validity of the reflective constructs before assessing the structural model. Following Hair et al. (2019), internal consistency reliability was assessed using Cronbach's alpha, rho_A and composite reliability (CR), while convergent validity was examined using the average variance extracted (AVE). Cronbach's alpha, rho_A and CR values of 0.70 or above are generally considered acceptable, whereas values exceeding 0.95 may indicate

excessive similarity or redundancy among measurement indicators. An AVE value of at least 0.50 indicates adequate convergent validity because the construct explains at least 50% of the variance in its indicators (Hair et al., 2019).

As shown in Table 1, all constructs satisfied the recommended reliability criteria. Cronbach's alpha values ranged from 0.861 to 0.903, exceeding the minimum threshold of 0.70. Similarly, rho_A values ranged from 0.867 to 0.906, while composite reliability values ranged from 0.896 to 0.924. These results indicate satisfactory internal consistency reliability across the Facebook, Instagram, TikTok, WhatsApp and Micro-enterprise Sales constructs. Although the composite reliability coefficients for TikTok (0.921) and WhatsApp (0.924) are above the commonly preferred 0.90 level, they remain below the 0.95 upper threshold suggested by Hair et al. (2019); therefore, the results do not indicate any problematic indicator redundancy.

Convergent validity was also established because the AVE values ranged from 0.563 to 0.662, all exceeding the recommended minimum of 0.50. Specifically, Facebook recorded an AVE of 0.591, Instagram 0.609, Micro-enterprise Sales 0.563, TikTok 0.662 and WhatsApp 0.636. Thus, each construct explains more than 50% of the variance in its respective indicators, providing evidence of adequate convergent validity. Overall, the results demonstrate that the measurement model possesses satisfactory internal consistency reliability and convergent validity and can therefore proceed to further assessment of the structural model, subject to confirmation of discriminant validity.

Structural Model Assessment and Discussion of Findings

The structural model was assessed using the path coefficient (β), standard deviation, t-statistic, p-value, effect size (f^2) and coefficient of determination (R^2). At the 5% significance level (Chin, 2010), relationships with p-values below 0.05 were considered statistically significant (Hair et al., 2011). The results show that Facebook, TikTok and WhatsApp have positive and statistically significant relationships with micro enterprise sales, whereas Instagram has a positive but statistically insignificant relationship. The f^2 values of approximately 0.02, 0.15 and 0.35 are commonly interpreted as small, medium and large effects, respectively (Cohen, 1988).The model explains 69.5% of the variance in micro enterprise sales ($R^2 = 0.695$), indicating relatively high explanatory capacity within the study context.

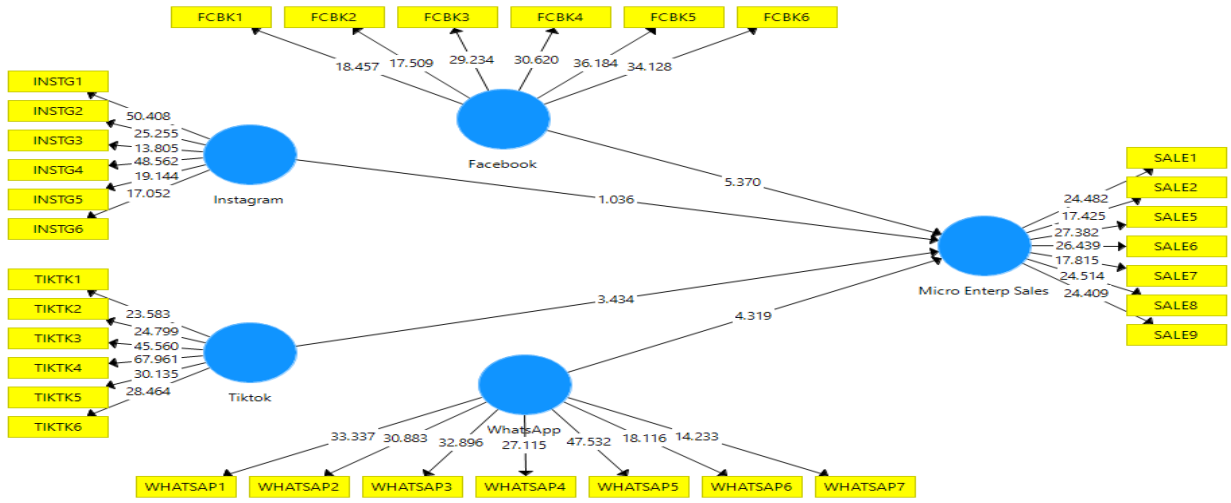

Figure 3
Measurement Model
Sources PLS-SEM Output 2026

Table 3
Path Coeffieicient

Structural relationship	β	SD	t-stat	p-val	f^2	Decision on H_0
Facebook -> Micro-enterprise Sales	0.345	0.064	5.370	0.000	0.148	Reject $H0_1$
Instagram -> Micro-enterprise Sales	0.056	0.054	1.036	0.301	0.005	Fail to reject $H0_2$
TikTok -> Micro-enterprise Sales	0.237	0.069	3.434	0.001	0.055	Reject $H0_3$

WhatsApp -> Micro-enterprise Sales	0.288	0.067	4.319	0.000	0.088	Reject $H0_4$
R^2: Micro-enterprise Sales	0.695					

Table 3 and figure 3 result indicates a positive and statistically significant relationship between Facebook adoption and micro-enterprise sales ($\beta = 0.345$, SD = 0.064, $t = 5.370$, $p < 0.001$). Since the p-value is below the 0.05 significance threshold, $H0_1$ is rejected. The effect size ($f^2 = 0.148$) indicates a meaningful contribution of Facebook to the explained variance in micro-enterprise sales. Thus, the results provide statistical evidence of a positive association between Facebook and micro-enterprise sales. This finding is consistent with Abdullahi et al. (2022), who found that Facebook adoption positively influenced the financial and non-financial performance of service-based SMEs in North-Western Nigeria. It is also consistent with Charles et al. (2025), who reported that Facebook significantly influenced SME performance among businesses in Aba. More recently, Ala et al. (2026) found a positive and significant Facebook SME performance relationship in Katsina State ($\beta = 0.204$, $t = 6.201$, $p < 0.001$). Hence, this study results provide evidence of a positive relationship between Facebook and sales. The convergence of these findings suggests that Facebook can support business outcomes through product promotion, customer interaction, market reach and brand visibility. The present study extends this evidence by focusing specifically on micro enterprises and sales performance.

In contrast the findings show that Instagram has a positive but statistically non-significant relationship with micro-enterprise sales ($\beta = 0.056$, SD = 0.054, $t = 1.036$, $p = 0.301$). Because the p-value exceeds 0.05, $H0_2$ is not rejected. Furthermore, the effect size is very small ($f^2 = 0.005$), indicating that Instagram makes only a minimal contribution to explaining variation in micro-enterprise sales within the model. This finding differs from Charles et al. (2025), who reported a significant positive effect of Instagram on SME performance, and from Ala et al. (2026), who found a significant Instagram effect in Katsina State ($\beta = 0.196$, $t = 5.779$, $p < 0.001$). The divergence may reflect differences in enterprise size, geographical context, measurement of performance and patterns of platform utilisation. While Instagram offers opportunities for visual product presentation and customer engagement, adoption alone may not ensure that online visibility is converted into measurable sales. This interpretation is consistent with Ayokunmi et al. (2026), who found that social media marketing effects differed across specific dimensions, with informativeness and interactivity significant but other dimensions producing non-significant effects.

TikTok demonstrates a positive and statistically significant relationship with micro-enterprise sales ($\beta = 0.237$, SD = 0.069, $t = 3.434$, $p = 0.001$). The p-value is below 0.05; therefore, $H0_3$ is rejected. The effect size ($f^2 = 0.055$) indicates a small contribution of TikTok to the explained variance in micro-enterprise sales. This finding is consistent with Ala et al. (2026), who reported a significant positive effect of TikTok on SME performance in Katsina State ($\beta = 0.204$, $t = 5.806$, $p < 0.001$). The consistency is particularly relevant because both studies examine businesses within the North-Western Nigerian environment. The finding also complements Ayokunmi et al. (2026), whose results indicate that the performance implications of social-media activities depend on the nature and quality of digital marketing practices rather than simply on technology adoption. TikTok's short-form video format may enable micro-enterprises to demonstrate products, communicate product benefits and increase audience engagement, although the relatively small f^2 indicates that its individual contribution is limited.

The results reveal a positive and statistically significant relationship between WhatsApp adoption and micro-enterprise sales ($\beta = 0.288$, SD = 0.067, $t = 4.319$, $p < 0.001$). Accordingly, $H0_4$ is rejected at the 5% significance level. The effect size ($f^2 = 0.088$) indicates a small to moderate contribution to the explained variance in micro-enterprise sales. The finding is consistent with Bassey et al. (2025), who identified WhatsApp as an important marketing communication tool for SME performance in Cross River State. It is also consistent with Charles et al. (2025), who reported a significant positive relationship between WhatsApp usage and SME performance in Aba. Furthermore, Ala et al. (2026) found a highly significant WhatsApp effect on SME performance in Katsina State ($\beta = 0.287$, $t = 8.138$, $p < 0.001$), a coefficient remarkably close to the present estimate. These findings suggest that WhatsApp's direct communication structure may be particularly relevant to micro-enterprises because it facilitates customer enquiries, product promotion, order processing, transaction confirmation and relationship management.

Hence, the study indicates that social media platforms do not exert uniform relationships with micro-enterprise sales. For instance, Facebook, WhatsApp and TikTok demonstrate statistically significant positive relationships, whereas Instagram does not. The R^2 value of 0.695 indicates that the four platform specific constructs jointly explain 69.5% of the variance in micro-enterprise sales. However, the f^2 values show that the individual contributions remain relatively small, with Facebook approaching the conventional medium effect threshold. The findings therefore suggest that the commercial value of social media depends not simply on whether a platform

is adopted but on how the platform is utilised for customer interaction, promotion, content creation and sales related activities.

The results also provide an important theoretical implication for the TOE and Resource-Based View perspectives. From a TOE perspective, different platforms may generate different outcomes depending on their technological characteristics and the organisational and environmental conditions under which they are deployed. From RBV perspective, the adoption of a social media account does not automatically constitute a performance enhancing resource; rather, value is likely to depend on the enterprise's ability to develop and deploy complementary digital capabilities, including content creation, customer engagement, responsiveness and online selling capabilities.

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

The findings indicate that social media adoption is differentially associated with micro-enterprise sales. Facebook demonstrates the strongest significant relationship ($\beta = 0.345$, $p < 0.001$), followed by WhatsApp ($\beta = 0.288$, $p < 0.001$) and TikTok ($\beta = 0.237$, $p = 0.001$). Their effect sizes are small to approaching moderate ($f^2 = 0.148$, 0.088 and 0.055, respectively). In contrast, Instagram exhibits a positive but statistically insignificant relationship ($\beta = 0.056$, $p = 0.301$; $f^2 = 0.005$). Collectively, the four platforms explain 69.5% of the variance in micro-enterprise sales ($R^2 = 0.695$), indicating substantial explanatory power within the study context. These findings suggest that social media adoption should not be treated as a uniform digital strategy, because platform specific differences matter.

This study has several limitations. First, it's cross sectional design captures social media adoption and sales performance at a single point in time, limiting the ability to establish temporal precedence and definitive causal relationships. Second, the study relies primarily on self-reported measures, which may be subject to recall and common-method biases. Third, the geographical focus on North-Western Nigeria may constrain the generalisability of the findings to micro-enterprises in other Nigerian regions or different institutional contexts. Finally, the analysis considers only Facebook, Instagram, TikTok and WhatsApp, excluding other emerging digital platforms that may influence sales performance.

Micro-enterprises should prioritise Facebook, WhatsApp and TikTok for customer acquisition. Micro-enterprise owners should integrate Facebook, WhatsApp and TikTok into specific sales activities rather than using them only for general visibility. Facebook should be used for targeted product promotion and customer acquisition; WhatsApp for enquiries, order processing, customer follow up and repeat purchases; and TikTok for product demonstrations, short form promotional content and audience engagement. The significant coefficients for these platforms provide empirical support for this platform specific approach.

Government and MSME support agencies such as SMEDAN should expand practical training in digital marketing, content creation, customer analytics, online selling and platform specific advertising. SMEDAN's Digital Academy already provides training in digital marketing, e-commerce and related digital capabilities. Micro-enterprises owners should evaluate its commercial value through targeted content, product presentation and customer conversion strategies. Finally, future interventions should emphasise measurable commercial outcomes rather than engagement metrics alone, enabling micro-enterprises to allocate limited digital resources more effectively.

Policymakers and MSME-support organisations should provide affordable digital skills programmes, market linkage support and digital infrastructure, enabling micro-enterprises to convert social media engagement into sustainable commercial transactions.

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