



# Antecedents of Facebook e-purchasing site and Social CRM: A Structural Equation Modeling from the customers' perspectives

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## ABSTRACT

Social Customer Relationship Management (Social CRM) is gaining ground globally, especially in this era that demands cashless transactions for promoting social commerce and reducing the spread of COVID-19. However, in some emerging nations like Nigeria, Social CRM via Facebook from the customer's perspective has not been researched widely. Therefore, this study aims to evaluate the antecedents of Facebook e-purchasing site and Social CRM from the perspective of customers. To realise the purpose of this study, we explored the Technology Acceptance Model (TAM) via a quantitative approach because of the descriptive and inferential requirements. Statistical Package for the Social Sciences (SPSS), and Structural Equation Modeling (SEM-AMOS) were employed to analyse the effects and mediation mechanisms. We found that the perceived information usefulness of Facebook purchasing sites does not significantly influence Social CRM while perceived site trustworthiness significantly influences Social CRM. Our findings further demonstrate that the perceived ease of use mediates the relationships between information usefulness and trustworthiness with Social CRM. However, the perceived site ease of use mediation mechanism on site information usefulness with Social CRM has a full mediation effect on Social CRM. We therefore, encourage Nigerian malls and other emerging countries' malls to consider making their Facebook e-purchasing sites simple for customers and potential buyers to boost Social CRM and promote social commerce. Our study further proffers insights to factors that can boost Social CRM and social commerce on Facebook and other social media platforms.

Keywords: **Facebook e-purchasing site antecedents, social commerce, ease of use mediation, Social CRM, trustworthiness**

## INTRODUCTION

There is a lack of studies on the predictors of Facebook e-purchasing sites for social customer relationship management (Social CRM) to boost social commerce from the perspective of Nigerian mall customers (Khan & Uwemi, 2018b; Ezennia & Marimuthu, 2020; Oyewobi et al., 2021). Social commerce is the dimension of electronic commerce where online buying and social interactions are accomplished through social media (Dewnarain et al., 2019). The general consensus today is that the internet and media have invigorated social commerce by enhancing customer relationships and virtual transactions (Joyappa et al., 2020). This is also because social commerce is deemed as being more convenient (Duarte et al., 2018).

Social commerce also affords price considerations, promotion sensitivities, and various opportunities (Pappas et al., 2017). Furthermore, it also enhances customer behaviour and civic activities as the internet provides an avenue for individuals to air their views, especially when the services fall through (Shen & Wang, 2021). Other major benefits that online purchasers enjoy are post-purchase delivery and tracking services. This entails updating virtual buyers on the status and location of the ordered goods until they are finally delivered. Thus, customer service is fully maximised (Cao et al., 2018).

From the retailers' and wholesalers' perspectives, social commerce increases sales by availing the options of transactions via communication technologies and the internet (Akçayır et al., 2016). It also helps in business expansion through profit maximisation, visibility sustenance, reputation enhancement, access to customer expectations, availing them the opportunity to browse catalogues, limits and prices as well as resolving customer issues (Kureshi & Thomas, 2019). However, having discussed some of the advantages associated with virtual shopping, we need to also look at some factors that affect the effective utilisation of social commerce sites from different parts of the world. For example, based on customers' personal experiences, emotional and environmental perceptions, perceived risk, trustfulness, website condition and behavioural issues were some of the dissuading factors affecting online customers' intentions of shopping online (Kawaf & Tagg, 2017). Additionally, Hariguna and Berlilana (2017) identified system, information, and service qualities as some other factors affecting the Indonesian customers' e-commerce purchasing intentions and trust on Facebook. Thus, these findings imply that certain controlled factors can sustain online buying intention and trust in social media marketing sites.

In another study on factors that affect Americans in their intentions to adopt social media for virtual shopping, Mamonov and Benbunan-Fich (2017) found social utilities, symbolic values, convenience, and privacy perceptions as factors that would intensify the adoption of social commerce. Hence, these scholars proffer on leveraging technological and social traits.

In Nigeria, as an emerging nation, a study established that restrictions from numerous sectors were hindering customers' intentions to use e-commerce, in particular the economic policies the country had adopted (Khan & Uwemi, 2018b). In another Nigerian study, Khan and Uwami (2018a) identified lack of customer feedback as well as low e-commerce awareness and perceived benefits as factors hindering the adoption of e-commerce amongst Nigerians. Thus, these findings suggest that Nigerians need to be well sensitised to adopt and maximise e-commerce. Furthermore, Ezennia and Marimuthu (2020) pinpointed that performance expectancies, effort expectations, social impact, expediting conditions, hedonic incentives, price worth and trust perceptions can influence the behavioural intents of Nigerian professionals.

A study conducted in the Nigerian capital city on the impacts of social media adoption for enhancing business performance showed that technology utilisation influenced social media acceptance, customer relationships, services, user motives and information availability (Oyewobi et al., 2021; Anumudu et al., 2021). Therefore, it is recommended that Nigerians should embrace technology if they anticipate benefitting from the social media antecedents of behavioural intents. Steady internet availability is another factor that may jeopardise the satisfactory use of social commerce in Nigeria, as a previous study established that intermittent internet supply hinders virtual engagement (Anumudu et al., 2020). However, the prevalent concern is that previous studies on virtual purchasing in Nigeria did not look at whether TAM elements would influence Social CRM on Facebook from the viewpoint of customers (Khan & Uwemi, 2018b; Ezennia & Marimuthu, 2020; Oyewobi et al., 2021).

Therefore, our study aims to evaluate the antecedents of Facebook e-purchasing sites and Social CRM from the mall customers' viewpoint. Thus, we aim to realise these specific objectives:

1. To examine the level of ease of use of Facebook e-purchasing sites.
2. To evaluate the direct influences of Facebook e-purchasing site information usefulness and trustworthiness on Social CRM.
3. To ascertain if the ease of use of Facebook e-purchasing site mediates the relationships between site information usefulness and site trustworthiness with Social CRM

## LITERATURE REVIEW

### *The concept of Social CRM in social commerce*

Customer relationship management (CRM) refers to the process of analysing and synthesising the interactions that take place between organisations and existing and future customers to outcompete rivals (Soltani et al., 2018; Gupta, 2017). However, from the perspective of social commerce, it is known as Social CRM. In this study, Social CRM was integrated with the Technology Acceptance Model (TAM) antecedents. Social CRM is the integration of social media platforms to sustain customers' interpersonal relationships. In other words, organisations and clients are given opportunities to maximise social media use for business sustainability by gathering and analysing customer interactions on the social media platforms (Dewnarain, et al., 2019).

In addressing whether technology-driven transformation could enhance Social CRM, Sigala (2018) established that Social CRM could be improved by evaluating, inferring, observing, enhancing, and incorporating unified customised buyers' experiences. Hence, the presence of these factors could induce effective Social CRM in social commerce. Proffering further insights on how thorough micro-, small- and medium-sized business-to-consumer enterprises could adopt Social CRM, it was found that Social CRM can positively influence customer bonds (Marolt et al., 2020). Therefore, it is advocated that customer bonds can be sustained if effective Social CRM is applied.

To understand the underpinning predictors of Social CRM among Australian small- and medium-sized enterprise owners-managers, Guha et al. (2018) presented Social CRM as a skill required for the growth of small and medium-sized enterprises (SMEs). Thus, the scholars suggested automated and continuous methods for gathering and combining data that would bring about actual Social CRM to these SME business owners.

In examining the impact of CRM promotion to non-targeted but connected consumers, findings show that the activities of CRM should not be limited to intended clients

but should be extended to non-target clients as well. It was further stated that extending proliferating CRM marketing activities to non-intended clients, who are interconnected with the existing clients would be influenced by intensifying communications (Ascarza et al., 2017). In exploring the key benefits that could be gained in embracing electronic CRM, findings reveal that factors such as consumer gratification, allegiance, preservation, and service qualities could be attained by integrating virtual CRM in higher learning institution environments (Badwan et al., 2017).

A study on luxury fashion that investigated the direct and indirect influences of social media marketing activities on customer buying intent, established that consumer relationship acts as a mediator between promotional sale events such as entertaining, collaborating, trending events; and customer buying intent (Gautam & Sharma, 2017). Hence, it is recommended that social media advertising events should work towards enhancing the customer's Social CRM. In studying the generalisability of Social CRM's impact on productivity with cross-company data, Wang and Kim (2017) presented social media as an indispensable factor for intensifying Social CRM on business performances.

### ***Perceived site information usefulness and Social CRM***

This study was guided by Technology Acceptable Model (TAM) as adopted from Chawla and Joshi (2020). Thus, the model's antecedents were adopted. Perceived site information usefulness is one of the elements adopted from the model. It is the conviction that utilising new technologies would improve one's job performance (Sagnier et al., 2020). However, perceived site information usefulness in this study refers to the customer's belief that social media platforms are able to provide the essential information needed for virtual shopping. Hence, this section intends to evaluate whether the perceived site information usefulness has a direct effect on Social CRM. A group of scholars who looked at the functions played by CRM on the output of Jordanian telecommunications companies, established site information value as a predictor of Social CRM for organisational performance (Al-Weshah et al., 2019). Therefore, a useful communication channel is a prerequisite for maximising business returns (Yulida et al., 2020). However, another study that explored the effects of hedonic technology on consumer buying intent via Instagram contradicted the impact of perceived system usefulness on enhancing Social CRM (Nedra et al., 2019).

In contrast, in investigating the impact of consumers and proficient electronic word-of-mouth (eWOM), Luo et al. (2018) illustrated that feeling of affinity affects the forum's information usefulness. This suggests that an increased attachment to a specific communication forum enhances the user's information usefulness. In their study on major factors influencing the Chinese WeChat use and how social media perceptions control the media usefulness for shopping and eWOM, Zeng and Seock (2019) demonstrated that WeChat usefulness has a significant effect on social support through eWOM. Thus, in consonance with most of the previous scholars' findings from similar studies, we hypothesise that:

*H1a: Facebook e-purchasing site information usefulness directly influences Social CRM*

### ***Perceived site trustworthiness and Social CRM***

Trust in CRM is seen as a crucial element for effective affiliation, because of its ability to sustain a lasting relationship (Oláh et al., 2019). However, in the context of social media, site trustworthiness as an element of TAM refers to the handiness, clarity, and efficacy of assurance a medium could offer to users (Zhang & Gupta, 2018). Emerging social

networking sites have altered how customer trust is conceptualised in social commerce. Therefore, to attain trustworthiness in online shopping media platforms, there is a need to apply transparency, encourage collaboration, and reconstruct values that would lead to trust among users (Connolly, 2020).

In aiming for an ethical and trustworthy social commerce community model for trademark value co-creation, Wang et al. (2020) outlined that collective norms and relationship binders strengthen trustworthiness on social commerce by attaching values to it. Hence, the trustworthiness of media sites is essential for CRM. Hu et al. (2019) added that trustworthiness has a significant positive effect on customer social-behavioural attitudes. Thus, emotional social improves customer trustworthiness for social influences.

Further, in the trust-based customer decision-making framework of social commerce, trust has a positive effect on e-commerce transaction activities. In other words, trust in social media sites has a greater influence on customer's e-commerce productivity (Lin et al., 2019). In conceptualising a theoretical model to explain social support's indirect effect on social commerce intent, trustworthiness was found to be a major factor that influences customer engagement. It is achieved when there is extant trust in the sites, and clients. Therefore, site trustworthiness is a prerequisite for effective Social CRM (Lin et al., 2018).

In the quest to clarify the function of social commerce trust in social presence and customer relationship qualities, Nadeem et al. (2020) demonstrated that social commerce trust affects social consumer relationship dimensions, which comprise commitments and loyalties. Thus, trust in social commerce sites intensifies Social CRM. However, with regard to business value and factors that influence Social CRM, Chatterjee et al. (2020) found that trust does not significantly affect Social CRM. Therefore, trust is not an indispensable factor for Social CRM. Based on these reviewed scholar findings, our study proposes that:

*H1b: Facebook e-purchasing site trustworthiness directly influences Social CRM*

### ***Mediation effect on perceived information usefulness and perceived trustworthiness in e-purchasing sites with Social CRM***

In the mediating mechanism shown in Figure 1, we intend to ascertain if the ease of use of Facebook e-purchasing sites could mediate on perceived information usefulness and perceived trustworthiness with Social CRM. Contrarily to our study's proposed conceptual framework, a recent study that investigated the mediating roles of perceived usefulness and perceived ease of use on the adoption of virtual government service website, demonstrated that usefulness and ease of use mediated on the trustworthiness for utilising it (Chen & Aklikokou, 2020). In examining the influence of social connectedness on social media users' approaches and intents towards embracing social commerce, Cho and Son (2019) differed in their study by hypothesising that social connectivity indirectly affects the propensity for social commerce via ease of use and usefulness of the site. However, the scholars also found that social connectivity has a stronger influence on ease of use. This implies that an increase in the site's ease of use would greatly improve the user's social connectivity and propensity disposition.

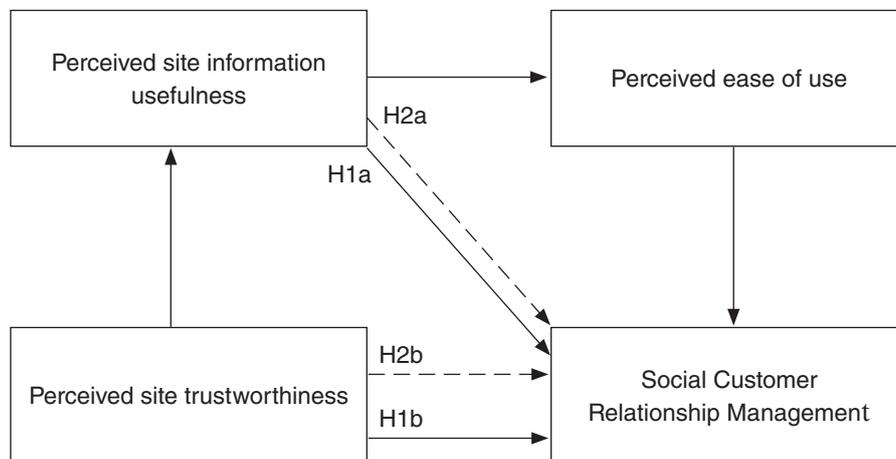
In analysing the effects of technology acceptance factors on consumer attitude and engagement practices with social tourism websites, Bravo et al. (2021) juxtaposed our proposed conceptual framework by demonstrating that ease of use, usefulness, and trustworthiness significantly affect the consumer's approach and successive engagement behaviours. Hence, the justified mediators could enhance Social CRM engagement on

Facebook e-purchasing sites. On conceptualising the predictors of intent to utilise mobile banking among Pakistanis, Raza et al. (2017) added that ease of use has a positive effect on the site's usefulness and approach. Therefore, this suggests that improvement on the site's ease of use would strengthen the site's usefulness and approach for online mobile banking users.

In their hypothesis on the correlations among the hotel website qualities, e-trust, and virtual booking intents among the Chinese, Li et al. (2017) demonstrated an insignificant effect of ease of use on virtual trust. Hence, this suggests that ease of use would not improve the virtual trust on online usage intent. Based on the positive outcomes of the previous studies, we propose the following two mediation mechanisms:

*H2a: Ease of use of Facebook e-purchasing sites mediates the correlation between information usefulness and Social CRM.*

*H2b: Ease of use of Facebook e-purchasing sites mediates the correlation between site trustworthiness and Social CRM.*



**Figure 1.** The proposed conceptual framework (Dotted lines indicate mediating correlations and solid lines indicate direct correlations)

## METHODOLOGY

### *Research context and design*

Nigeria was chosen because as an emerging society, it faces a digital commerce gap which remains an evolving concept (Khan & Uwemi, 2018a). Therefore, the present study is necessary for boosting social commerce and CRM in Nigeria. However, the data was collected in Delta State, situated in South-South Nigeria. This State was selected because it has bigger malls and larger number of customers. Three malls were selected through the multistage probability sampling. The selected malls were Asaba ShopRite, Christoby Shopping Mall, and Rose Plaza; all located at the Okpanam local government area in Delta State.

In line with the objective of this study, which aims to evaluate the antecedents of Facebook e-purchasing sites and Social CRM, a quantitative research approach was considered appropriate as it requires descriptive and inferential studies (Patten & Newhart, 2017). A survey questionnaire was employed for data collection based on the explored variables (Queirós et al., 2017).

### Sample, data collection, and analyses

The proposed sample size was 365 and was determined from the tentative customer population of 7,500 by applying Krejcie and Morgan’s table (Savari & Gharechae, 2020). Of the 7,500 customer population, 3,000 were from Asaba ShopRite, 2,500 from Christoby Shopping Mall and 2,000 from Rose Plaza. The questionnaires were proportionately shared among the three malls according to their customer population. A systematic random sampling technique was employed as respondents were selected at a regular interval to avoid being biased since every member of the targeted population has an equal chance of being selected (Martínez-Mesa et al., 2016). At the end of the fieldwork, only 322 questionnaires were filled and returned; therefore, the 322 sample size was used for this study. The items used to measure the variables of TAM, which comprise perceived site trustworthiness, perceived site information usefulness, perceived site ease of use; and Social CRM were adopted from similar studies. In total, 18 items were used and measured using a 5-point Likert scale, which included 1 = “Strongly disagree”, 2 = “Disagree”, 3 = “Somewhat agree”, 4 “Agree” and 5 = “Strongly agree” (Moors et al., 2014). However, 10 items adopted from Moslehpour et al. (2018) were used to measure perceived site ease of use and perceived site usefulness. To evaluate perceived site trustworthiness, four questions were adopted from Rauniar et al. (2014) while Social CRM was measured with four questions adopted from Choudhury and Harrigan (2014). The data analyses were done via SPSS and Structural Equation Modeling (SEM-AMOS). The first objective of descriptive analysis was analysed with SPSS while the other objectives on effects were analysed through SEM-AMOS. Initially, 18 items were analysed using SEM-AMOS but by the end of the Confirmatory Factor Analysis (CFA) and measurement model, only 14 items were used for the subsequent analyses. For these 14 items, their assumption of normality through Kurtosis and Skewness was achieved. Moreover, for the other criteria, individual factor loadings were  $\geq .5$  and each construct validity was  $\geq .5$ . The discriminant validity criterion was also met because each of the paired factors’ average variance extracted (AVE) was greater than the individual factor’s squared correlation matrices, and each construct’s reliability Cronbach alpha test yielded a value of  $\geq .70$  (Hair et al., 2010). Furthermore, the model indices were met as could be seen in the measurement model.

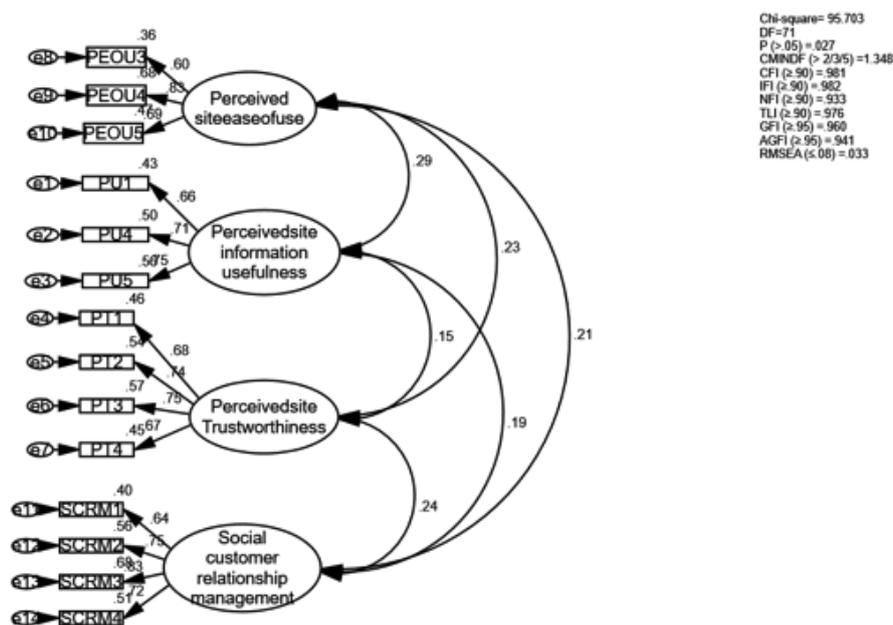


Figure 2. The study’s measurement model outcomes from SEM-AMOS

Table 1 shows the outcomes of CFA item loadings, construct reliability, and convergent validities as extracted from the SEM-AMOS measurement model in Figure 2.

**Table 1.** Results of confirmatory factor loading, construct reliability, and convergent validity from the SEM-AMOS measurement model analysis

Item numbers	Construct	Factor loadings $\geq .5$	Construct reliability (CR) $\geq .70$	Average variance extracted $\geq .5$
PIU1	Perceived Site Information Usefulness	.66	.750	.504
PIU4		.71		
PIU5		.75		
PT1	Perceived Site Trustworthiness	.68	.802	.501
PT2		.74		
PT3		.75		
PT4		.67		
PEOU3	Perceived Site Ease of Use	.60	.751	.503
PEOU4		.83		
PEOU5		.69		
SCRM1	Social Customer Relationship Management	.64	.804	.539
SCRM2		.75		
SCRM3		.83		
SCRM4		.72		

## RESULTS AND DISCUSSION

### *Respondents' demographics*

Table 2 on demographics shows that more than half of them are males, while more than one-third of them are females. This implies that with regard to the use of Facebook for virtual shopping, there is no difference in gender. In terms of age, the majority (more than one-third) are 30–39 years old. One-quarter are 40–50 years old, more than one-fifth are 18–29 years old and those above 50 years consisted less than one-fifth. Therefore, this indicates that more youths are using Facebook for e-purchasing.

With regard to marital status, more than one-quarter are married while more than one-quarter are single. Those separated from spouse constituted nearly one-fifth while the divorced comprised one-fifth. The lowest numbers are widows and widowers. This suggests that the singles use Facebook more for virtual shopping.

In terms of education level, more than one-quarter had bachelor degrees. More than one-quarter had a master's degree while those with diploma/certificate of examination comprised more than one-fifth. Those with a doctoral degree and other qualifications made

up the least numbers. The majority of those using Facebook for online purchasing did not have the highest academic qualifications. Thus, there is the need to enlighten the other groups with lower education qualifications on the benefits of social commerce.

**Table 2.** Respondents' demographic variables

Profile	Frequency	Percentage (%)
<b>Gender</b>		
Male	185	57.5
Female	137	42.5
<b>Age</b>		
18-29	74	23.0
30-39	135	41.9
40-50	80	24.8
>50	33	10.2
<b>Marital status</b>		
Single	85	26.4
Married	95	29.5
Separated	60	18.6
Divorced	37	11.5
Window	29	9.0
Widower	16	5.0
<b>Level of education</b>		
Senior Secondary Certificate Exam (SSCE)	37	11.5
Diploma/Nigerian Certificate of Education (NCE)	69	21.4
Bachelor degree	89	27.6
Master's degree	80	24.8
PhD	35	10.9
Others	12	3.7
<b>Do you use Facebook for online shopping?</b>		
Yes	322	100

### *Ease of use level for Facebook e-purchasing sites*

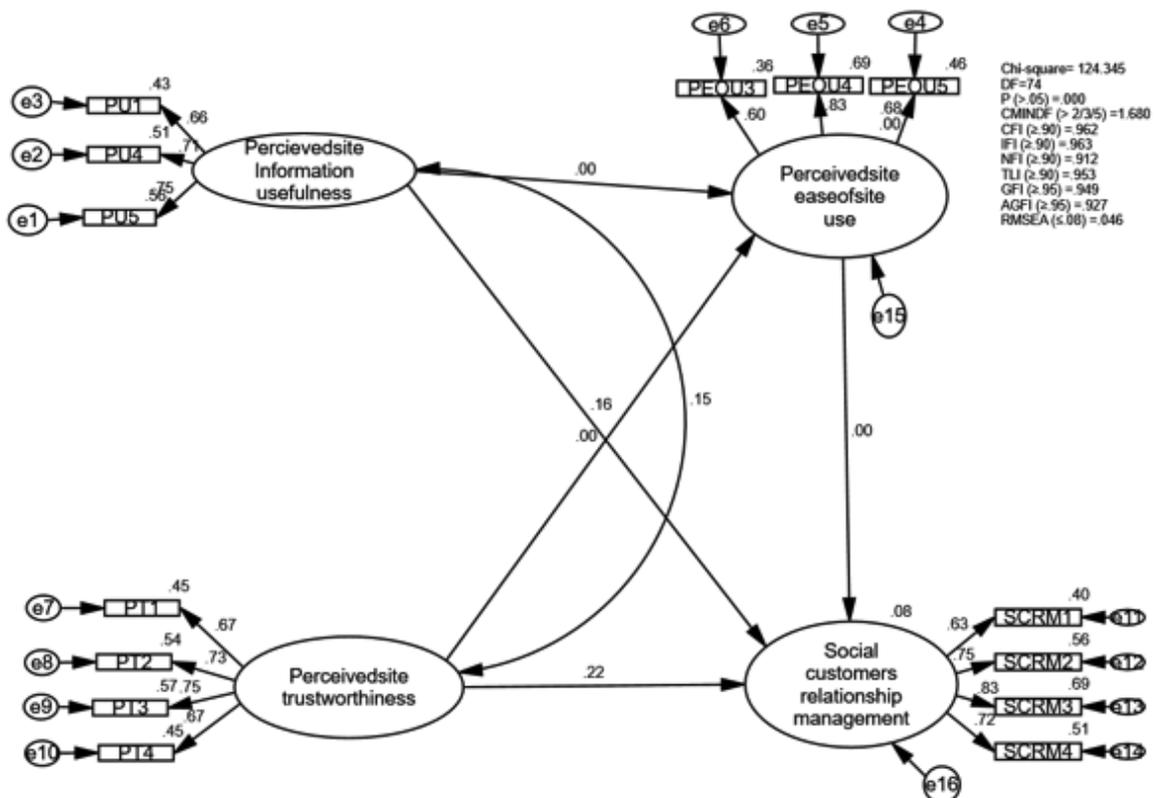
Based on Table 3 which shows the results regarding ease of use levels for e-purchasing sites, it illustrates that more than one-fifth of the respondents scored it as low. More than half responded as having a a medium level while less than one-third reported a high level. The findings demonstrate that the majority do not perceive a high level of ease in using Facebook for online shopping. This finding is aligned with previous findings, which found that profound inventiveness is the basic factor that could enhance social commerce (Williams, 2018). As our findings are based in the context of an emerging country, a similar scenario can be assumed for other developing nations. The findings also indicate the need to educate the informed and uninformed customers on the easiest ways to use Facebook sites for virtual shopping to promote cashless transactions and enhance social commerce.

**Table 3.** Ease of use levels for Facebook e-purchasing sites (n=322)

Level of ease of use	Frequency	Percentage (%)
Low (3–7)	74	23.0
Moderate (8–11)	163	50.6
High (>12)	85	26.4

### Site information usefulness and site trustworthiness on Social CRM

The second objective of this study evaluates the direct influences of site information usefulness and site trustworthiness on Social CRM. This objective tested two hypotheses. The outcomes of the first two hypotheses were extracted from the SEM-AMOS structural equation modelling as Figure 3 depicts.



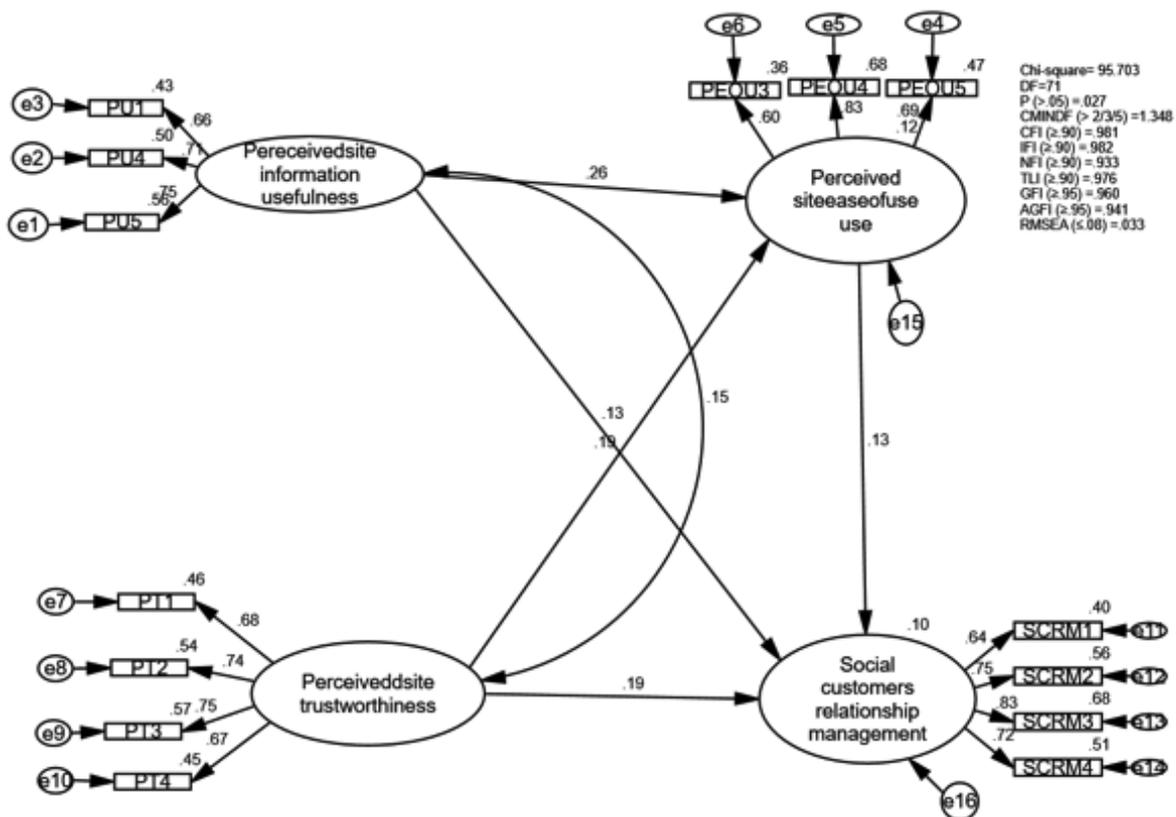
**Figure 3.** The SEM-AMOS results for the structural model

Table 4 presents the outcomes of the two direct hypotheses. The first hypothesis states that site information usefulness directly influences Social CRM. The results imply that site information usefulness does not have a direct influence on Social CRM ( $\beta = .125, p > .05$ ). Thus, H1a is not supported. This indicates that site information usefulness by itself will not significantly enhance Social CRM despite contributing 12.5% of the variance. Therefore, Nigerian malls need to integrate an antecedent that would strengthen the relationship between site information usefulness and Social CRM to maximise virtual shopping via Facebook. This finding supports Nedra et al. (2019) who found that information usefulness does not have a direct correlation with social support. However, this finding contradicts those that have demonstrated that perceived site information usefulness significantly influences Social CRM in social commerce settings (Al-Weshah et al., 2019; Luo et al., 2018; Zeng & Seock, 2019).

The second hypothesis of our study states that site trustworthiness directly influences Social CRM. Table 4 illustrates that site trustworthiness has a significant influence on Social CRM ( $\beta = .192, p < .05$ ). Thus, H1b is supported. This implies that for every 1 standard deviation increase of site trustworthiness, Social CRM would be improve by 19.2%. Therefore, this study recommends that Nigerian malls should improve site trustworthiness if they aim to maximise Social CRM on Facebook. This finding supports previous scholars who established that site trustworthiness enhances Social CRM on social commerce forums (Connolly, 2020; Wang et al., 2020; Hu et al., 2019; Lin et al. 2018). However, our finding juxtaposes with that of Chatterjee et al. (2020) who found that site trustworthiness does not have an impact on Social CRM. Additionally, site information usefulness and site trustworthiness in the model jointly explains 9.8% of the variance on Social CRM. Therefore, the model is considered sustainable for enhancing Social CRM even though, the effect size is small (Lachowicz, et al., 2018).

**Mediation mechanism effects**

The study’s last objective is to ascertain the mediation role of site ease of use on site information usefulness and site trustworthiness with Social CRM. This objective has two mediation hypotheses. The outcomes of the mediation mechanisms extracted from the SEM-AMOS Bootstrap Model are shown in Figure 4.



**Figure 4.** SEM-AMOS bootstrap model

The first hypothesis for the third objective of this study hypothesises that site ease of use mediates the correlation between site information usefulness and Social CRM. The mediation outcomes shown in Table 5 imply that ease of use fully mediates between site information usefulness and Social CRM. The direct model specifies ( $\beta = .160, p < .05$ );

the mediation model shows ( $\beta = .125, p > .05$ ) and the standardised indirect effect (SIE) is ( $\beta = .034, p < .05$ ). Hence, H2a is supported. This signifies that when ease of use is improved, this can fully strengthen the customer's perception of site information usefulness for an enhanced Social CRM. Therefore, Nigerian malls should work on improving their Facebook e-purchasing sites to make it easier for customers to use so that the customers can appreciate the site's information usefulness for an enhanced Social CRM. Our findings, to some extent, also support other similar studies which demonstrated that making social commerce sites easier to navigate can improve customer buying intent (Raza et al., 2017; Bravo et al., 2021). However, previous scholars did not evaluate the mediating role of ease of use on site information usefulness towards boosting Social CRM. The ease of use mediating effect size, also known as Kappa square ( $K^2$ ), was = 0.033, and this indicates a small effect (Preacher & Kelley, 2011).

The second mediation effect hypothesis in the third objective of this study states that:

*H2b: Ease of use of Facebook e-purchasing sites mediates the correlation between e-purchasing site trustworthiness and Social CRM.*

Table 5 specifies that site ease of use partially mediates site trustworthiness and Social CRM. Therefore, H2b is supported. The direct model yielded  $\beta = .217, p < .05$ ; the mediation model yielded  $\beta = .192, p < .05$ ; and the standardised indirect effect result (SIE) was  $\beta = .025, p < .05$ . This denotes that Nigerian malls need to improve their Facebook e-purchasing sites to appear less challenging if they intend to strengthen the effects of site trustworthiness on Social CRM.

Our findings correlate with that of previous studies which established the ease of social commerce sites as a prerequisite for enhancing the trust on the site towards strengthening social impact (Chen & Aklikokou, 2020; Bravo et al., 2021). However, these studies did not explore the mediating role of ease of use in strengthening the effect of site trustworthiness on Social CRM. The ease of use mediating effect size ( $K^2$ ) was 0.027 and this signifies a small effect size (Preacher & Kelley, 2011). Site information usefulness and site trustworthiness as two independent variables of this study explain 11.7% of the variance on the site ease of use as the study's antecedents. Thus, the integration of the variables as antecedents expands the TAM and makes it a sustainable model for future scholars.

**Table 5.** The mediating effect of site ease of use on the correlations between the two independent variables and Social CRM

Hypothesised Path	95% Bootstrap BC CI			
	Beta	p	LB	UB
<b>Direct Model</b>				
Facebook E-Purchasing Site Information Usefulness $\longrightarrow$ Social CRM	.160	.025		
<b>Mediation Model</b>				
Facebook E-Purchasing Site Information Usefulness $\longrightarrow$ Social CRM	.125	.090		
Standardised Indirect Effect (SIE)	.034	.039	.001	.103

**Table 5.** (con't)

Hypothesised Path	Beta	<i>p</i>	95% Bootstrap BC CI	
			LB	UB
<b>Direct Model</b>				
Facebook E-Purchasing Site Trustworthiness → Social CRM	.217	.002		
<b>Mediation Model</b>				
Facebook E-Purchasing Site Trustworthiness → Social CRM	.192	.007		
Standardised Indirect Effect (SIE)	.025	.044	.001	.076

## CONCLUSION

One of key findings of this study is that most of the respondents do not perceive that using Facebook for social commerce is easy. This supports past findings, that also contend that ease of using online commerce sites as the basic factor that could enhance social commerce (Williams, 2018; Tzavlopoulos et al., 2019). Thus, we recommend that Nigerian malls and other malls in developing nations to maximise social commerce on the Facebook platform by making its navigation appear less demanding. Findings also suggest the Nigerian malls should educate both informed and uninformed customers on the easiest ways to use Facebook for virtual shopping. Other findings demonstrate that site information usefulness does not directly influence Social CRM while site trustworthiness directly affects Social CRM. Thus, our findings support Nedra et al. (2019) who found that social commerce information usefulness does not directly correlate with social support. But our findings contradict scholars who demonstrated that site information usefulness significantly influences Social CRM (Al-Weshah et al., 2019; Luo et al., 2018; Zeng & Seock, 2019).

Thus, we recommend the Nigerian malls to consider factors that could help strengthen the impact of information usefulness on Social CRM via Facebook. Furthermore, site trustworthiness has a significant direct effect on Social CRM. Our findings are in line with past findings which state that site trustworthiness enriches Social CRM (Connolly, 2020; Wang et al., 2020; Hu et al., 2019; Lin et al., 2018). It also supports Chatterjee et al. (2020) who found that perceived site trustworthiness does not significantly influence Social CRM. In this respect, Nigerian malls should improve site trustworthiness if they aim to maximise Social CRM via the Facebook platform; and to attract customers. Our key findings also establish that ease of use has full mediation on site information usefulness and Social CRM. This is aligned to similar studies that found by making social commerce sites easy to utilise, customer behavioural purchasing intent improves (Raza et al., 2017; Bravo et al., 2021). Nigerian malls and other malls in emerging societies should make their e-purchasing sites easier to use if they want customers to value their site information usefulness. Further, as ease of use has a partial mediation effect on e-purchasing site trustworthiness and Social CRM, this suggests social commerce easiness is essential for enhancing the site's trust for social impact (Chen & Aklikokou, 2020; Bravo et al., 2021). Thus, Nigerian malls should improve their Facebook e-purchasing sites by making them less challenging if they intend to strengthen the effect of site trustworthiness on Social CRM for maximising social commerce.

Our study has practical and theoretical implications. The insights from this study can serve as a reference to social commerce policymakers, mall owners, and other entrepreneurs in developing countries where the use of social media for promoting social commerce is yet to be fully maximised. With regard to theoretical implication, the study successfully demonstrated the adoption of TAM and evaluation of its elements empirically as antecedents for achieving Social CRM on Facebook from the perspective of Nigerian malls. This has extended the TAM model by establishing that TAM variables can influence Social CRM in Facebook for enhancing social commerce, thus, supporting it as a sustainable model for future research.

The study has some limitations such as insufficient variables. The study evaluated only a few factors of TAM as predictors to Facebook's Social CRM. Thus it is recommended for future research to integrate other factors such as payment method support, social interconnectivity, information orientation and product usefulness for a better understanding of predictors to Social CRM. Further, as the study was confined to the malls in one Nigerian state only, the generalisability of the findings is limited. Future studies should aim to replicate these results in a larger sample to validate these findings. Qualitative and mixed research methods are also proposed for prospective researchers towards conceptualising new factors to enrich the data in various states of Nigeria and other developing countries. For example, the interview approach could be employed to explore new concepts that could influence Social CRM.

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