

## The mediation-moderation effect on the nexus between social media adoption, customer satisfaction, social media competence and SMEs performance during COVID-19 pandemic

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### CHRONICLE

### ABSTRACT

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Numerous studies have been conducted on individual and organizational adoption of social media, and many of these studies were conducted in advanced economies by focusing on large corporations. This study addresses the gap by examining the use of social media by SMEs in West Africa, notably Nigeria. Using a structured questionnaire, 682 small business owners were questioned regarding their thoughts on social media adoption: cost, privacy, convenience, and quality of service. The PLS-SEM result reveals a structural relationship between social media adoption and SME performance. Due to the substantial change in operations induced by COVID-19, enterprises are increasing their involvement in social media marketing to improve performance, and the competence of social media strengthens the effect on customer satisfaction.

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## 1. Introduction

Small and Medium-Sized Enterprises (SMEs), known as engines of economic growth in both developed and developing countries, have long recognized the value of high quality, to match consumer expectations and exploit value in their marketplaces, and achieve excellent implementations demand (Olaleye et al., 2021a; 2021b; Aribaba et al., 2019b; Demirbag, et al., 2006). Recently, numerous industries are adopting an online marketing strategy, which has served as a replacement for retail sales as its popularity and patronage among the general public has grown. With the COVID-19 pandemic wreaking havoc on SMEs, these businesses must continue operating endlessly, since their contribution to the economy's economic health remains tremendous. Digital promotion is the most effective method of communicating with customers, and this instrument has been put to full use as a result of the epidemic. This tremendous technological revolution affects all categories of humanity in person, educational, and professional realms. Despite having the most internet and social media users in Africa (Statistica, 2018), SMEs are slow to adopt modern technology, resulting in increased business failure (Napitupulu et al., 2018). The constraint emanating from face-to-face trade transactions resulted in the widespread development of online marketing, as an alternative for continuing business dealings. SMEs have used E-marketing to present customers with attractive, accurate, and valuable information.

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As a unified component of running company operations, technology helps organizations become more successful and competitive (Abed, 2020; Ahamat et al., 2017). Social networking is now a necessity for all organizations, regardless of size, with many benefits for firms, including advertising, marketing, branding, consumer feedback, market research, and product development. Since social media has grown important to SMEs, they are not remained excluded from these benefits (Ajibade, 2018). Alshamaila et al. (2013), concluded that technical capabilities to execute and operate digital marketing are still lacking by human resources. However, actions such as home telework, virtual conferencing, and internet buying continue to rise among SMEs organizations.

In times of economic shocks, the SME sector is expected to act primarily as a safety for the economy with a fascinating workforce, but this could no longer happen, as their cogent role became unperformed. Several businesses, including SMEs, have suffered due to restrictions on most economic and social activity (Aribaba et., 2019a; Al-Adwan et al., 2019). These developments impacted capital and supply chains, as well as product availability and distribution. The Coronavirus pandemic does have an impact on the worldwide economy, whereby the unprecedented pandemic prompted drastic measures in individual life and its environs. The rapid negative impact of COVID-19 on the global economy is unprecedented, causing the collapse of key travel, hospitality, and retail businesses, and massive global unemployment (Al-Khalidi, 2021).

The COVID-19 debacle wreaked havoc on SMEs, which were the most vulnerable to the global economic crisis. These micro-firms employ less than 50 people, and some are owned by families with only one or two employees, making them particularly sensitive to the effects of COVID-19. The economy has been sustained by this situation due to the critical beneficial roles SMEs play globally. For example, the UK had 5.94 million small firms in 2020, accounting for 99.3% of all businesses, employing 13.3 million people and generating 1.6 trillion dollars. Furthermore, over 90% of African enterprises are SMEs, and these SMEs have enabled the sustainability transformation during the COVID-19 crisis.

The SMEs' performance was improving before the outbreak but has since deteriorated due to the curfews and limitations imposed by the authorities, resulting in substantial losses for the SMEs. To overcome this big issue, SMEs will need to find ways to reach customers and offer products or services in their homes, despite the restrictions. However, most SMEs lack the resources to effectively use social media marketing, which negatively impacts their businesses and occasionally causes them to fail. Because most businesses lack social media literacy, they are unable to reach customers or deliver products or services, which would have allowed them to continue operating despite the pandemic restrictions.

Several prior studies demonstrate significant efforts on the role performed by social media adoption on SME's performance in advanced countries, while SMEs in developing countries disclose severe deficiency (Kateri, 2021; Nofal et al, 2020; Yaseen et al, 2019; Ahmad et al., 2018; El-Gohary, 2012). Interestingly, the present study is an effort to address these yearnings, focusing on the factors that influence social media adoption, as well as the intervening variable that can corroborate the varied and inconclusive outcomes from the existing literature (Dehghanpouri et al, 2020; Ahmad et al, 2018). In light of the paucity of research on social media marketing, this study seeks to establish the structural relationship between SM adoption-related factors and SMEs performance, while also taking into account, the role of social media competence and satisfaction as a moderator and mediator of this relationship within the Nigerian SMEs context.

## 2. Literature review and hypotheses development

SM, in particular, has been a major source of competitive advantage for most businesses. SM has evolved from online networking to a place where people look for dependable products. This confirms the idea that relying on social media is the key driver of a company's products or services. Company visibility improves, marketing expenditures decrease, client base expands, and brand image grows through social media. Small and large businesses recognize the power of social media influencers (Karr, 2014). The impact of social media on businesses is evident in the fact that corporations may use such data to do consumer and market research. Companies hunt for these influencers on social media and provide them free product samples to review (Karr, 2014).

Gullivan et al. (2015), conducted a descriptive survey design on the influence of social media on SMEs in Ghana. Data obtained revealed that the majority of respondents had internet-enabled phones and were aware of a wide range of media outlets. The study found that mostly, consumers spend 30 minutes to 3 hours each day on social networking platforms like Facebook, Instagram, and Twitter. The survey further showed a clear correlation between respondents' use of social networking sites and their SMEs' performance.

Oyekan and Kamiyo (2008) claim that had a great effect on corporate success. The study also identified social media's negative impact on student SMEs' performance. This includes limiting student access to social media sites and time spent on them. Patma et al. (2020), examines Facebook's apparent impact on Nigerian business, using a standardized questionnaire to obtain relevant data from 80 randomly selected agricultural students. However, the findings showed that 64% of the students were female and above-average were between the ages of 21 and 30. Facebook and WhatsApp were found to be the most popular social media sites among college students. The study's findings suggest that students should be encouraged to use Facebook for educational objectives but discouraged from using it for recreational purposes.

### 2.1 Cost and SMEs Performance

Cost is a significant issue in deciding whether or not a company should employ new technology to expand. A prior study found a link between technology adoption and cost. SMEs adopt social media marketing, since it is of low-cost involvement, and requires little IT expertise (Praveena & Thomas, 2014). Due to the better position occupied by TMT, senior managers solely encourage the effective SMM adoption in enterprises (Mustkibil, 2019; Ozili et al., 2020). Previously, firms' adoption of new technology was connected to management assistance. Top-down support is crucial in fostering an environment that allows for the adoption of new technology (Wang, 2005).

Small firms will not adopt social media marketing, if the setup costs are excessive, thus, a low-cost communication channel is always preferred by SMEs in communicating by customers (Kaplan et al., 2010).

**H<sub>1a</sub>:** *Cost as an SMM Adoption-related factor negatively influence SME's performance.*

**H<sub>2a</sub>:** *Cost is negatively related to customer satisfaction.*

### 2.2 Quality of Services and SMEs Performance

Service quality is an important facet of a firm-customer interaction being a driver of satisfaction. The consumer decides if the organization gives a quality that inspires them to continue doing business or not (Chen and Vargo, 2014). Poor service perceptions force clients to leave the trade connection. A perceived good service may boost contentment, as well as, bad service resulting in complaints and customer loss. They suggested that unfairness perceptions encourage customers to leave relationships if they receive poor customer service (Yu et al., 2015a). Many studies have looked at how service quality affects consumer satisfaction. Rust and Zahorik (1993) hypothesized that improved service quality enhances consumer loyalty and satisfaction. Customer pleasure and loyalty are preconditions for service quality. Increasing service quality can boost client satisfaction, loyalty, and profitability (Heidemann et al., 2013).

**H<sub>1b</sub>:** *Quality of service as an SMM Adoption-related factor positively affects SME's performance.*

**H<sub>2b</sub>:** *Quality of service is positively related to customer satisfaction.*

### 2.3 Convenience and SMEs Performance

Convenience is a key factor in internet shopping willingness (Wang et al., 2005). Convenience entails lowering shopping time, a pleasant buying experience, and delivery time, as well as perusing options quickly and easily (Olaleye et al., 2021a). Increasing time efficiency and allowing consumers to purchase from anywhere is a convenience dimension of service excellence. That is, consumers patronize online at any time of day, under dependable and predictable procurement services. Seiders et al. (2007) identify five characteristics of convenience: decision, access, benefit, transaction, and post-benefit. Small scale business owners tend to choose transaction options via social media once convenience in terms of time, efficiency, delivery can be guaranteed.

**H<sub>1c</sub>:** *Convenience as an SMM Adoption-related factor positively influences SME's performance.*

**H<sub>2c</sub>:** *Convenience is positively related to customer satisfaction.*

### 2.4 Privacy and SMEs Performance

Potential and actual customers are confident that the site is safe and secure (Kundu and Datta, 2015). Online environments may be less satisfying, due to bad interface design, technology failure, perceived absence of human touch, financial security, and privacy (Meuter et al., 2000). Ross (2005) cites privacy and security as major variables that influence whether or not customers make online purchases. This policy relates to the website's ability to protect the customer's personal information and is highly significant in creating a long-term relationship between the firm and the customer (Ismail and Hussin, 2013). However, privacy refers to the protection of many sorts of data collected (without or with the user's knowledge) during online system engagement (Kassim and Asiah Abdullah, 2010). For present clients and potential online customers, privacy is viewed as crucial (Park and Kim, 2003). Thus, client happiness and privacy are important factors. Based on the aforementioned, the current study hypothesizes:

**H<sub>1d</sub>:** *Privacy as an SMM Adoption-related factor positively influences SME's performance.*

**H<sub>2d</sub>:** *Privacy is positively related to customer satisfaction.*

### 2.5 SMM Adoption and SMEs' Performance: Mediating Role of Customer Satisfaction

Researchers agree that customer satisfaction is a substantial predictor of behavioral factors. Customers anticipate companies to go above and beyond. Thus, customer satisfaction is among the modern measure of SME's performance.

Several scholars claim that SMEs are progressively espousing and utilizing social media. The authors also suggested that academics focus on how SM adoption might help small and medium-sized enterprises and researchers interact better. There is a growing body of scientific work on business social media use. However, most existing research focuses on larger businesses that are more likely to adopt new and innovative technology. Small and medium-sized businesses (SMEs) are less likely to adopt new technologies due to a lack of resources, technical experience, organizational instability, staff numbers, and capacity (Stockdale et al., 2012; Zeiller and Schauer, 2011; Kaplan and Haenlein, 2010). SMEs must carefully consider adopting new technology, such as social media applications (Boyles, 2011).

In a study of 215 worldwide SMEs, researchers discovered that social networking sites boosted their performance. A second study looked at 204 small firms in Kenya and found a substantial correlation between SM and success. found that technical innovation influenced firm performance. During COVID-19, the researcher plans to explore social media's role as a mediator between several factors affecting SME success (Praveena & Thomas, 2014). Thus, social media has a positive impact on the performance of small and medium-sized firms.

- H3:** *SME's performance is positively influenced by customer satisfaction.*
- H4a:** *Customer satisfaction mediates cost influence on SME's performance.*
- H4b:** *Customer satisfaction mediates quality of service influence on SMEs performance.*
- H4c:** *Customer satisfaction mediates convenience influence on SMEs performance.*
- H4d:** *Customer satisfaction mediates privacy influence on SME's performance.*

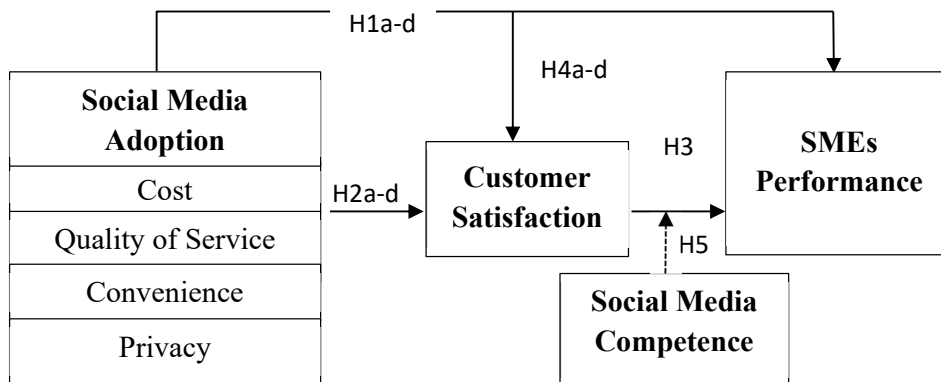
**2.6 Moderating Role of Social Media Competence on SMM and SMEs Performance**

Social media competency (SMC) is the ability to utilize social media effectively to communicate, connect, and engage with others (Alber et al., 2014). In other words, competence means knowing how to use social media properly and confidently. Alber et al. (2014), define essential components of the SMC construct as social media self-efficacy, social media experience, effort expectancy, performance expectancy, facilitating conditions, and social influence.

Bhattacharya & Wamba (2018) identified three barriers to SMEs embracing social media: social media skills, organizations, and individuals. Environmental, organizational, and technological factors all influence the effectiveness of SME technology adoption (Biucky & Harandi, 2017). Previous research has shown that small enterprises must adapt their business practices to adopt digital technology (Chiu et al., 2017). Although this adjustment is one of the most difficult for small enterprises, it always pays off when overcome. One important benefit of social media usage is that it allows SMEs to access resources normally reserved for larger corporations (Chong & Olesen, 2017). Social media also enables small firms to compete beyond their specialized market.

As Wahab et al. (2010), recommended if a variable affects customer satisfaction, it will result in great influence on performance. Thus, this study proposes that for small-scale businesses to experience better performance, the competency of social media in all marketing activities will strengthen and modify more satisfaction for intending and real customers, that is SM competence will mitigate the impact of satisfaction on SMEs performance.

- H5:** *Social media competence moderates the customer satisfaction-performance relationship.*



**Fig. 1.** Heuristic research model

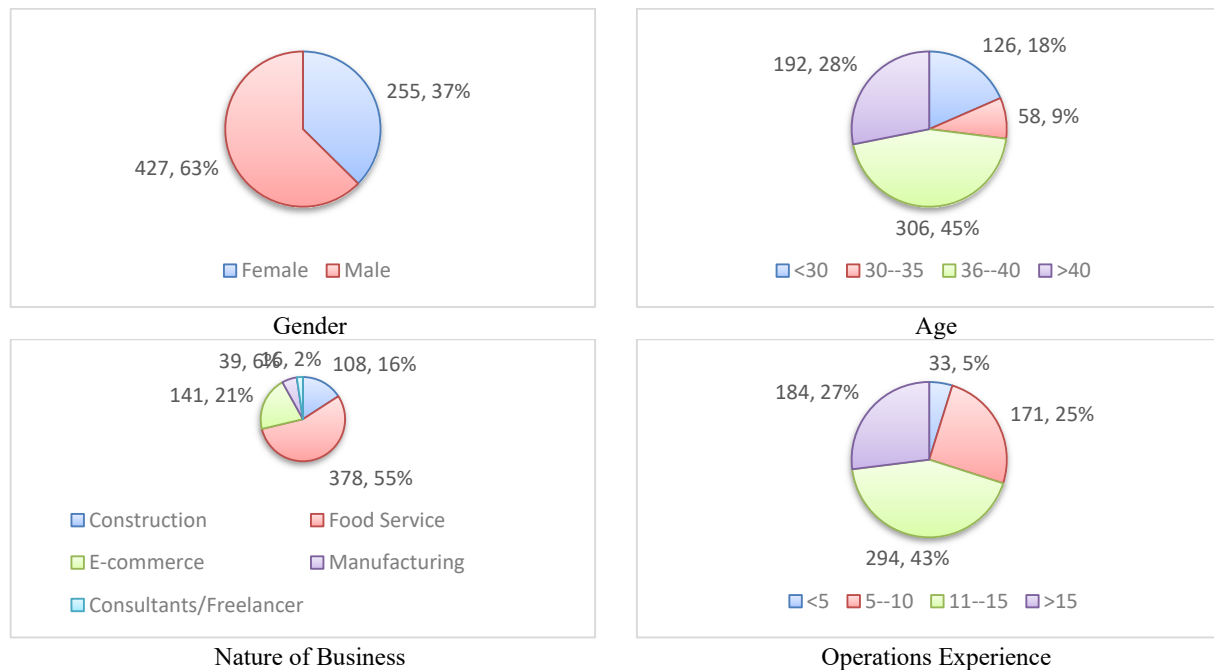
**3. Methodology**

This study uses a quantitative approach, which analyzes and examines the structural relationship between factors influencing adoption-related factors, and SMEs performance, equally with mediating and moderating role of customer satisfaction and

social media competence. A descriptive cross-sectional research design was conducted, where an online self-administered questionnaire was created, and uploaded in form of google forms, in addition to printed surveys which were conveniently distributed to elicit relating information from SMEs owners, and or operators, who are first-hand users of social media platforms for business transactions during the pandemic within Lagos, River, Delta, Oyo, and Imo state, being the five largest industrialized states in Nigeria. A well-structured survey was used to elicit responses consistent with the extant literature. Adoption of Social Media factors was operationalized according to prior research undertaken, where measurement of constructs are treated as; cost (4 items) quality of service (3 items), convenience (4-items), and privacy (3-items) from several studies (Zhang et al., 2019; Acquity Group, 2014; Aniba et al., 2011; Kaplan & Haenlein, 2010; Parasuraman et al., 2005; Aniba et al., 2011; Srinivasan et al., 2002). Meanwhile, customer satisfaction and social media competence were assessed using four items and seven items based on the study conducted by Amin and Isa, (2008), Pezderka et al. (2012), and María del Carmen Alarcón et al. (2015). Finally, five items were used to measure SME's performance from prior studies (Aral et al., 2013; Chung et al., 2017; Dwivedi et al., 2017; Elbanna et al., 2019). Thus, all constructs were measured using a 5-point Likert scale ranging from 1 indicating 'Strongly Disagree' to 5 representing 'Strongly Agree'. This research adheres to ethical standards, as participation is fully voluntary, and participants are informed that any information they provide will be kept confidential and their identity will always be protected. Meanwhile, 37 outliers and non-engaged respondents were eliminated from the 814 fully completed retorts obtained during four months, leaving 682 valid responses as the final sample size, which resulted in an approximately 84 percent response rate. Furthermore, Authors employed descriptive and inferential statistics to describe the sample population frame as well as the respondents' demographic profile. A two-step approach is recognized when evaluating the psychometric qualities of the measurement model and examining the postulated structural model, using the partial least square structural equation modeling (PLS-SEM) technique.

**4. Results and discussion**

The study sample comprised 62.6% were male and 37.4% were female. On average, the majority had age falling within 36-40 years, while the least age fell within 30-35 years. Statistics of the nature of business revealed that the majority of the respondents engage in food services as a firm of SMEs, while the least response emanated from those with the option of being a consultant or freelancer. Finally, business operation experience gave an analysis of the majority operating small enterprises for at least 5 years, which implies that they are fully equipped and knowledgeable on SMEs and their dynamism with technology being invented into daily business activities. Hence, the demographic profile is presented in Fig. 2 given below:



**Fig. 2.** Demographic profile of the respondents

Source: Author's survey and computation, 2021

**4.1 Social Media Platforms and Rate of Influence on Business Operations**

Table 1 summarized the various social media marketing platforms used by business owners or operators in Nigeria, as well as their effectiveness in increasing business operations. According to the majority of responses, WhatsApp and Instagram as social media platforms had a very positive impact on business operations, while Facebook had a moderate impact and Twitter had a decent impact.

**Table 1**  
Distribution based on social media platforms influence on business operations

Social Media Plat- forms	Very Poor		Poor		Fair		Good		Very Good	
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
WhatsApp	16	2.3	34	5.0	72	10.6	181	26.5	379	55.6
Instagram	26	0.8	17	6.7	91	17.7	241	32.7	307	42.1
Facebook	71	10.4	76	11.1	142	20.8	301	44.1	92	13.6
Twitter	88	12.9	164	24.1	311	45.6	106	15.5	13	1.9

Source: Authors' computation

## 4.2 Hypotheses Testing

### 4.2.1 Measurement and Structural Models

Both measurement and structural models were examined using Andersen and Gerbing's (1988) two-stage partial least squares (PLS) model. The measurement model was tested using convergent validity. The validity of an instrument evaluating the same notion is determined by how well many items in the instrument agree. Convergent validity was used to determine the factor loading ( $\lambda$ ), average variance extracted (AVE), and composite reliability (CR).

As suggested by Lin and Wang (2012) and Igbaria et al. (1995), the overall measurement has acceptable fit and moderate predictive power, with all items having outer loadings ( $\lambda$ ) above 0.5, and composite reliability (Cronbach's alpha and rho A) values above the threshold of 0.7 as suggested by Dijkstra & Henseler (2015). Its item-construct structure is convergent. Also, the AVE is greater than 0.5, showing that the construct's convergent validity is still adequate (Olaleye et al., 2020; Fornell & Larcker, 1981). Table 2 summarizes the results.

**Table 2**  
Measurement model

Latent Variables	Loadings( $\lambda$ )	CA	rho_A	CR	AVE
<b>SOCIAL MEDIA ADOPTION FACTORS</b>					
<b>Cost</b>		<b>0.888</b>	<b>0.895</b>	<b>0.923</b>	<b>0.751</b>
CS1- "My cost of dealing with customer inquiries has been reduced using social media"	0.897***				
CS2- "Cost of identifying new customer has been reduced through the use of social media"	0.911***				
CS3- "Customer awareness and training cost have been diminished by the use of social media"	0.891***				
CS4- "The overall advertising and promotion cost have gone down using social media"	0.758***				
<b>Quality of Service</b>		<b>0.956</b>	<b>0.957</b>	<b>0.972</b>	<b>0.920</b>
QS1- "The site of this organization enables me to complete a transaction quickly"	0.951***				
QS2- "It tells me what to do if my transaction is not processed"	0.963***				
QS3- "I think that the reputation of the organization in terms of security is important"	0.964***				
<b>Convenience</b>		<b>0.963</b>	<b>0.964</b>	<b>0.973</b>	<b>0.900</b>
CO1- "Navigation through their platform is not very spontaneous"	0.941***				
CO2- "A first-time buyer can purchase from the online shop website without much help"	0.958***				
CO3- "It takes a long time to shop at their website"	0.926***				
CO4- "The website of the online shop is user-friendly"	0.927***				
<b>Privacy</b>		<b>0.906</b>	<b>0.910</b>	<b>0.955</b>	<b>0.914</b>
PV1- "I think the platform provides a privacy statement to guarantee customer information is kept confidential is necessary"	0.960***				
PV2- "I think that providing third-party verification to verify the organization's website authenticity for customers is vital"	0.953***				
PV3- "I think that the online service of the organization does not share customers' personal information with other platforms"	-				
<b>CUSTOMER SATISFACTION</b>		<b>0.897</b>	<b>0.903</b>	<b>0.929</b>	<b>0.766</b>
SAT1- "I am satisfied with services provided by this organization"	0.780***				
SAT2- "I am satisfied with employees' respond and prompt services online"	0.910***				
SAT3- "I am satisfied with financial services advice online"	0.914***				
SAT4- "The overall online service quality provided by this organization is excellent"	0.891***				
<b>SOCIAL MEDIA COMPETENCE</b>		<b>0.965</b>	<b>0.965</b>	<b>0.973</b>	<b>0.876</b>
SMC1: "Social media improves the firm ability to generate foreign sales"	0.946***				
SMC2: "Social media helps us to reach more foreign potential customers"	0.945***				
SMC3: "Using social media to target foreign markets gives our company a competitive edge over rivals"	0.938***				
SMC4: "Using social media, we can interact with foreign customers much more quickly"	0.932***				
SMC5: "Social media allow us to effortlessly communicate a positive business image to foreign customers"	0.920***				
SMC6: "Social media improves our ability to create relationships with customers in our target foreign markets"	-				
SMC7: "Social media improves foreign customer satisfaction"	-				
<b>SMEs PERFORMANCE</b>		<b>0.968</b>	<b>0.969</b>	<b>0.976</b>	<b>0.912</b>
SMP1- "My business performance has been increased using social media platform"	0.964***				
SMP2- "My sales are above average compared to others using social media platform"	0.962***				
SMP3- "My customers feel more connected with my business after using social media"	0.963***				
SMP4- "My efficiency to identify the customers' need has been increased using social media"	0.929***				
SMP5- "Creativity of my employees has been enhanced through the use of social media"	-				

Source: Author's Computation, 2021 **Notes:** - items deleted due to poor loadings

CA=Cronbach's Alpha, CR=Composite Reliability, rho= rho\_A reliability indices, AVE= Average Variance Extracted.

#### 4.2.2 Discriminant Validity

Table 3 shows that the square root of AVE for each latent variable is greater than the inter-construct correlation for each construct in the measurement model, according to the Fornell-Larcker (1981) criterion. The Heterotrait-Monotrait (HTMT) correlation ratio was developed in response to critiques of the Fornell-Larcker (1981) criterion (Henseler et al., 2015). As shown in Table 3, all constructs in our measurement model have HTMT values less than 0.9, as recommended by Kline (2005), indicating definite discriminant validity among variables.

**Table 3**  
Discriminant Validity (Fornell-Larcker Criterion and HTMT ratio)

Variables	CO	CS	SAT	PV	QS	SMP	SMC
Convenience	<b>*0.948</b>	<i><sup>b</sup>0.042</i>	<i>0.061</i>	<i>0.781</i>	<i>0.673</i>	<i>0.800</i>	<i>0.659</i>
Cost	-0.036	<b>0.867</b>	<i>0.814</i>	<i>0.061</i>	<i>0.024</i>	<i>0.049</i>	<i>0.041</i>
Customer Satisfaction	-0.053	0.726	<b>0.875</b>	<i>0.030</i>	<i>0.034</i>	<i>0.041</i>	<i>0.044</i>
Privacy	0.732	0.055	-0.001	<b>0.956</b>	<i>0.688</i>	<i>0.418</i>	<i>0.671</i>
Quality of Service	0.646	-0.012	0.015	0.642	<b>0.959</b>	<i>0.713</i>	<i>0.694</i>
SMEs performance	0.772	0.046	0.029	0.955	0.686	<b>0.955</b>	<i>0.713</i>
Social Media Competence	0.636	-0.036	-0.035	0.630	0.667	0.689	<b>0.936</b>

Source: Author's Computation, 2021

*a\**Diagonal values in bold are the square root of AVE when using Fornell-Larcker's criteria.

*b\**italics values above the diagonal are the HTMT ratio

#### 4.2.3 Collinearity Statistics

Multicollinearity between and among predictors is evaluated by estimating the Variance Inflation Factor (VIF) for each independent variable, as shown in the add-on Table 4 below, while evaluating the measurement model. Since all of the VIF values are less than 3, the results show that there is no problem regarding collinearity or multicollinearity (Hair et al., 2017).

**Table 4**  
Structural Model Multicollinearity (Inner VIF Values)

Variables	SAT	SMP
Convenience	2.452	2.570
Cost	1.017	2.165
Customer Satisfaction	-	2.144
Privacy	2.444	2.568
Quality of Service	1.919	2.243
SMEs performance	-	-
Social Media Competence	-	2.176

Source; Authors Computation

#### 4.3 Structural Model

Apart from the measurement model, this study also assessed the structural model. The Structural model is usually adopted to test the causal relationship among the constructs in the instrument, by providing a path coefficient, the R-squared, t-statistics, P-value, and  $f^2$  using a bootstrapping of 5000 re-sampling procedure.

The direct effects of the predictor variable on the outcome variables are examined, and the results indicate that all identified factors in hypothesis one (H1b-d) are significantly and positively related to SMEs performance, with the exception of cost, which has a negative effect on SMP but is insignificant (H1a:  $\beta = -0.040$ ,  $t = 1.733$ ,  $p > 0.05$ ). Furthermore, hypotheses 2a,2b, 2d were said to be significant and positively related to customer satisfaction, while convenience as a social media marketing-related factor is insignificantly related to satisfaction (H2c:  $\beta = -0.026$ ,  $t = 0.666$ ,  $p > 0.05$ ). Meanwhile, H3 revealed that social media competence is positively and significantly related to SMEs performance ( $\beta = 0.092$ ,  $t = 5.686$ ,  $p < 0.05$ ). Finally, the indirect effect of customer satisfaction on the relationship between SMM influencer and SME performance is all said to be significant (H4a-d:  $p < 0.05$ ), and social media was said to moderate SAT  $\rightarrow$  SMP path with a positive extent ( $\beta = 0.078$ ,  $t = 4.662$ ,  $p < 0.05$ ).

The estimation of coefficients of the determinant ( $R^2$ ) in the first hypothesis reveals that cost, quality of service, convenience, and privacy can explain and interpret SMEs performance to the tune of 93.4%, since the concerned coefficient of the determinant is 0.934, comparatively, privacy had the highest magnitude of concerned path coefficient (0.793). Meanwhile, the influence of the factors (CS, QS, CO, PV) on customer satisfaction revealed a strong coefficient of determination ( $R^2 = 0.534$ ), denoting that the SMM-related factors accounted for 53.4% influence on customer satisfaction having cost with the highest concerned path coefficient. Finally, 0.934 shown as the R-squared on the path (SMC  $\rightarrow$  SMP), revealed that social media competence (SMC) tends to account for and construe SME's performance with explanatory power of 93.4%, hence 6.6% variations in SMEs performance is explained by other factors.

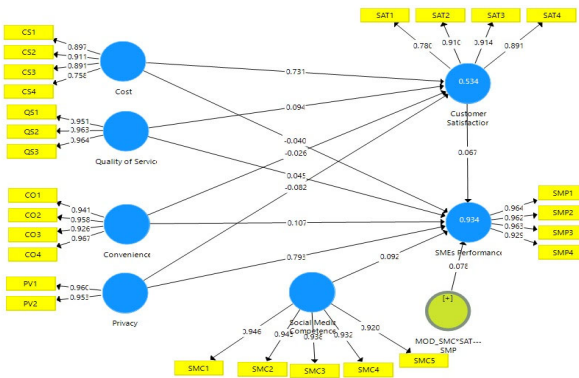
Subsequently, in addition to measuring the beta coefficients ( $\beta$ ), statistical significance (p-value), and variance explained ( $R^2$ ), Sullivan & Feinn (2012), advised that the substantive significance ( $f^2$ ), be reported to reflect the true magnitude of the observed effects. The effect sizes of the direct pathways are reported in Table 5 shown below. Relying on the magnitude of effect sizes, three paths (PV→SMP; CS→SAT), recorded high effect sizes, since the  $f^2$  value came inside the limit of above 0.35 as stated by Cohen (1988). (1988). Equally, path CO→SMP had a low antecedent effect on social media marketing and SMEs performance, since its  $f^2$  value fell within the range of low effect threshold (0.02 – 0.15), while the effect sizes of the remaining paths had insignificant magnitude, since  $f^2$  values fell below the three thresholds.

Finally, when considering overall goodness-of-fit (GoF), which can be determined, using model fit indices, indicators such as the SRMR and normal fit index (NFI) become significant when the SRMR is less than 0.08 and the NFI is between 0 and 1. As a consequence, according to Henseler, Hubona, and Ray (2016), the study model is statistically fit (SRMR= 0.039; NFI = 0.833).

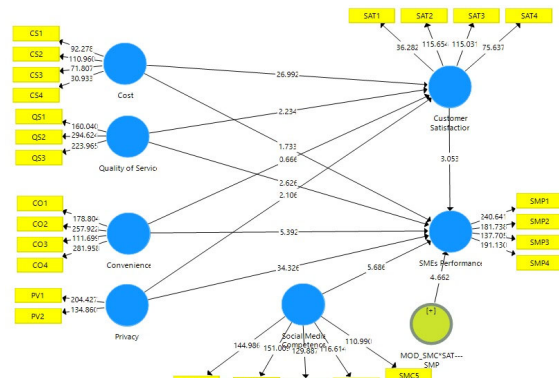
**Table 5**  
Path analysis result

		Model fit summary		SRMR = 0.039	NFI = 0.833	Chi-Square = 3,307.061		
Hypotheses	Relationship	Std. Beta	Std. Error	T-Value	p-value	F <sup>2</sup>	R <sup>2</sup>	Decision
H1a	CS→ SMP	-0.040	0.023	1.733	0.083	0.011	0.934	Not Supported
H1b	QS→ SMP	0.045	0.017	2.626**	0.009	0.014	0.934	Supported
H1c	CO→ SMP	0.107	0.020	5.392**	0.000	0.068	0.934	Supported
H1d	PV→ SMP	0.793	0.023	34.326***	0.000	3.737	0.934	Supported
H2a	CS→ SAT	0.731	0.027	26.992***	0.000	1.126	0.534	Supported
H2b	QS→ SAT	0.094	0.042	2.234**	0.026	0.010	0.534	Supported
H2c	CO→ SAT	-0.026	0.039	0.666	0.506	0.001	0.534	Not Supported
H2d	PV→ SAT	0.082	0.039	2.106**	0.035	0.006	0.534	Supported
H3	SMC→ SMP	0.092	0.016	5.686**	0.000	0.059	0.934	Supported
<b>Indirect Effects (Mediation)</b>								
H4a	CS→ SAT → SAT	0.049	0.016	2.996**	0.003	-	-	Partial Mediation Supported
H4b	QS→ SAT → SAT	0.046	0.042	3.579	0.114	-	-	Full Mediation Supported
H4c	CO→ SAT → SAT	0.031	0.023	2.634	0.526	-	-	Partial Mediation Supported
H4d	PV→ SAT → SAT	0.016	0.014	4.521	0.128	-	-	Full Mediation Supported
<b>Interaction effect (Moderation)</b>								
H5	MOD SMC*SAT→ SMP	0.078	0.011	4.662	0.007	-	-	Supported

Source: Author's Computation, 2021. Significant at P\*\* < 0.01; P \*\*\* < 0.05 \*\*\*\_ (Not Applicable)



**Fig. 3.** PLS Structural Model



**Fig. 4.** t-test statistic

**5. Discussion**

Discoveries emanating from the in-depth analysis conducted in his study revealed that social media marketing has come to stay in SME operation since the extent of usage is very high among the respondents. It was evidenced that identified SM-related factors play an important role in ascertaining the improved performance of SMEs in Nigeria. During the COVID-19 epidemic, social media supported SMEs in selling their products and offering services quickly. It also impacted operational efficiency because some employees were unfamiliar with the tactics required to operate and utilize social media in commercial applications, resulting in low operational efficiency. SM adoption and usage has a helpful impact on the growth of SMEs, as they reported positive turnovers and customer base resulting in financial growth. Despite the COVID-19 pandemic, most SMEs saw financial growth because of the use of SMM to overcome restrictions, and lockdowns.

The five specifically formulated hypotheses explicitly connote the relationship existing between SM-related influencers, social media competence, customer satisfaction, and SME performance. Firstly, all factors identified are positively significant to SME's performance except for cost which shows an inverse and insignificant relationship, although social networking is a low-cost option. If expenditures are reasonable, a company may use social media marketing. It was deduced from hypothesis



one (H1b – H1d) that SME's performance increases as a result of good quality of service rendered by social media, convenience enjoyed, and privacy of user's information. However, findings conform with previous research (Heidemann et al., 2013). The second hypothesis is favorably supported since performance is deduced as a result of satisfaction derived from consumers. A strong relationship exists between the costs associated with SM. adoption connotes that SMEs deeply invest in social media and they acquired huge expenses to ensure customers are being satisfied during the pandemic. Customer satisfaction is also being positively influenced by the quality of service and this connotes that the more quality is being targeted, the greater the satisfaction enjoyed yielding more users of social media to be retained. Hypothesis three was said to be strongly supported and affirmed with a previous study conducted by Wahab (2010), who suggested and concluded that competence of social media will increase the performance of SMEs and this is proudly evidenced within the Nigerian context most especially during the pandemic, where individuals operating small scale enterprises exploit all opportunities scanned from social media. For instance, a lot of logistic ventures are established during the pandemic, and most set up applications to allow free flow of transactions despite the lockdown and there are a lot of social media promotion strategies from the SM platforms easily accessible by individuals. The significant indices of the relationship between SM competence and SMP are being supported from the study conducted by Wahab (2010), evidence that small-scale business tends to experience better performance of the SM is actively competent in all commercial transactions initiated to derive satisfaction from customers.

Meanwhile, the mediating role performed by satisfaction is a novel contribution in this present study. Every small firm aims at deriving satisfaction, and this propels a mediation between performance and SM adoption-related factors identified in the present study. The results of this study show that satisfaction has a favorable effect on SME's performance, and this favorable effect is shown by the increased adoption of social media for marketing activities. The SMEs surveyed felt that social media has helped their productivity and will continue to be effective even after the COVID-19 outbreak. Also, during this COVID-19 epidemic, social media has been recognized as a tool that helps improve corporate management and so boosts customer satisfaction.

## 6. Conclusion, limitations and suggestions for further research

The study focused on SMEs in Nigeria, focusing on the influence of social media adoption on SMEs performance. Using a sample size of 682 despite the emergence of the epidemic, which global economies are still facing, the result shows that social media marketing still boosts SMEs' value and productivity. Meanwhile, findings revealed that satisfaction stood as a significant mediator for realizing greater performances. Furthermore, social media competence strengthens the nexus between satisfaction and SME performance. Despite the COVID-19 pandemic, small and medium-sized businesses have seen considerable revenue gains thanks to the use of social media. A boost in performance was inevitable for SMEs who had the technological know-how to strategically execute the usage of social media.

The COVID-19 epidemic has had a huge impact on worldwide SME performance. This negative impact is mostly due to physical and social limitations that have led to a lack of community activities and the physical closure of numerous businesses. Most businesses use online media as a backup plan in case of a disaster like the COVID-19 pandemic. Social media marketing is a very powerful form of internet media since it crosses all barriers and allows firms to access clients regardless of their location. Because this way of employing social media marketing in SMEs is new, there are a few things to consider before adopting it. As evidence from the present study, the cost is expected to be given absolute consideration despite SM being known to be a low-cost strategy

Furthermore, most SMEs feel the necessity to understand the technology that allows them to easily integrate social media marketing and achieve great outcomes. Firms are expected to know that it is no longer business as usual, but instead, fully migrate all promotional activities to social media which houses more potential customers. The usage of social media is predicted to boost sales and restore pre-pandemic levels of profitability, if not exceed them. The adoption of social media has increased the performance of SMEs, which is a positive significant effect on this research. This means that SMEs can enhance sales, customer relationships, productivity, and innovation by using social media marketing more frequently.

Despite this study's contribution, some limitations still exist. The generalization of this study remains questionable, considering the sample size selected from the nation and therefore replicability should be made in both developed and developing nations. On the other hand, regulating the adoption of social media to improve performance ignores demographic and cultural distinctions. Future research should therefore focus on demographic and cultural aspects to improve the study's outcomes. Also, because this study was conducted during the COVID-19 pandemic when SMEs were in danger of bankruptcy, it is recommended that more research be done on the use of social media in the post-COVID-19 era, to better illustrate the differences in the use of social media marketing for SMEs during the crisis and normal conditions. Finally, social media competence can be treated as a dimensional construct, to scientifically investigate its role on satisfaction and performance.

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