

# How social CRM and customer satisfaction affect customer loyalty

Social CRM  
and customer  
satisfaction

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## Abstract

**Purpose** – Based on relationship marketing theory, this study aims to test the effect of social customer relationship management (social CRM) on customer satisfaction (CS) and loyalty (CL).

**Design/methodology/approach** – To assess the proposed framework, structural equation modeling was performed on the data of 314 automotive customers surveyed online.

**Findings** – Social CRM dimensions [traditional CRM (TCRM) and social media (SM) technology use] have a direct and positive effect on CS. On the other hand, only TCRM has a direct and significant influence on CL, while the SM technology use effect seems to be indirect rather than direct. Indeed, the findings have provided empirical support for the contention that CS plays a mediating role between social CRM dimensions and CL.

**Practical implications** – In the automotive sector and developing countries in particular, companies' managers could increase CS and CL and consequently enhance their competitiveness and market share by adopting an effective social CRM strategy. From this perspective, companies should focus their social CRM campaigns on the most SM used by customers, offer personalized choices and improve customer experience, interaction and value co-creation.

**Originality/value** – This paper enriches the understanding of how social CRM can affect CS and CL. The scales of social CRM, CS and CL were validated in the context of developing countries and the automotive sector. Furthermore, the direct and mediating effect of CS between social CRM (TCRM and SM) and CL was also confirmed.

**Keywords** Social CRM, Social media, Customer satisfaction, Customer loyalty, Automotive sector

**Paper type** Research paper

## Cómo afectan el CRM social y la satisfacción del cliente a la lealtad del cliente

### Resumen

**Propósito** – Basándose en la teoría del marketing relacional, este estudio pretende comprobar el efecto de la gestión social de las relaciones con los clientes (CRM social) sobre la satisfacción y la fidelidad de los clientes.

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**Diseño** – Para evaluar el marco propuesto, se realizó un modelado de ecuaciones estructurales sobre los datos de 314 clientes de automoción encuestados online.

**Conclusiones** – Las dimensiones del CRM social (CRM tradicional y uso de tecnología de medios sociales) tienen un efecto directo y positivo en la satisfacción del cliente. Por otro lado, solamente el CRM tradicional tiene una influencia directa y significativa en la fidelidad del cliente, mientras que el efecto del uso de la tecnología de medios sociales parece ser más indirecto que directo. De hecho, los resultados han proporcionado apoyo empírico a la afirmación de que la satisfacción del cliente desempeña un papel mediador entre las dimensiones del CRM social y la fidelidad del cliente.

**Valor** – Este artículo enriquece la comprensión de cómo el CRM social puede afectar a la satisfacción y la fidelidad de los clientes. Las escalas de CRM social, satisfacción del cliente y fidelidad del cliente se validaron en el contexto de países en vías de desarrollo y del sector automovilístico. Además, también se confirmó el efecto directo y mediador de la satisfacción del cliente entre el CRM social (CRM tradicional y medios sociales) y la fidelidad del cliente.

**Implicaciones prácticas** – En el sector de la automoción y en los países en desarrollo en particular, los directivos de las empresas podrían aumentar la satisfacción y fidelidad de sus clientes y, en consecuencia, mejorar su competitividad y cuota de mercado adoptando una estrategia eficaz de CRM social. Desde esta perspectiva, las empresas deberían centrar sus campañas de CRM social en los medios más utilizados por los clientes, ofrecer opciones personalizadas y mejorar la experiencia del cliente, la interacción y la cocreación de valor.

**Palabras clave** CRM social, Medios sociales, Satisfacción del cliente, Fidelización del cliente, Sector de la automoción

**Tipo de artículo** Trabajo de investigación

社交客户关系管理和客户满意度如何影响客户忠诚度

## 摘要

**目的** – 基于关系营销理论, 本研究旨在检验社会化客户关系管理 (social CRM) 对客户满意度和忠诚度的影响。

**设计/方法/途径** – 为评估所提出的框架, 对 314 名汽车客户的在线调查数据进行了结构方程建模。

**研究结果** – 社交客户关系管理维度 (传统客户关系管理和社交媒体技术使用) 对客户满意度有直接的积极影响。另一方面, 只有传统客户关系管理对客户忠诚度有直接和显著的影响, 而社交媒体技术使用的影响似乎是间接而非直接的。事实上, 研究结果为客户满意度在社交客户关系管理维度和客户忠诚度之间发挥中介作用的论点提供了实证支持。

**原创性/价值** – 本文丰富了人们对社交客户关系管理如何影响客户满意度和忠诚度的认识。本文以发展中国家和汽车行业为背景, 对社会化客户关系管理、客户满意度和客户忠诚度的量表进行了验证。此外, 还证实了客户满意度在社会化客户关系管理 (传统客户关系管理和社会化媒体) 与客户忠诚度之间的直接和中介效应。

**实践意义** – 在汽车行业 – 尤其是发展中国家, 企业管理者可以通过采取有效的社交客户关系管理战略, 提高客户满意度和忠诚度, 进而增强竞争力和市场份额。从这个角度来看, 企业应将社交客户关系管理活动的重点放在客户使用最多的社交媒体上, 提供个性化选择, 改善客户体验、互动和价值共创。

**关键词** 社交客户关系管理 社交媒体 客户满意度 客户忠诚度 汽车行业

**文章类型** 研究型论文

## 1. Introduction

Recently, an increasing number of companies have developed social customer relationship management (CRM) strategies to integrate the opportunities offered by Web 2.0 into their marketing approaches. According to [Greenberg \(2009\)](#), social CRM is a business strategy that leads to customer engagement through social media (SM) with the objective of sustaining customer trust and brand loyalty. This innovation allows firms to center their strategy on customers, reach and attract them with user-generated content, enhance their engagement using online social interactions and retain them by generating new relationships with other customers ([Rodriguez and Trainor, 2016](#)). On the other hand, social CRM has given the ability to the customer who can express himself through blogs and forums and give his opinion quickly, freely and easily – about the products and services he has purchased – to other customers or advertisers.

Despite its different advantages, the use and effect of social CRM on customer satisfaction (CS) and loyalty (CL) differ from one sector to another and between developed and developing countries. Indeed, while organizations in developed economies use smart technologies, those in developing countries care about providing basic information systems (IS), and the majority of them are still trying to digitize their services (Stokić *et al.*, 2019). As a consequence, investments in social CRM solutions in developing countries still lag behind those in developed countries, and their payoff and impact on CS and CL are still unassessed (Jaber and Simkin, 2017).

Although widely discussed, the influence of social CRM on CS and CL remains one of the most challenging issues faced by marketing researchers (Nyadzayo and Khajehzadeh, 2016). First, the mediating role of CS between social CRM and CL has received restricted scientific interest (Khan *et al.*, 2022). Indeed, Cakici *et al.* (2019) underlined that CL can be increased through CS, which is a potential mediator between CRM and loyalty. Second, some specific sectors where customers are implicated in long-term and deep relations with companies need more investigation to inform managers about how to benefit from social CRM systems and how to generate higher levels of satisfaction and loyalty (Chen *et al.*, 2021). This is the case for the automotive sector, where the minimum price of a car is over US\$15,000, and unlike other products, the ownership cycle exceeds five years. In a context marked by digitalization and enhanced competition, many automotive firms still fail to reach CS and CL due to deficiencies in resources and a lack of strategies (Khan *et al.*, 2021). Hence, firms operating in such an environment need to understand all social CRM factors that affect CL to develop sustainable relationships with customers, which can be maintained and strengthened beyond the transaction (Nyadzayo and Khajehzadeh, 2016). Third, most of the studies in this area were undertaken in developed countries (Tsokota *et al.*, 2021). Nevertheless, firm practices, market conditions and product life cycles are different in developing countries compared to developed countries (Wang and Chen, 2004). Cultural values, customer behaviors, incomes and price sensitivity are too divergent; the technological infrastructure needed for social CRM remains less efficient, and the usage and practices of internet users are quite different (Medjani and Barnes, 2021). Therefore, the study of social CRM in economies with different markets and contexts in general and developing countries in particular can help us to generalize the social CRM scale and to expand our global understanding of how it impacts CS and CL (Akroush *et al.*, 2011).

In summary, the scarcity of studies addressing social CRM in the environment of developing countries' organizations and specific sectors, such as the automotive industry, is still a major issue (Kebede and Tegegne, 2018). Hence, it is necessary to conduct more studies to understand the mediating effect of CS between social CRM and CL from a customer angle (Aldaihani and Ali, 2018). From this perspective, this study revolves around the influence of social CRM on CL by answering the following research question: Does CS play a mediating role in the relationship between social CRM and CL?

To address this question, the structure of this paper is divided into six sections. Section 2 presents the literature review and the proposed hypotheses. The research methodology is described in the Section 3; follow by the results obtained in the Section 4. Finally, in Sections 5 and 6, we provide theoretical and managerial implications as well as the limitations of the study.

## 2. Literature review

### 2.1 Relationship marketing theory

The framework of this research has been developed based on relationship marketing theory (RMT). Arose in the early 90s, this theory tends to be long-term oriented; it originated from

the idea of being focused on building value networks and valuable relationships instead of transactions (Caliskan and Esmer, 2020). Hence, RMT can be considered an approach to attract, establish, maintain and enhance long-term relationships with customers and other stakeholders by mutual exchange and fulfillment of promises (Koiranen, 1995).

Relationship marketing ties many seemingly unrelated marketing ideas, such as business-to-customer (B2C) marketing, CRM, promotional strategy and database marketing. According to this theory, it costs three to five times less to preserve a customer than to attract a new customer (Farber and Wycoff, 1991), and the firms' profits can be boosted from 25% to 85% by decreasing customer defections by 5% (Hanley and Leahy, 2008). Indeed, when firms act to reinforce relationship policies and practices, commitment, trust and cooperative activities are likely to be improved, and marketing costs and perceived risk should be reduced (Palmatier, 2008). Consequently, customers' perceptions and behavior will be shaped, their satisfaction and loyalty will increase, and firm performance will be enhanced (Halimi *et al.*, 2011).

Therefore, relationship marketing aims to strengthen the firm–customer relationship and to progressively turn them into “clients” (who make regular purchases and then), “supporters” and eventually “advocates” for the company (Herington *et al.*, 2006). Achieving this goal in today's digital age requires a special solution that includes personalized messages and services and responsive communication such as social CRM.

## 2.2 Social customer relationship management (CRM)

Social CRM includes the principles of CRM using social networks. Therefore, this managerial innovation should be considered an enrichment of traditional CRM (TCRM), which follows the evolution of firms moving from purely transactional logic to interactional logic with their customers (Greenberg, 2009).

The goals of social CRM are to extract the highest value from customers over the lifetime of the SM relationships and to turn them into loyal customers. Once companies adopt social CRM, they can facilitate communication and collaborative experiences with their customers. Furthermore, through social CRM, firms become able to build a dynamic, interactive and multichannel process of mutual value creation and cocreation product development with customers, which allows them to create market-based products and to reach CS and CL (Hidayanti *et al.*, 2018).

Recently, social CRM has become one of the most debated subjects in digital marketing (Yasiukovich and Haddara, 2021), and many researchers have proven that using CRM not only establishes superior relations with customers but can also boost CS and CL. For instance, Nadeem (2012) indicated that engagement through SM makes the customer more loyal and pushes him to spend more than other customers. Moreover, Dutot (2013) estimated that social CRM use and presence on social networks boost satisfaction and loyalty from a long-term view. In other studies, Siti Hasnah *et al.* (2019) and Zaim *et al.* (2020) found that social CRM adoption could increase CS. Finally, Arora *et al.* (2021) detected a significant impact of social CRM on customers' engagement, satisfaction, retention and loyalty.

Based on the studies of Yawised *et al.* (2018) and Suhasini and Kumar (2018), social CRM was operationalized in this study through two variables: TCRM and SM.

*2.2.1 Traditional customer relationship management.* TCRM can be defined as the process of managing the whole relationship between the company and its customers, with all their various contacts, interactive processes and communication elements (Grönroos, 2007). CRM is an iterative process in which companies review their goals regularly to affect customers' behavior and consequently decrease costs, enhance CS and CL, attract new customers and increase sales and profitability.

Several researchers, such as [Seify et al. \(2020\)](#), have identified a positive relationship between CRM and CS. Furthermore, CL can also be achieved via a successful CRM application.

On the other hand, recent studies, such as [Kim \(2012\)](#), pointed out that CS plays the role of a mediator variable that connects CRM and CL. From this perspective, CRM influences CS, which in turn impacts CL ([Nyadzayo and Khajehzadeh, 2016](#)). In the context of developing countries, although firms are increasingly adopting TCRM systems at considerable cost, there is limited research examining the impact of CRM on other variables, such as CS and CL ([Askool and Nakata, 2010](#)), particularly in North African countries. Therefore, the following hypotheses were suggested:

- H1. Traditional CRM (TCRM) positively influences customer satisfaction (CS).
- H2. Traditional CRM (TCRM) positively influences customer loyalty (CL).
- H3. Customer satisfaction (CS) mediates the relationship between Traditional CRM and customer loyalty (CL).

**2.2.2 Social media.** SM are the technology used for interactions by the interactive Web ([Yawised et al., 2018](#)). This technology is changing customer behavior and marketing practices, especially in emerging markets ([Enikolopov et al., 2018](#)).

According to [Potra et al. \(2016\)](#), SM can immensely assist companies in delivering on the promise of the advertising concept, market orientation and relationship marketing by providing tools to improve CS and boost customer engagement that leads to CL. In this line of idea, [Huang et al. \(2018\)](#) and [Pinto \(2015\)](#) indicated that companies that have better communication with their customers on SM gain not only the knowledge of customers but also their satisfaction and loyalty. Furthermore, [Yee et al. \(2021\)](#) underlined CS as a mediating variable that affects the relationship between SM and CL. Thus, the following hypotheses were assumed:

- H4. Social media (SM) positively influences customer satisfaction (CS).
- H5. Social media (SM) positively influences customer loyalty (CL).
- H6. Customer satisfaction (CS) mediates the relationship between social media (SM) and customer loyalty (CL).

### 2.3 Customer satisfaction and customer loyalty

First, CS is considered customers' judgment of the perceived performance of a product or service in line with their expectations, as well as the level of pleasure acquired from consumption-related fulfillment ([Kotler and Keller, 2016](#)). In the online environment, satisfaction arises as one of the most important indicators of CL and firm success ([Jacka and Keller, 2013](#)). Indeed, satisfied online customers are likely to make purchases again and recommend online retailers to others ([Pereira et al., 2017](#)).

On the other hand, CL is a concept that has been widely adopted and used in the field of customer behavior for many years, and original studies have defined it as a behavioral manifestation that includes rebuying company products or services ([Tellis, 1988](#)). CL is considered a multifaceted construct that includes attitudinal and behavioral components ([Fournier and Yao, 1997](#)). [Jacoby and Chestnut \(1978\)](#) interpret that the behavioral dimension of CL is a form of repeat purchase behavior for a particular product or service. This dimension involves some degree of positive attitude toward the distinctive value associated with the product or service. In the current study, we measure loyalty from a behavioral perspective as the degree to which a customer exhibits repetitive purchasing behavior and shows a positive

attitudinal disposition toward the products and/or services provider (Nyadzayo and Khajezadeh, 2016).

CL depends to a greater extent on cumulative satisfying experiences with product/ service attributes. This means that satisfied customers are more likely to be loyal (Minta, 2018). In this line of idea, Kotler and Armstrong (2006) argue that highly satisfied customers will repeat purchases and share their experiences with others. Therefore, companies need to better understand the relationship between CS and CL to allocate their marketing efforts between satisfaction initiatives and loyalty strategies (Shankar et al., 2003).

Empirical evidence from previous studies conducted in different contexts and countries has indicated that CS is a significant determinant of CL (Hu et al., 2009). This is the case for Liat et al. (2017) and Nobar and Rostamzadeh (2018), who found that CS induced CL in Malaysia and Iran. Moreover, Şenel (2011) mentioned that CS is a prerequisite of CL in the automotive sector in Turkey. Based on these results, the following hypothesis is proposed:

H7. Customer satisfaction (CS) positively influences customer loyalty (CL).

In light of this discussion, the theoretical model shown in Figure 1 was formed.

3. Research methodology

Like almost all developing countries, most Algerian firms struggle to provide Web connections and basic computer equipment (Stokić et al., 2019), and few sectors have seen a wide diffusion of social CRM systems (Jaber and Simkin, 2017). In this context, the Algerian automotive sector has emerged as an appropriate research field to investigate the influence of social CRM on CS and CL. As seen from the statistics of the Algerian National Office of Statistics (NOS), the Algerian automotive market recorded during the period of this study had one of the highest growth rates in Africa. Between 2012 and 2019, the Algerian automotive fleet grew from 4812555 to 6577188 vehicles, with average sales of 265507 vehicles per year (NOS, 2013, 2019). This period also saw the establishment of several multinational firms and the development of mounting activities, which encouraged the adoption of social CRM practices, especially by French and German leader companies.

From these considerations, an empirical study was conducted on customers of the Algerian automotive sector.

3.1 Variable measurement

The questionnaire construction was based on previous studies. As shown in Table 2, each variable was measured using a scale tested and validated in several studies. To ensure that

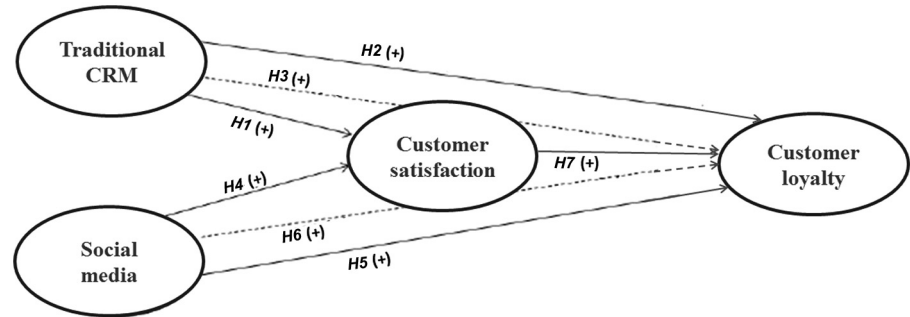


Figure 1. Framework model

Note: Dashed arrows illustrate the indirect effect; and nondashed arrows illustrate the direct effect



survey participants understood and answered the questionnaire in the way that our study intended, the questions were tested before the main survey. Three customers and four researchers specializing in the area performed the pretest. Both the structure of the survey (e.g. order of questions) and some unclear wordings were adjusted.

### 3.2 Sample characteristics

To test the hypotheses, an electronic questionnaire was administered – from January to May 2020 – to Algerian customers who have at least one car from any automotive brand and who use SM and were exposed to a social CRM campaign.

Items of the second section of the questionnaire ensure that the respondents have experience in social CRM. The SM platforms most frequently used by respondents to interact with automotive brands are Facebook and Instagram. In contrast, other social networks, such as Twitter, LinkedIn or YouTube, are never or rarely used. Moreover, the most valuable SM functions for the respondents are successively instant messaging, video hosting/sharing, news/live feed and photo sharing. Finally, these customers seem to be exposed to different CRM actions.

Similar to other e-marketing and CRM studies (Kumar *et al.*, 2023), we used convenience and snowball sampling techniques. A total of 340 questionnaires were collected. Then, actual cleaning and data screening led us to eliminate 26 inconsistent responses and to retain 314 usable questionnaires for data analysis.

Table 1 shows that the respondents consisted of 268 males (85.4%) and 46 females (14.6%), which is representative of Arab societies. Despite progress in gender equality and even if an increasing number of women drive and own cars, male drivers remain the majority in these countries (Aissaoui, 2022). Furthermore, the vast majority of respondents were within the age range of 20–30 (61.1%) and 31–40 (28%) years old, which corresponds to the characteristics of the young Algerian population (70% are under 30 years old) (Boukhelkhal, 2022), of which the majority of people who are able to drive or own a car is between 20 and 40 years old. In addition, Millennials (born from 1982 to the mid-1990s) and Generation Z (born from the mid-1990s onward) who grew up in the age of ICT, internet connectivity and SM (Agrawal, 2022) are more likely to interact with brands through social CRM tools and share their consumption-related experiences across digital platforms (Khan, 2022). Finally, most of the respondents had cars from the leading brand in Algeria (25.2%), while the second brand reached 14.7%, the third brand reached 8% and the rest of the percentage was divided among the other brands.

Variable	Cases (%)	Variable	Cases (%)
<i>Gender</i>	268 (85.4) 46 (14.6)	Automobile brand	
		Brand 1	79 (25.2)
		Brand 2	45 (14.35)
<i>Age</i>	192 (61.1) 88 (28.0) 16 (5.1) 18 (5.7)	Brand 3	25 (8.0)
		Brand 4	23 (7.3)
		Brand 5	22 (7.0)
		Brand 6	18 (5.75)
		Brand 7	16 (5.1)
		Brand 8	16 (5.1)
		Brand 9	14 (4.5)
		Other brands (15 Other brands)	56 (17.7)

**Table 1.**  
Demographics  
analysis ( $N = 314$ )

3.3 Data analysis method

This study used the covariance-based structural equation modeling approach and the bootstrapping approach (AMOS version 23.0) for data analysis. A three-stage data analysis was performed to validate the proposed framework. First, reliability and validity tests were performed. Second, the direct relationships were tested. Then, the mediation analysis was tested.

4. Results

4.1 Reliability and validity test

To ensure that the data were normally distributed, skewness and kurtosis tests were performed. As recommended by Hair *et al.* (2010), the obtained values in this study are between  $-2$  and  $2$  for skewness and between  $7$  and  $7$  for kurtosis, which support the assumption that the data follow a normal distribution (Table 2).

To measure the reliability and convergent validity of the constructs, Cronbach's alpha, factor loading, composite reliability (CR) and the average variance extracted (AVE) were calculated for each construct. Regarding factor loading, all item loadings in the model should be  $0.50$  or higher (Hair *et al.*, 2010). Furthermore, Cronbach's alpha and CR values should exceed  $0.70$  (Hair *et al.*, 2010), and the AVE should exceed  $0.50$  (Kline, 2011). As shown in Table 2, all values of factor loading, CR, Cronbach's alpha and AVE exceed the recommended thresholds. Thus, the reliability and convergent validity of the model were established.

Construct and items	$\lambda_i$
<i>Traditional CRM (TCRM) adapted from Iriana and Buttle (2008)</i>	
$\alpha = 0.785$ ; $CR = 0.861$ ; $AVE = 0.608$ ; $Skewness = -0.029$ ; $Kurtosis = -0.496$	
TCRM1: The company understands my needs, expectations and preferences	0.63
TCRM2: The brand provides to the ability of collaboration with it	0.65
TCRM3: The company commits time and resources to meet customer needs and successfully serve the customer	0.76
TCRM4: My relationship with the company/brand is deep	0.73
<i>Social media (SM) adapted from Trainor et al. (2014)</i>	
$\alpha = 0.867$ ; $CR = 0.908$ ; $AVE = 0.713$ ; $Skewness = 0.393$ ; $Kurtosis = -1.003$	
SM1: The most valuable social media function for me is Video hosting/sharing (e.g. YouTube)	0.77
SM2: The most valuable social media function for me is news/live feeds	0.81
SM3: The most valuable social media function for me is blogging (e.g. company blog)	0.87
SM4: The most valuable social media function for me is online conferencing/broadcasting (e.g. webinar)	0.72
<i>Customer satisfaction (CS) adapted from Chang (2015)</i>	
$\alpha = 0.868$ ; $CR = 0.915$ ; $AVE = 0.732$ ; $Skewness = -0.977$ ; $Kurtosis = -1.066$	
CS1: I am satisfied with the after-sales service of my automotive brand	0.56
CS2: I am pleased with the experience of using my automotive brand	0.83
CS3: My decision to use this brand was a wise one	0.90
CS4: My feeling with using this automotive brand was good	0.91
<i>Customer loyalty (CL) adapted from Nyadzayo and Khajehzadeh (2016)</i>	
$\alpha = 0.840$ ; $CR = 0.907$ ; $AVE = 0.767$ ; $Skewness = -0.548$ ; $Kurtosis = -0.457$	
CL1: I consider myself to be highly loyal to the brand	0.87
CL2: I will recommend this brand to friends	0.98
CL3: This brand is my first choice	0.58

Note:  $\lambda_i$  = standardized factor loading values

Table 2.  
Constructs with  
items and reliability  
and validity



To evaluate discriminant validity, the Fornell–Larcker criterion (square roots of the AVEs) was used. The recommended standard of the Fornell and Larcker techniques is that they should not obtain the same variance as any other variables, which is more than the AVE (Fornell and Larcker, 1981). The values in Table 3 ensured that the observed variables in the model in each construct show the given latent variable, authenticating the discriminant validity of the model.

In addition, all good fit indices of the measurement model were within the recommended level, indicating that the model is acceptable and has sufficient goodness of fit to the observed data. Relative chi-square = 2.885, incremental fit index = 0.939, normed fit index = 0.91, Tucker–Lewis index = 0.924, comparative fit index = 0.939, root mean square error of approximation = 0.078.

Finally, the explanatory power of the model – estimated by the coefficient of determination ( $R^2$ ) – is 25.6% for CS and 45.4% for CL (Figure 2).

## 4.2 Hypotheses test

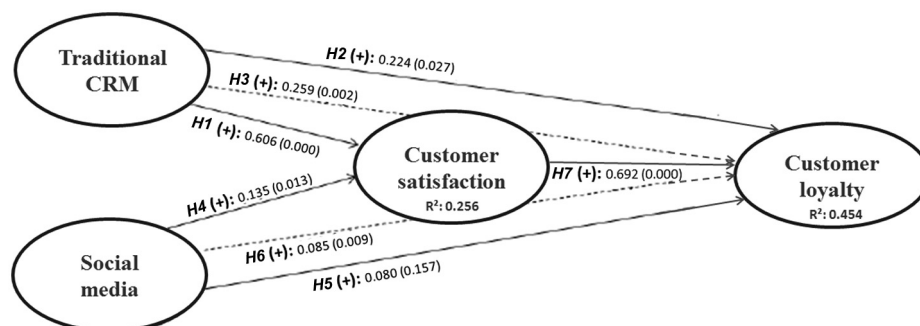
**4.2.1 Direct effect.** The main causal paths were tested using structural equation modeling. As seen in Figure 2, all hypotheses ( $H1$ ,  $H2$ ,  $H4$ ,  $H6$  and  $H7$ ) were supported except for  $H5$ . Therefore, the results indicate that TCRM ( $\beta = 0.606$ ,  $p < 0.001$ ) and SM ( $\beta = 0.135$ ,  $p = 0.013$ ) positively and significantly influence CS. In addition, the findings showed that CS ( $\beta = 0.692$ ,  $p < 0.001$ ) and TCRM ( $\beta = 0.224$ ,  $p = 0.027$ ) have a positive and significant effect on CL (0.224,  $p = 0.027$ ). However, there was no direct relationship between SM and CL ( $\beta = 0.080$ ,  $p = 0.157$ ). In fact, the relationship between SM technology use and CL seems to be indirect rather than direct. As seen below, CS has a significant mediating effect on this relationship.

Variable	CL	CS	SM	TCRM
CL	0.876			
CS	0.613	0.855		
SM	0.239	0.250	0.844	
TCRM	0.382	0.455	0.187	0.780

**Table 3.**

**Notes:** CL = customer loyalty; CS = customer satisfaction; SM = social media; TCRM = traditional CRM

Discriminant validity



**Figure 2.**

Direct and indirect  
effects

**Note:** Dashed arrows illustrate the indirect effect; and nondashed arrows illustrate the direct effect

4.2.2 *Indirect effect.* To examine the mediation relationship, we used the bootstrapping method. The bootstrapping method allows us to provide the upper and lower bounds for the confidence interval with a 95% confidence level and to confirm that the estimate of the indirect effect is inside this confidence interval (Arbuckle, 2009). As shown in Table 4, the estimate of the indirect effect between TCRM and CL (0.259) is significant ( $p < 0.01$ ) and inside the confidence interval (0.251, 0.640). Thus, the CS variable is considered a mediator between TCRM and CL, and  $H3$  has been supported. In addition, the indirect effect between SM and CL (0.085) is also significant ( $p < 0.01$ ) and inside the confidence interval (0.024, 0.187). Therefore, the CS variable is considered a mediator between SM and CL, and  $H6$  has been supported.

5. Discussion and implications

The competitiveness of the automotive sector and increasing virtual interactions that occur today among customers through SM make it critical for managers to be present and available on Web 2.0 and to develop a digital long-term connection with their current and potential customers. Indeed, ensuring CS and CL consolidates relationships with companies and can be decisive in a maturing sector characterized by an accelerated rhythm of innovation and strong interest shown by customers in after-sales services (YuSheng and Ibrahim, 2019).

This research contributes to the literature by the following:

- analyzing the influence of social CRM on automotive CL; and
- examining how CS affects the precedent effect.

The findings have provided empirical support for the contention that social CRM (TCRM and SM) has a direct and positive impact on CS in developing countries' automotive sector. This result is consistent with the findings of previous studies conducted in other sectors and countries, such as Aldaihani and Ali (2018) and Seify *et al.* (2020). Furthermore, CS has a positive effect on CL, which is consistent with the results of Şenel's (2011) research in Turkey in the same sector and in other sectors, such as Nyadzayo and Khajehzadeh (2016) and Nobar and Rostamzadeh (2018). Therefore, in addition to social CRM efforts, CS creates CL in developing countries' automotive sector, leading to future behavioral intentions, which means that loyal customers can recommend the automotive brand to their relatives and friends and post positive comments on that brand on SM. In this context, companies can use a social CRM strategy to upgrade the quality standards of products/services, which are produced or delivered in the end to gain CS that leads to CL.

Moreover, the study results also revealed that CL to automotive brands in developing countries is directly affected by TCRM. This result supports the results of previous studies, such as Shaon and Rahman's (2015) research.

On the other hand, even if the research failed to detect any direct effect of SM on CL, the mediating role of consumer satisfaction between social CRM (TCRM and SM) and CL was confirmed. These results are consistent with those underlined by Kim (2012) and Yee *et al.* (2021) and attest that CL is affected indirectly by social CRM through CS. Thus, the relationship between social CRM and CL appears more complex. In addition to the mediating effect played by CS, other potential mediators could explain the nonsignificant direct effect of SM technology

Table 4.  
Hypotheses' test  
results (indirect  
effect)

Hypotheses	Estimate	p-value	Lower bounds confidence	Upper bounds confidence	Hypotheses result
TCRM → CS → CL	0.259	0.002	0.251	0.640	Supported
SM → CS → CL	0.085	0.009	0.024	0.187	Supported

use on CL: CRM capabilities (Trainor *et al.*, 2014), customer engagement (Arora *et al.*, 2021) and customer empowerment (Aldaihani and Ali, 2018). In the context of this study, even though the respondents were exposed to social CRM campaigns, their level of engagement seems to be low. Referring to the collected data, they use, on average, Facebook and Instagram to interact with automotive companies from time to time and rarely or never use other SM. A final explanation is related to customer relationship quality and strength. In developing countries, where customers have a relatively lower income (compared to developed countries), automotive brands tend to offer standardized cars with little possibility of customization. In addition, despite the quality of the after-sales services provided by these brands, the counterfeit spare parts and the services offered by independent repair remain very cheap, which can affect social CRM efficiency. Therefore, it is worth noting that our findings provide more evidence supporting the results in the marketing literature, developing country context (Medjani and Barnes, 2021) and automotive sector (Nyadzayo and Khajehzadeh, 2016).

### 5.1 Theoretical implications

While several studies conducted in different sectors focus solely on either CS or CL (Nadeem, 2012; Aldaihani and Ali, 2018), this research reduces the knowledge gap in the fields of RMT and social CRM literature by exploring the outcomes of social CRM on CS and CL.

First, our model was tested in the Algerian automotive sector, as Yasiukovich and Haddara (2021) recommended expanding to new sectors and countries. Therefore, the scales of social CRM (Iriana and Buttle, 2008; Trainor *et al.*, 2014), CS (Chang, 2015) and CL (Nyadzayo and Khajehzadeh, 2016) are generalizable to the Algerian automotive sector as an example of developing countries' sectors. Such empirical validation is needed to provide sufficient evidence on how to properly translate the social CRM concept into a comprehensive set of specific organizational activities conducive to CRM success (Akroush *et al.*, 2011). Second, this study tests and validates the direct relationship among important constructs of social CRM (TCRM and SM) and CS (Aldaihani and Ali, 2018). Third, this research not only empirically examines the direct relationships but also validates the mediating effect of CS, which plays the role of a mediator variable in various previous studies (Kim, 2012; Yee *et al.*, 2021). Finally, even if the results validate the direct relationship between TCRM and CL, they failed – in turn – to detect any significant and direct effect of SM technology use on the dependent variable (CL). This prompts us to ask about the moderating and mediating variables–inherent to developing countries–likely to explain such results.

### 5.2 Managerial implications

Practically, our study provides some precious implications for practitioners and firms activated in developing economies, particularly those in the automotive sector.

First, companies should develop strong and sustainable relationships with their customers to improve CS and CL and consequently enhance their competitiveness and market share. This goal can be reached by implementing social CRM best practices.

Second, companies should focus their social CRM campaign on the most SM platform used by customers.

Third, in a growing market, where automotive offers are standardized, companies in developing countries should offer more choices to customers and allow them to personalize their requests.

Fourth, it is important to promote and encourage communication with current and potential customers to increase the purchase and repurchase of products and to improve value cocreation. Marketing managers should develop strategies that make customers able to share their experiences and opinions, which help the company explain and understand needs.

Fifth, our study revealed that young people use SM and the internet more than older generations. Consequently, companies, especially B2C businesses and automotive firms, should reconsider SM as an integral element of their communication strategy to maintain connections with them.

Beyond the automotive sector, other industries where customers are involved in deep and long-term relationships with companies could also benefit from the study findings, especially in developing countries.

From an international business and marketing perspective, our research offers empirical insights for international organizations that are considering entering the North African and Middle Eastern automotive market by providing a deeper empirical understanding of social CRM – CS and CL relationships. This could reveal new business opportunities or provide clues in understanding automotive markets in neighboring countries that share similar characteristics with those of Algeria (Akroush *et al.*, 2011).

Table 5 summarizes the research conclusions and implications:

6. Limitations and further research

Despite its important contribution, this study is not without limitations. First, the generalizability of our results is limited, the data were collected from a self-report survey, and the sample size is relatively small compared to the total number of automotive customers present in the area. The limited size of the sample covered in this study may negatively reflect the generalizability of the results to the whole population. In addition, the majority of respondents were men and young. This may not be generalizable for women or customers over age 40. Further studies should consider collecting real social CRM use data from a larger sample. This will lead to an increase in the limited degree of freedom in the model.

Second, although the conceptual model explains 45.4% of the variance of CL, we can improve it by adding other variables such as customer engagement or customer empowerment. Furthermore, we used data from a B2C relationship within a single sector, suggesting that the results cannot be immediately applied to business-to-business (B2B) contexts. Therefore, future studies should investigate the antecedents of CRM and its impact on brand loyalty in other B2C or B2B markets.

Finally, only a quantitative analysis was undertaken in this research. For future studies, a mixed method using both quantitative and qualitative techniques can be used to test whether the supported hypotheses are still valid.

Table 5. Conclusions and theoretical and managerial implications

Conclusions	Theoretical and managerial implications
The adoption of a social CRM strategy has become vital for automotive companies in developing countries since it not only gives them a competitive advantage but also positively impacts customer satisfaction and loyalty	Companies should develop strong and sustainable relationships with their customers to improve customer satisfaction and loyalty and consequently enhance their competitiveness and market share
Social media has become a new social phenomenon in developing countries, which leads to customer satisfaction	Companies should focus their social CRM campaign on the most social media used by customers, namely, Facebook and Instagram
It is important to promote and encourage communication with current and potential customers to increase the purchase and repurchase of products and services	Marketing managers should develop strategies that make customers able to share their experiences and opinions, which help the company explain and understand the satisfaction of needs

## References

- Agrawal, D.K. (2022), "Determining behavioral differences of Y and Z generational cohorts in online shopping", *International Journal of Retail and Distribution Management*, Vol. 50 No. 7, pp. 880-895.
- Aissaoui, N. (2022), "Spatio-Temporal analysis of road insecurity in Algeria: case of the wilaya of Oum El Bouaghi during the period 2017-2019", *Finance and Business Economics Review*, Vol. 6 No. 1, pp. 398-411.
- Akroush, M.N., Al-Mohammad, S.M., Zuriekat, M.I. and Abu-Lail, B.N. (2011), "An empirical model of customer loyalty in the Jordanian mobile telecommunications market", *International Journal of Mobile Communications*, Vol. 9 No. 1, pp. 76-101.
- Aldaihani, F.M.F. and Ali, N.A.B. (2018), "Impact of social customer relationship management on customer satisfaction through customer empowerment: a study of Islamic banks in Kuwait", *International Research Journal of Finance and Economics*, Vol. 170, pp. 42-53.
- Arbuckle, J. (2009), *Amos 18 User's Guide*, Amos Development Corporation, Chicago.
- Arora, L., Singh, P., Bhatt, V. and Sharma, B. (2021), "Understanding and managing customer engagement through social customer relationship management", *Journal of Decision Systems*, Vol. 30 Nos 2/3, pp. 215-234.
- Askool, S.S. and Nakata, K. (2010), "Scoping study to identify factors influencing the acceptance of social CRM", *2010 IEEE International Conference on Management of Innovation and Technology, Singapore*, pp. 1055-1060.
- Boukhelkhal, A. (2022), "Impact of economic growth, natural resources and trade on ecological footprint: do education and longevity promote sustainable development in Algeria?", *International Journal of Sustainable Development and World Ecology*, Vol. 29 No. 8, pp. 875-887.
- Cakici, A.C., Akgunduz, Y. and Yildirim, O. (2019), "The impact of perceived price justice and satisfaction on loyalty: the mediating effect of revisit intention", *Tourism Review*, Vol. 74 No. 3, pp. 443-462.
- Caliskan, A. and Esmer, S. (2020), "An assessment of port and shipping line relationships: the value of relationship marketing", *Maritime Policy and Management*, Vol. 47 No. 2, pp. 240-257.
- Chang, C.C. (2015), "Exploring mobile application customer loyalty: the moderating effect of use contexts", *Telecommunications Policy*, Vol. 39 No. 8, pp. 678-690.
- Chen, L., Hsieh, J.J. and Rai, A. (2021), "How does employee infusion use of CRM systems drive customer satisfaction? Mechanism differences between face-to-face and virtual channels", *MIS Quarterly*, Vol. 45 No. 2, pp. 719-754.
- Dutot, V. (2013), "A new strategy for customer engagement: how do French firms use social CRM?", *International Business Research*, Vol. 6 No. 9, pp. 54-67.
- Enikolopov, R., Petrova, M. and Sonin, K. (2018), "Social media and corruption", *American Economic Journal: Applied Economics*, Vol. 10 No. 1, pp. 150-174.
- Farber, B. and Wycoff, J. (1991), "Customer service: evolution and revolution", *Sales and Marketing Management*, pp. 44-51.
- Fornell, P.H. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Fournier, S. and Yao, J. (1997), "Reviving brand loyalty: a reconceptualization within the framework of consumer-brand relationships", *International Journal of Research in Marketing*, Vol. 14 No. 5, pp. 451-472.
- Greenberg, P. (2009), *CRM at the Speed of Light: Social CRM 2.0 Strategies, Tools, and Techniques for Engaging Your Customers*, McGraw Hill Professional, New York, NY.
- Grönroos, C. (2007), *Service Management and Marketing: Customer Management in Service Competition*, John Wiley and Sons, London.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis: A Global Perspective*, Pearson Education International, London.

- 
- Halimi, A.B., Chavosh, A. and Choshali, S.H. (2011), "The influence of relationship marketing tactics on customer's loyalty in B2C relationship – the role of communication and personalization", *European Journal of Economics, Finance and Administrative Sciences*, No. 31, pp. 49-56.
- Hanley, S. and Leahy, R. (2008), "The effectiveness of relationship marketing strategies in department stores", *International Journal of Business and Management*, Vol. 3 No. 10, pp. 133-140.
- Herington, C., Johnson, L.W. and Scott, D. (2006), "Internal relationships, linking practitioner literature and relationship marketing theory", *European Business Review*, Vol. 18 No. 5, pp. 364-381.
- Hidayanti, I., Herman, L.E. and Farida, N. (2018), "Engaging customers through social media to improve industrial product development: the role of customer co creation value", *Journal of Relationship Marketing*, Vol. 17 No. 1, pp. 17-28.
- Hu, H.-H., Kandampully, J. and Juwaheer, T.D. (2009), "Relationships and impacts of service quality, perceived value, customer satisfaction, and image: an empirical study", *The Service Industries Journal*, Vol. 29 No. 2, pp. 111-125.
- Huang, T.K., Liao, C.Y., Wang, Y.T. and Lin, K.Y. (2018), "How does social media interactivity affect brand loyalty?", Proceedings of the 51st HI international conference on system sciences.
- Iriana, R. and Buttle, F. (2008), "Does organizational culture influence CRM outcomes?", *Australia and New Zealand Marketing Academy Conference 2008: marketing: shifting the focus from mainstream to offbeat*, Sydney, pp. 1-3.
- Jaber, F.N. and Simkin, L. (2017), "Understanding customer relationship management (CRM) adoption in an Arab Middle Eastern context", *Behaviour and Information Technology*, Vol. 36 No. 10, pp. 1020-1036.
- Jacka, J.M. and Keller, P.J. (2013), *Business Process Mapping: Improving Customer Satisfaction*, Wiley, Hoboken, NJ.
- Jacoby, J. and Chestnut, R. (1978), *Brand Loyalty: Measurement and Management*, John Wiley and Sons, New York, NY.
- Kebede, A.M. and Tegegne, Z.L. (2018), "The effect of customer relationship management on bank performance: in context of commercial banks in Amhara region, Ethiopia", *Cogent Business and Management*, Vol. 5 No. 1, p. 1499183.
- Khan, I. (2022), "Do brands' social media marketing activities matter? A moderation analysis", *Journal of Retailing and Consumer Services*, Vol. 64, p. 102794.
- Khan, M.A., Muhammad, Y. and Muhammad, A.K. (2021), "Factors affecting customer loyalty in the services sector", *Journal of Tourism and Services*, Vol. 12 No. 22, pp. 184-197.
- Khan, R.U., Salamzadeh, Y., Iqbal, Q. and Yang, S. (2022), "The impact of customer relationship management and company reputation on customer loyalty: the mediating role of customer satisfaction", *Journal of Relationship Marketing*, Vol. 21 No. 1, pp. 1-26.
- Kim, S.H. (2012), "A study on the impact of customer equity on customer loyalty in the Korean retail industry: mediation of customer satisfaction and switching costs", *Journal of Distribution Science*, Vol. 10 No. 11, pp. 79-88.
- Kline, R.B. (2011), *Principles and Practice of Structural Equation Modeling*, The Guilford Press, New York, NY.
- Koiranen, M. (1995), "Custopreneurship coalitions in relationship marketing", *Understanding Stakeholder Thinking*, pp. 184-194.
- Kotler, P. and Armstrong, G. (2006), *Principles of Marketing, 11e*, Prentice Hall Video Gallery, New Jersey, USA.
- Kotler, P. and Keller, K.L. (2016), *Marketing Management*, Pearson, Boston, MA.
- Kumar, P., Sharma, S.K. and Dutot, V. (2023), "Artificial intelligence (AI)-enabled CRM capability in healthcare: the impact on service innovation", *International Journal of Information Management*, Vol. 69, p. 102598.
- Liat, C.B., Mansori, S., Chuan, G.C. and Imrie, B.C. (2017), "Hotel service recovery and service quality: influences of corporate image and generational differences in the relationship between customer satisfaction and loyalty", *Journal of Global Marketing*, Vol. 30 No. 1, pp. 42-51.



- 
- Medjani, F. and Barnes, S.J. (2021), "Understanding the implementation of social customer relationship management in the North African context: an integrated theory perspective", *Journal of Global Information Technology Management*, Vol. 24 No. 4, pp. 299-318.
- Minta, Y. (2018), "Link between satisfaction and customer loyalty in the insurance industry: moderating effect of trust and commitment", *Journal of Marketing Management*, Vol. 6 No. 2, pp. 25-33.
- Nadeem, M. (2012), "Social customer relationship management (SCRM): how connecting social analytics to business analytics enhances customer care and loyalty?", *International Journal of Business and Social Science*, Vol. 3 No. 21, pp. 88-102.
- National Office of Statistics (NOS) (2013), "National automotive park on 31/12/2013, No 681", available at: [www.ons.dz/IMG/pdf/NATIONAL2013.pdf](http://www.ons.dz/IMG/pdf/NATIONAL2013.pdf) (accessed 12 April 2022).
- National Office of Statistics (NOS) (2019), "National automotive park on 31/12/2019", No 931, available at: [www.ons.dz/IMG/pdf/e.parc\\_national\\_auto31-12-2019.pdf](http://www.ons.dz/IMG/pdf/e.parc_national_auto31-12-2019.pdf) (accessed 12 April 2022).
- Nobar, H.B.K. and Rostamzadeh, R. (2018), "The impact of customer satisfaction, customer experience and customer loyalty on brand power: empirical evidence from hotel industry", *Journal of Business Economics and Management*, Vol. 19 No. 2, pp. 417-430.
- Nyadzayo, M.W. and Khajezadeh, S. (2016), "The antecedents of customer loyalty: a moderated mediation model of customer relationship management quality and brand image", *Journal of Retailing and Consumer Services*, Vol. 30, pp. 262-270.
- Palmatier, R.W. (2008), "Relationship marketing", *Marketing Science Institute*, Cambridge, MA, pp. 1-140.
- Pereira, H.G., de Fátima Salgueiro, M. and Rita, P. (2017), "Online determinants of e-customer satisfaction: application to website purchases in tourism", *Service Business*, Vol. 11 No. 2, pp. 375-403.
- Pinto, M.B. (2015), "Social media's contribution to customer satisfaction with services", *The Service Industries Journal*, Vol. 35 Nos 11/12, pp. 573-590.
- Potra, S., Izvercian, M. and Miclea, S. (2016), "Changes in CRM approach: refined functional blocks for customer creative engagement in services", *International Journal of Information Systems in the Service Sector*, Vol. 8 No. 1, pp. 45-57.
- Rodriguez, M. and Trainor, K. (2016), "A conceptual model of the drivers and outcomes of mobile CRM application adoption", *Journal of Research in Interactive Marketing*, Vol. 10 No. 1, pp. 67-84.
- Seify, M., Tabaeian, R.A. and Khoshfetrat, A. (2020), "Investigating factors in implementation of electronic customer relationship management and its consequences in private hospitals in Isfahan city", *International Journal of Electronic Customer Relationship Management*, Vol. 12 No. 3, pp. 225-245.
- Şenel, M. (2011), "An approach to measuring brand loyalty in the Turkish automotive sector", *Journal of Economy and Society*, Vol. 30 No. 2, pp. 137-154.
- Shankar, V., Smith, A.K. and Rangaswamy, A. (2003), "Customer satisfaction and loyalty in online and offline environments", *International Journal of Research in Marketing*, Vol. 20 No. 2, pp. 153-175.
- Shaon, S.M.K. and Rahman, H. (2015), "A theoretical review of CRM effects on customer satisfaction and loyalty", *Prague Economic Papers*, Vol. 4 No. 1, pp. 23-36.
- Siti Hasnah, H., Noor Mohamed, M.H. and Noor Hazlina, A. (2019), "Social customer relationship management (s-CRM) among small- and medium-sized enterprises (SMEs) in Malaysia", *International Journal of Ethics and Systems*, Vol. 35 No. 2, pp. 284-302.
- Stokić, A., Stojanović, D., Bogdanović, Z., Despotović-Zrakić, M. and Radenković, B. (2019), "Enhancing the customer relationship management in public libraries: findings from three developing countries", *Library Hi Tech*, Vol. 37 No. 2, pp. 247-268.
- Suhasini, B. and Kumar, N. (2018), "Digital India: transforming customer relationship management in higher education", *Journal of Applied Management-fidnyasa*, Vol. 10 No. 1, pp. 51-59.
- Tellis, G.J. (1988), "Advertising exposure, loyalty, and brand purchase: a two-stage model of choice", *Journal of Marketing Research*, Vol. 25 No. 2, pp. 99-111.

- 
- Trainor, K.J., Andzulis, J.M., Rapp, A. and Agnihotri, R. (2014), "Social media technology usage and customer relationship performance: a capabilities-based examination of social CRM", *Journal of Business Research*, Vol. 67 No. 6, pp. 1201-1208.
- Tsokota, T., Mahlangu, G., Muruko, M.E. and Kangara, C.T.C. (2021), "Electronic customer relationship management framework for game parks in Zimbabwe", *African Journal of Science, Technology, Innovation and Development*, pp. Vol. 14 No. 5, pp. 1-12.
- Wang, C.L. and Chen, Z.X. (2004), "Consumer ethnocentrism and willingness to buy domestic products in a developing country setting: testing moderating effects", *Journal of Consumer Marketing*, Vol. 21 No. 6, pp. 391-400.
- Yasiukovich, S. and Haddara, M. (2021), "Social CRM in SMEs: a systematic literature review", *Procedia Computer Science*, Vol. 181, pp. 535-544.
- Yawised, K., Ellis, L. and Wong, M. (2018), "A framework for the adoption of social customer relationship management (SCRM) by private sector", *Asian Journal of Science and Technology*, Vol. 9 No. 4, pp. 7844-7851.
- Yee, W.F., Ng, S.L., Seng, K., Lim, X.J. and Rathakrishnan, T. (2021), "How does social media marketing enhance brand loyalty? Identifying mediators relevant to the cinema context", *Journal of Marketing Analytics*, Vol. 10 No. 2, pp. 1-17.
- YuSheng, K. and Ibrahim, M. (2019), "Service innovation, service delivery and customer satisfaction and loyalty in the banking sector of Ghana", *International Journal of Bank Marketing*, Vol. 37 No. 5, pp. 1215-1233.
- Zaim, H., Ramdani, M. and Haddi, A. (2020), "E-CRM success factors as determinants of customer satisfaction rate in retail website", *International Journal of Computer Information Systems and Industrial Management Applications*, Vol. 12, pp. 82-92.

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