








ORIGINAL

The Mediation Role of Social Customer Relationship Management (CRM) Performance Between E-CRM Antecedents and Customer Loyalty: A Study of Internet Users in Jordan

El papel de mediación del desempeño de la gestión social de las relaciones con los clientes (CRM) entre los antecedentes de E-CRM y la lealtad del cliente: un estudio de usuarios de Internet en Jordania

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ABSTRACT

Introduction: electronic Customer Relationship Management (e-CRM) refers to a business strategy that facilitates interaction with customers for enhanced customer satisfaction, customer loyalty of potential customers to the business website .

Method: aim of this study was to clarify the impact of e-CRM Antecedents with its dimensions (enjoyment, usefulness and usability) on customer loyalty through social CRM was identified and social CRM performance with customer loyalty. The researcher's development model based on underpinning model, method adopted to achieve the study objectives. the data collection process and the outcome of data analysis. A convenience sample was taken from 500 internet users in Jordan, with valid responses being 448. The study adopted a quantitative method involving statistical analysis, primarily using Smart PLS software. Both statistical and empirical evidences were used to predict actual e-CRM practice and towards end of study.

Results: based on the findings, the study found an impact of E-CRM Antecedents with its dimensions (enjoyment, usefulness and usability) on customer loyalty of the online environment in Jordan, with the results indicating that users have made use of E-CRM relationship management in line with peeling abreast of modern developments in Jordan.

Conclusions: the study provides insight into the perceptions of managers concerning the the impact of e-CRM antecedents and customer loyalty of internet users in Jordan, the Jordanian context and identification of additional factors influencing e-CRM is crucial to provide insight into how Social CRM and e-CRM can be enhanced.

Keywords: Social CRM; e-CRM Antecedents; Enjoyment; Usefulness; Usability; Customer Loyalty; Jordan.

RESUMEN

Introducción: la gestión electrónica de relaciones con los clientes (e-CRM) se refiere a una estrategia empresarial que facilita la interacción con los clientes para mejorar la satisfacción del cliente y la fidelidad de los clientes potenciales al sitio web de la empresa.

Método: aclarar el impacto de los antecedentes del e-CRM con sus dimensiones (disfrute, utilidad y usabilidad) en la lealtad del cliente a través del CRM social y se identificó el desempeño del CRM social con la lealtad del cliente. El modelo de desarrollo del investigador se basa en el modelo subyacente, método adoptado para lograr los objetivos del estudio. el proceso de recopilación de datos y el resultado del análisis de datos. Se tomó una muestra de conveniencia de 500 usuarios de Internet en Jordania, con 448 respuestas válidas. El estudio adoptó un método cuantitativo que implica análisis estadístico, utilizando principalmente el software Smart PLS. Se utilizaron evidencias tanto estadísticas como empíricas para predecir la práctica real de e-CRM y hacia el final del estudio.

Resultados: sobre la base de los hallazgos, el estudio encontró un impacto de los Antecedentes de E-CRM con sus dimensiones (disfrute, utilidad y usabilidad) en la lealtad del cliente del entorno en línea en Jordania, y los resultados indican que los usuarios han hecho uso de la gestión de relaciones de E-CRM en línea con los desarrollos modernos en Jordania.

Conclusiones: el estudio proporciona información sobre las percepciones de los gerentes sobre el impacto de los antecedentes del e-CRM y la lealtad de los usuarios de Internet en Jordania; el contexto jordano y la identificación de factores adicionales que influyen en el e-CRM son cruciales para brindar información sobre cómo se pueden mejorar el Social CRM y el e-CRM.

Palabras clave: CRM Social; Antecedentes de E-CRM; Disfrute; Utilidad; Usabilidad; Fidelización Del Cliente; Jordania.

INTRODUCTION

Considering the basis upon which customer relationship management (CRM) rests is the relationship marketing theory, it is referred to as the acquisition and retention of and partnering with the right customers to develop optimum company and customer value.^(1,2) CRM transformed in 2008 into a strategy involving customer interactions integration rather than just customer transaction.⁽³⁾ This enabled the marketers to obtain accurate customer information for achieving higher customer value delivery.^(1,4) This has led to terminology change from CRM to social customer relationship management/CRM2.0.⁽⁵⁾

More importantly, CRM's integration of social media is an increasingly popular trend which has resulted into the formation of a novel scientific paradigm,^(6,7) namely Social Customer Relationship Management/Social CRM).⁽⁸⁾ Social CRM is described by⁽⁹⁾ as a holistic, customer-centric and strategic management method, while⁽¹⁰⁾ referred to it as both a philosophy and a business strategy driven by technology, rules of business, processes and social characteristics, developed to enable customer engagement in a collaborative way for mutual advantages in a business environment that is characterized by transparency.⁽¹¹⁾ Activities related to Social CRM cover the companies-customers interaction and collaboration, as well as the customers and potential customers' interaction using social media, and the analysis of such interaction using Social CRM tools.⁽¹¹⁾

In Jordan, the increasing progress in the telecommunication sector can be attributed to the liberalization and privatization of the sector, where in the current times, the three major players in the mobile phone networks industry are Zain, Orange, and Umniah⁽¹²⁾. In the mature market, the primary strategy adopted by mobile service providers in the face of dynamic competition is focusing on resources and effort directed towards customer retention as opposed to customer acquisition.^(9,12)

Additionally, compared to the cost of current customer retention, the cost of attracting a new one is manifold (5 times), and the profit gained by attracting 10 new customers cannot counter the expenses incurred in losing a current one.^(13,14) This highlights the importance of developing effective programs in the mobile industry to enhance their strategy of retaining customers.⁽¹⁵⁾ This significant issue has been tackled by several studies in literature, which attempted to shed light on the factors relating to and determinants of social CRM in Jordan. In this study, the author examines the effects of CRM antecedents on customer loyalty, with the mediation role of social CRM.

Previous studies

There are three functional divisions to e-CRM technology and they are operational, analytical and collaborative. In particular, operational e-CRM covers customer-facing applications integrating the front, back and mobile offices and business operations automation as exemplified by order management, marketing automation, customer service, sales-force automation and field service in order to improve customer interaction effectiveness. In comparison, analytical e-CRM entails applications analyzing customer data produced by operational tools and stored in the company database to assist firms in timely decision-making and to provide customer value. It is thus significant to obtain the right information for achieving processes while keeping customer care and understanding into consideration.⁽¹⁶⁾ Lastly, collaborative e-CRM facilitates customer-service

providers interactions via various technologies (e.g., e-commerce and e-CRM),⁽¹⁷⁾ involving the entire functions that are directed towards customer-suppliers relationship enhancement.

Moreover, e-CRM refers to an integrated method of customer relationship management, with particular focus on retaining customer and developing relationship with them. No employee can keep track of every customer's preferences and requirements and thus necessitating the collection and storage of large information amounts that depend on e-technology.^(19,18) In this process, a huge proportion of customer interactions take place over the net as opposed to face-to-face interactions and with a large amount of customer service, most e-CRM employees of the institution turn to e-media for recourse in order to improve customer interaction. Three factors are selected in this study to examine as e-CRM performance antecedents. They are proposed to affect the performance of SCRM and they are usefulness, enjoyment and usability.

In addition to usability and usefulness, enjoyment is another important e-CRM performance antecedent examined in this study. Majority of authors have proposed their definition of enjoyment. To begin with⁽¹⁹⁾ and⁽²⁰⁾ referred to enjoyment as the level to which the activity performance is considered to be a source of joy and pleasure, aside from the outcomes of the performance. Enjoyment experienced in using mobile phone service can be deemed as level to which the service activity such as, chatting, game playing, and other activities are perceived as enjoyable in their right and is an intrinsic motivation source.^(22,21) In comparison to other activities (e.g., online shopping and use of IS), mobile phone service enjoyment largely depends on experience-orientation. This may be explained by the top significant driver behind online games use is to experience enjoyment and fun, and players who do, have a higher likelihood to continue playing.^(23,12)

Prior studies also showed that behaviors of individuals are boosted by intrinsic motivation and these cover interest and enjoyment and inclination towards continuing the behavior in the future.^(24,23) User's enjoyment has been extensively utilized in literature to examine interface quality and it was added to TAM by⁽²⁶⁾ evidenced by⁽²⁷⁾ as one of the top behavioral intention antecedents.

The role of enjoyment has been examined in prior studies in the context of instant messaging⁽²⁸⁾ in online shopping⁽²⁹⁾ and in other contexts, but not in mobile phone service. Evidence from⁽³⁰⁾ and⁽³¹⁾ showed enjoyment to be a significant factor in email use and online shopping. Despite the fact that online gaming is under the category of e-commerce application, stressing on enjoyable experiences production, the role of enjoyment in the use of a system has so far generated mixed results. To begin with, in⁽³²⁾ study, enjoyment was found to influence use frequency but not variety of use. The authors stressed the need for other studies to provide deeper insight into the enjoyment role in behavior.

According to,⁽³³⁾ enjoyment can arise not just in physical activities but also in mental ones (e.g., chess playing) and it is critical in both online and offline settings.⁽³¹⁾ In⁽³⁴⁾ study, enjoyment was revealed to have a significant influence on behavioral intention of online users, while⁽³⁵⁾ reported that users who felt that the use of instant messaging was enjoyable had a greater tendency to continue to do so. Also, shopping enjoyment was reported to have a key role in the prediction of consumer intention towards repetitive web-based store purchase.⁽²⁹⁾ In the same line of study,⁽³⁵⁾ supported the direct influence of enjoyment on behavioural intention as well as its indirect influence through attitude. Perceived enjoyment therefore positively influences users' attitudes towards mobile services adoption.⁽³⁶⁾

Several reasons were forwarded by⁽³⁷⁾ for examining enjoyment, including the effect of enjoyment on behavioural intention that has been under-studied in online gaming and the mixed findings obtained concerning enjoyment was also evidenced to be significant in system use and instant messaging by⁽³⁸⁾. According to the authors, in⁽³⁹⁾ study, no significant influence was evidenced from enjoyment on system use behavior, while a significant effect was reported by⁽³¹⁾, the effect was significant as reported by⁽³²⁾ of both motivation types (intrinsic and extrinsic) in internet use enjoyment on use frequency, but no effect on the use diversity. Enjoyment refers to the perceptions of consumers concerning the potential entertainment reaped through the use of mobile phone service and to the author's best knowledge, only a few studies have been dedicated to examining the effect of perceived enjoyment on the performance of e-CRM.

Furthermore, enjoyment is a significant antecedent not only of behavioral intention but also of behavioral attitude.⁽³⁷⁾ In this regard, users achieving mobile phone gaming enjoying had a likelihood to harbor positive attitudes towards game playing. Also, perceived enjoyment influenced attitude and intention towards adoption and use of a system whereas ease of use, enjoyment and usefulness determined system acceptance, via adoption and use.^(40,32) More specifically, according to⁽³²⁾ perceived enjoyment significantly and positively correlated with internet use frequency and daily use. Also, perceived enjoyment positively affected the online banking acceptance among consumers.⁽⁴¹⁾

In other studies, system usage and perceived fun was evidenced to have a positive correlation⁽⁴²⁾ and enjoyment was found to be a significant antecedent of mobile phone Push to Talk Technology (PTT).⁽⁴³⁾ Finally,⁽⁴⁰⁾ contended that perceived playfulness positively and significantly impacted intention towards Internet usage and customer satisfaction. In sum, enjoyment is a top antecedent of mobile phone services and thus, it is examined in this study to be a factor influencing the performance of e-CRM.

However, Usefulness is among the technology factors that have been evidenced as an antecedent of e-CRM performance in the electronic and service sector. It is the subjective probability that technology use would enhance the user's completion of a specific task.⁽⁴⁴⁾ More specifically, perceived usefulness refers to the perception of the individual that the new technology use would enhance his performance on the job.⁽²⁰⁾ According to the Theory of Reasoned Action (TRA) proposed by,⁽⁴⁵⁾ the Theory of Planned Behavior (TPB) proposed by,⁽⁴⁵⁾ and the Technology Acceptance Model (TAM), TAM is a parsimonious and robust model.^(44,20)

The theory posits that perceived usefulness is the level to which an individual is convinced that using a specific system would enhance his/her performance on the job.⁽²⁶⁾

Along a similar line of definition,⁽⁴⁶⁾ described perceived usefulness as the perceptions of the consumers of the functional and practical dimensions of the system. In this regard, majority of studies in literature that adopted TAM evidenced perceived usefulness to be a significant determinant of the acceptance and use of the system and behavioral usage.^(47,21,20)

Studies in literature are of the consensus of the presence of associations between usefulness and attitude, intention and behavior of customers towards technology use.⁽²⁰⁾ In fact, empirical findings of technology adoption support positive usefulness-adoption of specific technologies relationship, with technologies ranging from computer software to e-mail.⁽⁴⁸⁾ In relation to this, high levels of computer and Internet self-efficacy were found to impact the relationship between usefulness and attitude towards Internet adoption in⁽⁴⁹⁾ study.

Also, Usability is another antecedent of e-CRM performance and is referred to as the level to which a product can be used by certain users for the achievement of goals with effectiveness, and the level to which they find that using the product is acceptable in a certain use context.⁽⁵⁰⁾ According to⁽⁵¹⁾, usability is the level to which an individual can perform a specific required task and a useable system is a system that satisfies the user's requirements. The construct, based on⁽⁵²⁾ study, addresses the functionality/usefulness of the system, ease of learning, aesthetics, satisfaction of users, their ease of use, and lastly, quality.

Moreover, a system should be designed for easy learning, easy remembrance and its being useful by including the significant functionalities that cater towards work and productivity.⁽⁵³⁾ This is because a significant relationship was found by⁽⁵⁴⁾ between usability and functionality, with the two being a requirement of the system design.

Juxtaposing this argument to the interface design of the mobile phone, it enables the determination of the customers' gratitude to the service value. Usability can be divided into four dimensions and they are perception, learning/memorization, control/action and evaluative feeling.⁽⁵⁰⁾

In a business survey conducted by⁽⁵⁵⁾, the authors found that over 50 % of e-CRM implementation failed to produce profitability on investment and success, which was attributed to factors of usability and resistance. The authors stated that e-CRM implementations benefits can be leveraged by effectively meeting the assumptions concerning resistance and usability.

Social CRM is a relatively new term describing the distinct combination between the capabilities and resources of IT and CRM marketing.⁽⁶⁾ The objective behind Social CRM, being that it is based on Social Media tools is to develop and being about information that customers, organizations, employees and partners can make use of to enhance the performance of the company. According to⁽⁵⁶⁾, firms that fail to combine customer focus management systems with Social Media technology will perform lower compared to their counterparts who do so.

In⁽¹²⁾ study, the authors explained that the basis of customer relationship is built on the knowledge, interaction, value and satisfaction of customers, with customer knowledge being connected to learning technology, knowing the needs of customers and developing databases constituting their information. In customer interaction, the focus is on operational excellence, management of customer service channels and operational management. Lastly, customer value concerns the obtained customer advantages and customer satisfaction is connected to their level of satisfaction when it comes to products and services use. There are four major CRM measurements based on the above according to⁽¹⁴⁾ and they are, customer focus, CRM organization, management of customer knowledge and technology-based CRM.

Today, a number of studies have attempted to define the loyalty. Researchers have used both attitudinal and behavioural measures to define and assess customer loyalty.⁽⁵⁷⁾ From an attitudinal perspective consumer loyalty is a specific desire to continue a relationship with suppliers and provider.⁽⁵⁸⁾ An study⁽⁵⁹⁾ defines customer loyalty as "a deeply held commitment to re-buy or re-patronize a preferred product/ service consistently in the future." According to⁽⁶⁰⁾, loyal customers are defined as those customers who hold favourable attitudes toward an organization, recommend the organization to other consumers and exhibit repurchase behaviour. Customer loyalty definition emphasises on the two principal aspects of loyalty: behavioural and attitudinal that have been studied widely in past studies.

In this study, customer loyalty was chosen as the main consequence of e-CRM performance as the previous literatures support the relationship between them. As example, ⁽⁶¹⁾ laid emphasis on the lack of empirical studies dedicated to examining the customer relationship management association with customer loyalty in the context of e-commerce. They proceeded to explain the importance of such studies in shedding light on

the nuances of such association. So on this bases,⁽⁶¹⁾ conducted a research to provide evidence of how e-CRM can enhance customer loyalty. They found that e-retail companies should consider customers' perceptions of relationship marketing efforts, as they are fundamental to enhancing customer loyalty.

Model and hypotheses

On the whole, the study's major theses are; the three main antecedent variables collective influence on the performance of social-CRM, each antecedent category's independent influence on such performance, and the performance independent influence on customer loyalty. The first part of the model drawn from prior research is the one that addresses the antecedents of e-CRM performance. The factors are split into three, indicating various effects on the performance of e-CRM and allowing for the examination of the different antecedents at the same time to determine the relationship strength of each antecedent and e-CRM performance.

On the basis of the reviewed literature and research problem, the following integrative framework is proposed (figure 1).

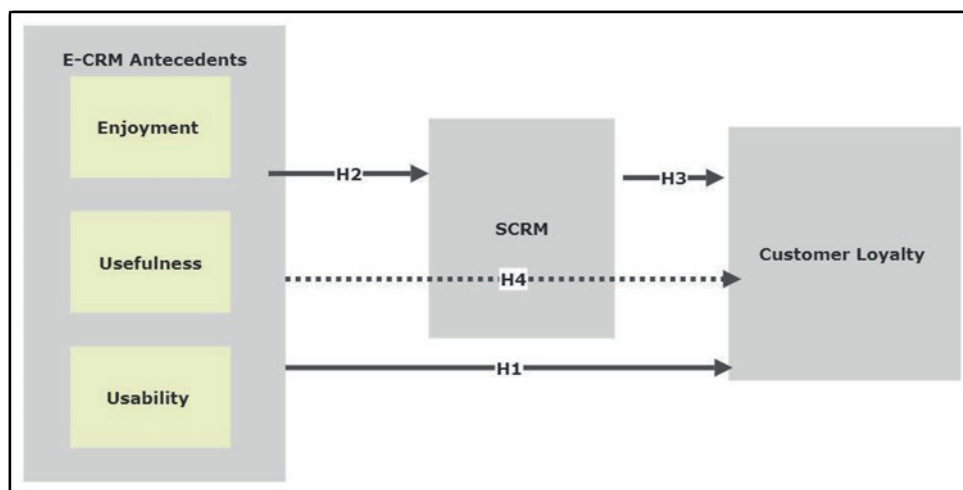


Figure 1. Theoretical Framework of the Research

According to the above figure the study formulated the following hypotheses for testing:

H1: There is appositive effect betweenE-CRMAntecedentsand customer loyalty.

H2: There is appositive effect between E-CRMAntecedentsand social CRM.

H3: There is appositive effect between social CRMand customer loyalty.

H4: Social CRM has mediate the effect between E-CRM Antecedents and customer loyalty.

METHOD

The research population includes Jordanian internet users in 2024, according to ⁽⁶²⁾, there are 26 licensed companies licensed to provide internet services in Jordan, andthe penetration rate of users extended to 95 % in 2024. The main internet service providers in Jordan are (Orange, Zain and Umniah), who present 90 percent of internet market with an equal percent for each of them.⁽⁶²⁾ As it is not allowed to access their databases for sampling determinations, the researchers used a convenience sampling method to collect data, using google form survey designed and considered acceptable to match the purpose for the present study.⁽⁶³⁾

The survey distributed using Facebook messenger using official Facebook account by sending a link for the three internet service providers customers, as well surveys were filtered with conditions that;first : the internet user had a valid internet service .second :the internet user have social media interaction with service provider. Third: the internet user had at least two years' experience with service provider.to filter the valid surveys the previse questions included in the beginning of the survey and if they were accepted the participant accepted and continue to answer the rest of the online survey ,otherwise the survey finished and eliminated. Therefore, unit analysis used in the present study is internet users who meet the three conditions mentioned above. Only 500 respondents agreed to participate 448 questionnaires matched the conditions and were suitable to be analysed and considered adequate according to.⁽⁶³⁾

The questionnaire had six sections; Section one had items that measured the respondents' demographic details, section two had items measuring usefulness, section three had items measuring usability while section four is dedicated to items measuring enjoyment,section five had items measuring social CRM performance,and Finlay section six had items measured customer loyalty. The questionnaire items were adopted form relevant studies in literature and was gauged using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5

(strongly agree).

Content validity was established by translating the questionnaire using double-back translation, where the English version was translated into Arabic with the assistance of two academics, after which the Arabic version was translated back to English by another academic staff. The original English version was compared to the back-translated version for translation consistency check.

RESULTS

In this study the researchers used Smart PLS Version 3.0 software to analyse data. PLS which is considered as a SEM technique used to test and estimates causal relationships among various independent and dependent constructs at the same time. Using PLS is appropriate for assessing the present research model since it has the ability to assess direct and indirect effects and complex models.⁽⁶⁴⁾ This phase presents the following parts; measurement model assessment, model fitness evaluation, and survey validity and reliability confirmation. Lastly, the structural model was evaluated to confirm whether null or alternative hypothesis is accepted.

In this study, university students from Jordanian universities who follow a social site like Facebook and others like it constitute the study population. Online questionnaires were distributed to 900 of such students in Facebook, from which 660 were retrieved and 448 were deemed suitable for analysis. The total sample size remained 448 and their characteristics are displayed in table 1.

Table 1. Study Population			
Variable		%	Frequency
Gender	Female	60 %	268
	Male	40 %	180
Age	18-20	32,4 %	145
	21-23	47 %	211
	24-26	11,4 %	51
	27 and above	9,2 %	41

Based on the above table, majority of the sample units were females (60 %), with the remaining (40 %) as males. Most of the respondents (47 %) fell in the age category of 21 to 23 years old, followed by those from 18 to 20 years old (32,4 %), then those from 24-26 (11,4 %), and lastly, those that are older than 27 years old (9,2 %).

In this division the researcher present evaluation of measurement model in two stages; first Discriminant Validity (Fornell -Larcker criterion) using formative measures for E-CRM Antecedents (enjoyment, usability, and usefulness), SCRM and customer loyalty; which is not expected to correlate.⁽⁶⁵⁾ There were no causal relationships among the pre-conditions and thus, a strong correlation was expected.⁽⁶⁶⁾ In the case of formative models formative constructs need to display convergent validity and for discriminant validity, each sub- variable's AVE needs to be higher than their squared correlation with other variables. If this condition is satisfied then discriminant validity is approved for the variable as show the results for all variables in table 2.

Table 2. Results Summary for Discriminant Validity (Fornell -Larcker criterion)					
	Enjoyment	Usability	Usefulness	SCRM	Customer Loyalty
Enjoyment	0,732				
Usability	0,499	0,727			
Usefulness	0,498	0,571	0,712		
SCRM	0,398	0,517	0,537	0,766	
Customer Loyalty	0,509	0,526	0,484	0,706	0,737

R-Square provides an important clarification of the impact of variables specially the mediation, mainly in the dependent variable change explanation. Table 4 represent the R-Square for the model before the mediation of SCRM and after. And presents two result; first: R square for both models have a score of (38,6 %), (57,1 %) consequently; is exceeding the lower limit 25 %⁽⁶⁷⁾ and therefore, considered as accepted values. Second: explanation of the increase in the predicting level by 18,5 %, which relies on the mediator variable (social CRM performance) in the proposed model.

The research hypotheses were tested using PLS structural model, by using bootstrapping SEM; path coefficient, p-value, t statistics. The PLS structural model output is presented in table 4 and emphasizes the result of hypothesis testing. The bootstrapping method in Smart PLS software was utilized to provide a clear picture of the proposed model upon which conclusions can be reached when it comes to tested hypotheses. The value of the entire influences of E-CRM antecedents on customer loyalty, sans the mediating role of SCRM

performance was confirmed (figure 2).

Table 3. Results for Factor Loading, Convergent Validity, Internal Consistency Reliability and Discriminant Validity						
Variables indicators Factor Loading*		Convergent validity AVE** Composite reliability***		Internal consistency reliability Cronbach's alpha**** Fornell-Larcker criterion*****		Discriminat validity
Enjoyment (ENJ)	ENJ1	0,663	0,536	0,822	0,717	Yes
	ENJ2	0,775				
	ENJ3	0,761				
	ENJ4	0,724				
Usfullnes (USFL)	USFL1	0,680	0,507	0,835	0,756	
	USFL2	0,783				
	USFL3	0,844				
	USFL4	0,613				
	USFL5	0,609				
Usability (USAB)	USAB1	0,812	0,529	0,870	0,822	Yes
	USAB2	0,744				
	USAB3	0,697				
	USAB4	0,664				
	USAB5	0,706				
	USAB6	0,732				
Social CRM performance (SCRM)	SCRM1	0,685	0,587	0,894	0,857	Yes
	SCRM2	0,722				
	SCRM3	0,714				
	SCRM4	0,748				
	SCRM5	0,747				
	SCRM6	0,859				
Customer Loyalty (CUST-L)	CUST-L1	0,500	0,544	0,822	0,703	Yes
	CUST-L2	0,797				
	CUST-L3	0,853				
	CUST-L4	0,749				
Notes: *Factor Loading greater than 0,4 (Hulland&Business, 1999); **proper value of AVE is 0,4; ***composite reliability is 0,7 (0,6-0.9)(Nunnally, 1978); ****Cronbach's Alpha 0.6-0.9 (Henseler et al., 2015); ***** AVE of each of the subvariables should be higher than the highest squared correlation with any other subvariables.(Henseler et al.,2015). Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com .						

Table 4. R Square measurement	
Relation	R Square
The effect of E-CRM Antecedents on customer loyalty	0,386
The effect of E-CRM Antecedents on customer loyalty with the mediation of social CRM	0,571

Figure 2 displays t-values on the tested hypotheses regarding the 3 antecedents of CRM, namely usability, enjoyment and usefulness, and their effects on customer loyalty. Table 5 details the resulting values.

In the first analysis phase, the direct influence of the antecedents of E-CRM on customer loyalty was examined in H1.

There are three sub-hypotheses in H1; first, in H1.1, the results supported the positive effect of enjoyment on customer loyalty in the online environment, with t-value of 3,435; and α level of 0,001; indicating that the hypothesis is accepted. In other words, there is a positive relationship between enjoyment and customer loyalty in the context of Jordanian online environment. Moving on to H1.2, the results supported usability positive effect on customer loyalty, with t- value of 1,85; and beta value of 0,047; indicating that usability level contributed 0,047 change in customer loyalty and thus, the former has positive influence on the latter in

the online environment of Jordan. Lastly, in H1.3, the results supported the effect of usefulness on customer loyalty, with t-value at 3,169; and beta value of 0,005; indicating that usefulness explains 0,005 variation in customer loyalty; in other words, usefulness has a positive significant effect on customer loyalty in the context of Jordan's online environment.

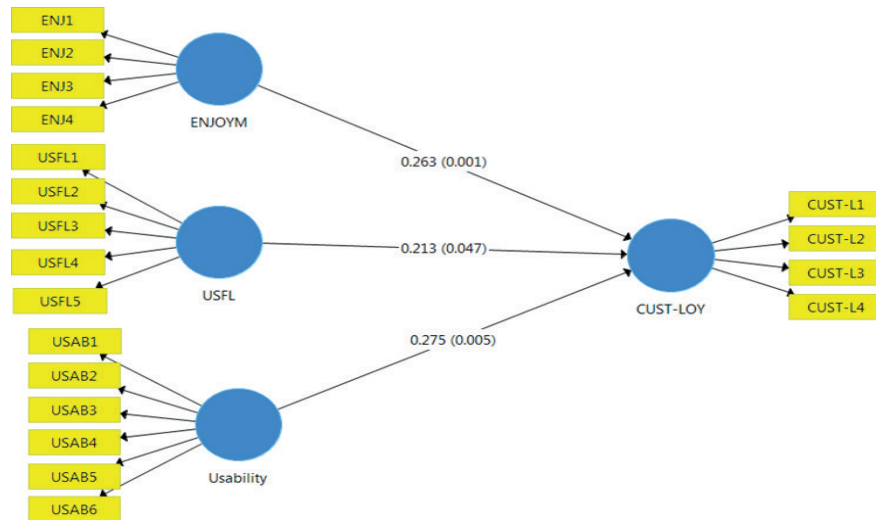


Figure 2. Structural model for the effect of E-CRM Antecedents on customer loyalty without mediation

Table 5. Structural model for the effect of E-CRM Antecedents on customer loyalty without mediation					
Hypotheses		B	T	P	Hypotheses (Null\Alternative)
H1.1	There is appositve effect of enjoyment on customer loyalty	0,263	3,435	0,001	Alternative
H1.2	There is appositve effect of usability on customer loyalty	0,213	1,85	0,047	Alternative
H1.3	There is appositve effect of usefulness on customer loyalty	0,275	3,169	0,005	Alternative

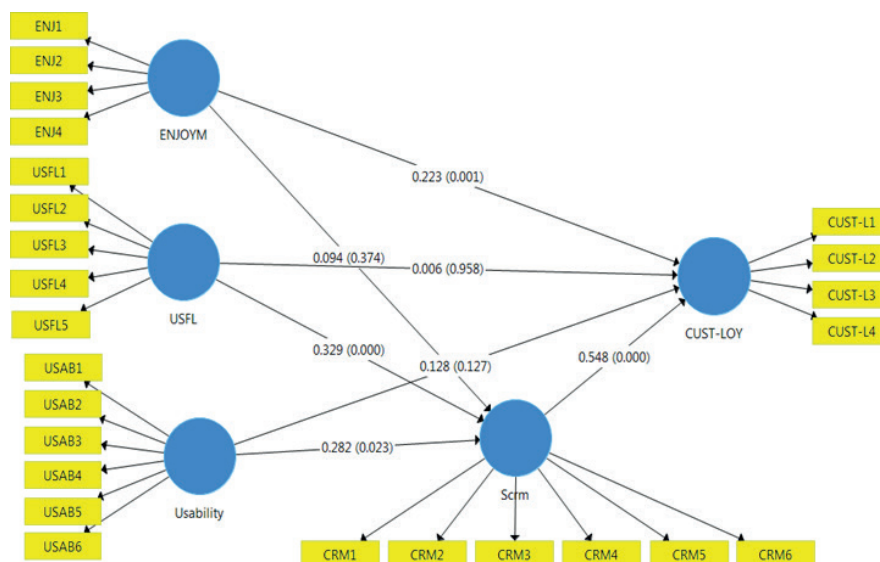


Figure 3. Structural model for the effect of E-CRM Antecedents on customer loyalty with SCRM mediation

Figure 3 displays t-values obtained from the hypotheses testing of the antecedents of ECRM, namely; enjoyment, usability, and usefulness and their effects on SCRM and the latter's effect on customer loyalty. Along with the above, the mediating role of SCRM between the relationships of enjoyment, usability and usefulness on customer loyalty are detailed in table 6.

Table 6. Structural model for the effect of E-CRM Antecedents on customer loyalty with SCRM mediation

Hypotheses		Results			Hypotheses (Null\ Alternative)
		B	T	P	
H3	There is appositive effect of SCRM on customer loyalty	0,548	6,638	0,000	Alternative
H2.1	There is appositive effect of enjoyment on SCRM	0,094	0,849	0,396	Null
H2.2	There is appositive effect of usability on SCRM	0,282	2,388	0,017	Alternative
H2.3	There is appositive effect of usefulness on SCRM	0,329	3,435	0,001	Alternative
H4.1	There is a mediation effect of SCRM between enjoyment and customer loyalty	0,057	0,836	0,403	Null
H4.2	There is a mediation effect of SCRM between usability and customer loyalty	0,180	3,184	0,002	Alternative
H4.3	There is a mediation effect of SCRM between usefulness and customer loyalty	0,155	2,233	0,026	Alternative

In the second analysis phase, the direct influence of the three antecedents of ECRM on SCRM is tested in H2. Based on table 6, H2 is divided into 3 sub-hypotheses, beginning with H2.1, where enjoyment's positive effect on SCRM obtained t-value of 0,849; and alpha level of 0,396; which supports a negative rather than a positive effect of enjoyment on SCRM in the online environment of Jordan. Moving on to H2.2, where the focus is testing the positive effect of usability on SCRM, t-value was obtained and found to be 2,388; with beta value of 0,017; indicating that usability explains 0,017 change in SCRM and thus, the sub- hypothesis was supported. Finally, in H2.3, usefulness positive effect on SCRM on the online environment of Jordan was tested, and t-value of 3,435 was obtained along with beta value of 0,001. This supports the contribution of usefulness to SCRM, and thus, the sub-hypothesis was supported. In the third analysis phase, the focus is on the examination of the influence of SCRM on customer loyalty in H3. The results in table 7 support the positive influence of SCRM on customer loyalty in the online environment, considering t-value is 6,638 and beta value is 0,000; indicating that SCRM explained a change in customer loyalty equal to 0,000. SCRM's positive influence on customer loyalty in the online environment of Jordan was therefore supported.

In the fourth analysis phase, the mediating role of SCRM between the relationships of enjoyment, usability and usefulness, and customer loyalty was examined and t- values are displayed in figure 3. More specifically, Smart Partial Least Square (PLS-SEM) was adopted to test the corresponding hypotheses of the mediating variable (table 6). The fourth hypothesis (H4) was sub-divided into three, beginning with H4.1, which SCRM mediates the relationship between enjoyment and customer loyalty in the online environment of Jordan. T-value was found to be 0,836; with alpha of 0,403; indicating that the sub-hypothesis is rejected. Thus, SCRM has no mediating effect on the relationship between enjoyment and customer loyalty in the online environment of Jordan. Moving on to the next sub-hypothesis, H4.2, the examination was focused on the mediating effect of SCRM between usability and customer loyalty and based on the t-value statistics (3,184) and alpha of 0,002; the sub-hypothesis is accepted in that SCRM does have a mediating effect on the relationship between usability and customer loyalty in the online environment of Jordan. Lastly, in H4.3, t-value was found to be 2,233; with alpha of 0,026; which meets the criterion of acceptable hypothesis. SCRM therefore has a mediating effect on the relationship between usefulness and customer loyalty in the online environment of Jordan.

DISCUSSION

The study found an impact of E-CRM Antecedents with its dimensions (enjoyment, usefulness and usability) on customer loyalty of the online environment in Jordan, with the results indicating that users have made use of E-CRM relationship management in line with keeping abreast of modern developments. The system provides novel details to customers and this attracts prospective customers and retains current ones through long-term relationship development. The results supported the effect of customer value on internet users - in other words, distinct value is delivered to the customer through a strategic tool by which competitive advantage and long-term success can be achieved. The system is able to prioritize customer information while keeping them confidential (e.g., phone numbers, e-mail and addresses) with follow-ups for maintenance leading to enhanced customer loyalty, offering of attractive products and meeting of expectations and needs - all contributing to cementing customer loyalty. Upon realizing the services advantages, customers do not hesitate to pay for them to be valued. For user's acceptance of new technology, usefulness is an important predictor. TAM posits that perceived usefulness is the level to which an individual is convinced that specific system use could improve his/ her performance on the job.⁽²⁶⁾ The findings of this study support the positive relationship between usefulness and performance of SCRM in the mobile phone service case. Usefulness, in this case, is the ability of the system to support the achievement of a task in the perception of the individual. The mobile phone usefulness and effectiveness in communication has increased and combined with voice and data, its useful features to be leveraged for personal business use has been compounded.

According to⁽⁴⁴⁾ the TAM theory considers the system's usefulness to be significant to the intention towards system acceptance. The study findings support the assumption of the theory by revealing a positive usefulness-E-CRM performance relationship (customer's intention to remain with the service longer). This finding is aligned with those reported by⁽⁶⁸⁾ who found a positive direct effect of E-CRM Antecedents and customer loyalty, with⁽⁴⁸⁾ findings of a positive relationship between usefulness and the adoption of technologies (computer software, e-mail and others). Studu by⁽⁶⁹⁾ also revealed perceived usefulness to significantly impact intentions towards adoption among customers, and⁽⁷⁰⁾ indicated a positive effect of usefulness on purchase intentions, while ⁽⁷¹⁾ supported the same in mobile internet. Also,⁽⁷²⁾ revealed a positive effect of perceived usefulness on the mobile banking use intentions.

In addition to the above studies, usefulness and ease of use of online shopping was revealed by⁽⁷¹⁾ to influence customer satisfaction, which is among the major E-CRM dimensions, and as such, it affects repeat purchase behaviors. In case the customer perceive that mobile phone is useful, they will have a greater tendency to use the services and maintain long-term relationships with the service provider, and spread the service by word-of-mouth. In other words, a perceived useful service is viewed by users to have the ability to mitigate task issues and increase work performance. This premise is consistent with prior findings in literature that illustrated the direct influence of usefulness on computer use.^(74,44,39) It is notable that studies concerning use of technology support the importance of perceived usefulness as a predictor of technology adoption and use.⁽⁷⁵⁾

The results showed E-CRM's effect on customer loyalty and this may be attributed to the meeting of the user's needs through value added benefits. When the wants and needs of the users are met, then they feel important and valued, increasing their customer loyalty. In the context of the hospitality business, a set of activities, operations, interactions and communications are used to develop and maintain long-term customer relationship, with products tailor-made to suit customer's tastes based on past information, and thus leading to high customer loyalty.

In addition, system usability is the meeting of the user's needs through the system and is specifically related to its usefulness/functionality, learning ease, use ease, and user's satisfaction and quality.⁽⁵²⁾ Specifically, usability of a website is the way the website can be used easily without complications, to learn, use and interact in order to achieve tasks. In this study, the results support the positive usability ECRM performance relationship in the online environment in Jordan. This finding is supported by prior ones conducted by⁽⁷⁶⁾ where the authors revealed usability of the website to directly and positively impact the customer's e-banking and satisfaction, and a determinant of the satisfaction level with prior interactions in e-banking. The authors proceeded to explain that customer satisfaction in prior interactions with the online website of the bank positively impacted the loyalty and positive word of mouth of customers. Moreover, usability of website positively impacted customer satisfaction and loyalty, which in turn, connected to positive word-of-mouth.

In another related study,⁽⁷⁷⁾ reported that the usability of a website encapsulates the perceived ease of using it or the perceived ease of use of making purchases online, and it is a significant factor in e-commerce development. This in turn plays a key role in developing profitable consumer behaviors like loyalty, satisfaction and positive word-of-mouth of the performance of the system. Basing their findings from the website design parameters viewpoint,⁽⁷⁸⁾ looked into website usability and revealed that website navigation ease, content of information, speed of downloads, and availability of websites all had a positive effect on website usability. In fact, other studies in literature like^(79,80) supported the premise that website design/usability is one of the top significant determinants of website quality, as a result of which, it may affect customer satisfaction levels. In the same study caliber by⁽⁸¹⁾ reported that perceived website usability boosts the familiarity of the user with the website, enhancing his/her ability to carry on the behavior in the future. Also, usability of the website assists in information transparency, communication and parties interaction, simplification of the process of transaction and user's search efforts.⁽⁸²⁾

The usability concept may be generally described as the effective use of e-CRM. According to⁽⁸³⁾, usability is concerned with several aspects (ease of use, learning capability, managing the system, ease of memorizing the fundamental functions and user satisfaction in light of manageability). In this regard, higher usability levels are related to lower difficulty levels of functionality management.⁽²⁰⁾ As a consequence, usability has been acknowledged to be a major predictor of intention towards system use.^(32,20) In the Internet context, website usability is a representation of the perceived ease of site navigation, purchase-making and is thus a critical predictor of e-commerce development.⁽⁷⁷⁾

In relation to the above, higher usability levels calls for mitigated search costs and a deeper understanding of the contents and website tasks. This reduces the complexity and increases the services ease and usefulness, which form a major aspect in provision of mobile phone services.⁽⁷⁶⁾ Hence, this study proposed a direct influence of usability on e-CRM performance. Usability assists in promoting consumer satisfaction in light of service manageability, and such satisfaction eventually leads to loyalty and positive word-of-mouth. Customers would be more inclined to interact with the service provider if they are convinced that they are receiving value for it. Based on the data analysis findings in this study, Jordanian subscribers possessed a positive viewpoint of the

usability of the mobile phone service in light of efficient work completion and easy rectification of mistakes. Using such services is easy, comfortable and understandable - all in all - the subscribers were satisfied with the Jordanian mobile phone service providers.

Furthermore, based on the results, SCRM has a positive and significant effect on the customer loyalty of the online environment in Jordan, and this may be related to the readily available sites like modern social networking sites, enabling them to interact and communicate concerning products and services, to keep abreast of the new services and to maintaining orientation dealing, through communication tools that are available at any time. Owing to such interactions, customers can provide their opinions and comments on the services through the provided tools. This also enables management to obtain and gather customer feedback regarding the services, cement interactive communication with their customers within the SCRM framework. SCRM positively supports and enhances the reputation and image in the customers' eyes using social media's low cost and high efficiency, particularly compared to traditional communication tools - enabling them to exchange marketing messages. Customers may also take part in decision-making revolving around the design and quality of the products and services.

According to^(21,44) described enjoyment as the level to which the performance of an activity is viewed to provide pleasure, fun and joy, in addition to enhanced performance. In prior studies, enjoyment was revealed to be top online activities determinant (e.g., using email and e-shopping).^(31,30,79) In e-commerce application, online gaming generates enjoyment although its role in system use has yet to be strongly validated. In the present study, the analysis results indicated the lack of significant relationship between enjoyment and e-CRM performance. The finding is aligned with prior findings reported by⁽³⁹⁾. The authors revealed no statistical significant relationship between enjoyment and acceptance of data processing systems. According to them, perceived enjoyment positively correlates with use period but not with use frequency or the number of tasks. In another study,⁽⁸⁴⁾ indicated that enjoyment in shopping did not predict emotional reactions in advertisements announced websites. While enjoyment was found to influence use frequency, no significant influence was noted on variety of use in⁽⁸⁵⁾ study. Such mixed findings require more studies to examine enjoyment role in behavioral intention.

The above mentioned findings are in contrast with the findings reported by⁽²⁹⁾ in that shopping enjoyment has a key role as a predictor of return visit intentions of customers. This was also supported by Lee et al.⁽³⁵⁾ who revealed no direct influence of enjoyment on behavioral intention but there was a presence of an indirect one via attitude. Meanwhile, a positive correlation between perceived enjoyment and frequency of Internet use as well as daily Internet usage was revealed in⁽⁸⁵⁾ study.

Along a similar line of finding,⁽⁴¹⁾ reported that perceived enjoyment positively affected the acceptance of online banking among consumers. This is aligned with Koufaris⁽²⁹⁾ who illustrated a positive relationship between online shopping enjoyment and site return. Online consumers perceiving an enjoyable shopping experience was found to have enhanced positive attitude towards online shopping.⁽³¹⁾ Also⁽³⁴⁾ illustrated the presence of direct effects from enjoyment to behavioral intention of online customers, with the former trigger behavioral intention of customers. Users recognizing the use of instant messaging as enjoyable in⁽²⁸⁾ study had a likelihood to continue using the service. In sum, enjoyment is a crucial positive factor that contributes to online environment adoption.⁽⁸⁶⁾

The hypotheses formulated in this study were generally accepted and as aligned with the reported findings of⁽⁵⁶⁾, a significant relationship between SCRM and customer empowerment and customer loyalty is supported. According to other related studies, like Nure⁽⁸⁷⁾ and⁽⁸⁸⁾, SCRM has a significant impact on loyalty as the system meets the needs of customers and provide them value, which will in turn, guarantee customer loyalty from the other end.⁽⁸⁹⁾ Based on the results, SCRM has a significant impact on customer empowerment - a variable which is a top SCRM component⁽⁹⁰⁾ being that it aims to obtain informational feedback from customers for customer satisfaction.^(91,92) Also, customer empowerment has a positive relationship with customer loyalty. Along the same line of findings of^(93,94,95,96) the significant and positive relationship between the two variables were also supported. In light of the mediating role of customer empowerment, it was found to mediate between the antecedents examined and customer loyalty. Past studies on the same examination were not found albeit⁽⁹⁷⁾ explained that SCRM is function of customer empowerment. In other words, customer empowerment leads to customer loyalty and other positive behaviors. Using social media was evidenced by⁽⁹⁸⁾ to enhance customer relationship and in turn, loyalty.⁽⁹⁹⁾

In the context of mobile phones, enjoyment refers to the degree of service activity use (chatting, gaming, etc.) and the experienced enjoyment.⁽²²⁾ Compared to other activities, like online shopping, mobile phone service tends to be more experiential with the top aim being the pleasure, fun and enjoyment. And players experiencing enjoyment are more likely to respond to pleasure and continue playing.^(23,40) In prior literature, it was noted that when the behaviors of individuals were urged by their intrinsic motivation (interest and enjoyment), individuals had a higher tendency to continue doing the behaviors in the future.⁽²⁴⁾ Additionally, easier to use systems are not as threatening and they work towards enhancing and encouraging control feelings,

and in turn, an enjoyable experience with technology use. Added to the above explanation, users perceiving the mobile phone service to be enjoyable and pleasant are likely to feel satisfaction and in turn, to provide high evaluations of the service outcome expecting beneficial outcomes to arise from it. They will naturally develop a positive attitude towards using the service. In prior researches, enjoyment was evidenced to have a direct effect on behavioral intention towards online use.^(34,100) Along a similar line of finding,⁽³⁸⁾ revealed that the perceived enjoyable use of the service were likely to convince users to continue its usage. Also, shopping enjoyment plays a key role as a predictor of consumer intention towards repeat website use⁽³⁸⁾ such enjoyment is a significant construct in online consumer behavior.

Nevertheless, in the present study, no significant relationship was found between enjoyment and e-CRM performance and this may be attributed to the context - prior studies contexts included internet usage, shopping enjoyment and online shopping enjoyment, while this one is in mobile phone service enjoyment, which is more of a necessity than entertainment. The respondents used mobile phones to make and receive calls, discuss studies and work issues and chat (68,4 %), with only a minimal number (7,8 %) using it for enjoyment, recreation and news. This shows that mobile phones are more of a necessity for the respondents. Moreover, although other factors had a positive e-CRM performance relationship like ease of use, usefulness and usability but not enjoyment. This may be related to the overriding effect of other technology factors. Aside from the above, prior studies were carried out in the West, while the present one is conducted in Jordan, an Arab country. In this regard, culture may have had a hand in the absence of significant positive relationship between enjoyment and e-CRM performance. This may be further explained by the Middle Easterners perception of mobile phone usage for social interactions, with online banking, online shopping and e-services still in their infancy stage.⁽¹⁰¹⁾ The study showed that only 7,2 % of the respondents kept internet services into consideration in their use of mobile phones. However, because mobile phones are becoming a necessity in contacting family and friends, arranging plans and resolving emergencies, they are perceived as work tools that are quite useful. Mobile phones are generally purchased by students with the same major objectives namely, prestige, necessity and gift from parents,^(102,103,104) but not for the objective of enjoyment. Majority of the youth mobile users receive phone calls from parents to keep track of their activities and despite the fact that phones are used to keep in touch with family, the students also use them for texting, calling or messaging friends. The results appeared to indicate that Jordanian university students do not use mobile phones for the purpose of availing of internet services, playing games, reading about sports and books, but mainly for making and receiving calls, SMS and conducting academic issues discussions. To the best of the author's knowledge, experience and observation, majority of the students still use the old mobile phones models that have no internet surfing facilities. Moreover, the internet connection incurs significant costs beyond the financial means of students.

CONCLUSIONS

The prior section provided a discussion of the findings in the context of the objectives of the study and the reviewed literature. Outcomes and general implications were discussed to demonstrate their significance from the perspective of academics and research and the model is expected to be useful to explanatory studies for e-CRM performance investigation in other industries. This is an original contribution to the e-CRM and Social CRM literature. The researcher views the current study as beneficial to academic circles and practitioners in terms of e-CRM, Social CRM and customer loyalty. However, not unlike other studies, this study has its limitations, with one of them being the sampling framework and the use of self-reported surveys. Although survey has been extensively used by studies, there are several issues related with the method, including the limitations of control over the self-completion approach, the representation of the whole population, and the expected answers or pattern of responses to the questions that the respondents may provide. Moreover, this study left out the examination of a moderating variable on the antecedent variables relationship with ECRM in the context of mobile phone services. The study is limited in focus to specific antecedent factors and their effects on the e-CRM and Social CRM. Future studies may delve into examining the moderating variables as it enriches the relationship and the accuracy of findings.

However, despite the above limitations, the study succeeded in providing e-CRM performance and the factors that affect it in the mobile phone service providers in Jordan. This study recommends the study's extension and replication in other areas and nations, and the inclusion of other services to test the present findings generalizability and to confirm the validation of the framework in terms of cultural and geographical variations of customer behaviour. Added to the above, the author urges future authors to reap opportunities from the limitations of this study. Future studies can be extended over a longer time period and they can adopt a case study or carry out comparative research using other nations as the sample study. Future efforts will assist in validating the study conclusions as a single period data set obtained from this study may contain bias. Lastly, identification of additional factors influencing e-CRM is crucial to provide insight into how Social CRM and e-CRM can be enhanced.

REFERENCES

1. Parvatiyar A, Sheth JN. Customer relationship management: emerging practice, process, and discipline. *J Econ Soc Res*. 2001; 3(2):1-34.
2. Yakubovich, R. K. The Essence of Customer Relationship Management Systems, Development Theories. In *International Conference on Economics, Finance, Banking and Management*. 2025; (pp. 102-111).
3. Ghaus-Pasha, A. The Evolution of Customer Relationship Management (CRM): From Contact Management to Experience Orchestration. *Research Studies of Business* . 2024; 2(1): 1-9.
4. Vivek SD, Beatty SE, Morgan RM. Customer engagement: Exploring customer relationships beyond purchase. *J Mark Theory Pract*. 2012; 20(2):122-46. <https://doi.org/10.2753/MTP1069-6679200201>
5. Nwabekee, U. S., Abdul-Azeez, O. Y., Agu, E. E., & Ignatius, T. Digital transformation in marketing strategies: The role of data analytics and CRM tools. *International Journal of Frontline Research in Science and Technology*. 2024; 3(2): 055-072.
6. Askool S, Nakata K. A conceptual model for acceptance of social CRM systems based on a scoping study. *AI Soc*. 2011;26(3):205-20. <https://doi.org/10.1007/s00146-010-0311-5>
7. Alnassar, B. A. The factors that impact of e-customer relationship management performance (e-CRM) of mobile services in Jordan. *Journal of Management Research*. 2014; 6(3): 199.
8. Choudhury MM, Harrigan P. CRM to social CRM: The integration of new technologies into customer relationship management. *J Strateg Mark*. 2014; 22(2):149-76. doi: 10.1080/0965254X.2013.876069.
9. Al-nassar, B. A. Y. The customer trust and customer commitment of e-customer relationship management: Study at Jordan of mobile phone services. *International Journal of Electronic Customer Relationship Management*. 2015; 9(1):33-55.
10. Safitri NE, Masreviastuti M. The influence of customer relationship management and service quality on customer loyalty of Jne Pendowo Branch. *MAR-Ekonomi: J Manaj Akunt Rumpun Ilmu Ekon*. 2024; 2(2):117-22.
11. Greenberg P. CRM at the speed of light. New York: McGraw-Hill; 2001.
12. Kim, M. K., Park, J. H., & Park, M. C. The effect of switching barriers on customer retention in Korean mobile telecommunications services. *Telecommunications Policy*. 2007; 28(2): 145-159.
13. Peter C, Verhoef BD. Predicting customer potential value: an application in the insurance industry. *Decis Support Syst*. 2001; 32:189-99. doi: 10.1016/S0167-9236(01)00110-5.
14. Hussein AMS, Mohammed HEA, Fadul MM. The impact of customer relationship management on competitive advantage: case study in Saudi Arabian banks. *Migr Lett*. 2024; 21(S7):1721-31.
15. Lee J, Lee J, Feick L. The impact of switching costs on the customer satisfaction-loyalty link: mobile phone service in France. *J Serv Mark*. 2001; 15(1):35-48. doi: 10.1108/08876040110381463.
16. Ewell F. Loyalty.com: customer relationship management in the new era of internet marketing. New York, NY: McGraw-Hill; 2000.
17. Trepper C. Match your CRM tool to your business model. *Inf Week*. 2000; p. 74.
18. Chen IJ, Popovich K. Understanding customer relationship management (CRM): People, process, and technology. *Bus Process Manag J*. 2003; 9(5):672-88. doi: 10.1108/14637150310496758.
19. Fuad, E., & Abdullah, Z. Impact of E-CRM Implementation, Customer Experience, and Customer Loyalty in E-Commerce: Literature Review. *Finance, Accounting and Law in the Digital Age: The Impact of Technology and Innovation in the Financial Services Sector*. 2023; 389-399.

20. Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*. 1989; 13(3):319-340. doi: 10.2307/249008.
21. Venkatesh V. Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Inf Syst Res*. 2000; 11(4):342-65. <https://doi.org/10.1287/isre.11.4.342.11872>
22. Al-Gahtani SS, King AM. Satisfaction and usage: Factors contributing to each in the acceptance of information technology. *Behav Inf Technol*. 1999; 18(4):277-97. <https://doi.org/10.1080/014492999119127>
23. Huang Z, Cappel JJ. Assessment of a web-based learning game in an information systems course. *J Comput Inf Syst*. 2005; 45(4):42-50.
24. Deci EL, Koestner R, Ryan RM. A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*. 1999; 125(6):627-668. doi: 10.1037/0033-2909.125.6.627.
25. Shalihati, F., Sumarwan, U., Hartoyo, H., & Yuliati, L. N. Mapping Customer Relationship Management Research in Higher Education: Trends and Future Directions. *Administrative Sciences*. 2025; 15(2):68.
26. Davis FD, Bagozzi RP, Warshaw PR. Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*. 1992; 22(14):1111-1132. doi: 10.1111/j.1559-1816.1992.tb00945.x.
27. Chen EH, Corkindale D. The adoption of online information services: Extensions to TAM. University of South Australia. 2006. http://smib.vuw.ac.nz:8081/WWW/ANZMAC2006/documents/Chen_YenHao.pdf.
28. Li D, Chau PYK, Lou H. Understanding individual adoption of instant messaging: an empirical investigation. *J Assoc Inf Syst*. 2005; 6(4):102-26. doi: 10.17705/1jais.00067.
29. Koufaris M. Applying the technology acceptance model and flow theory to online consumer behavior. *Inf Syst Res*. 2002; 13(2):205-23. doi: 10.1287/isre.13.2.205.83.
30. Eighmey J, McCord L. Adding value in the information age: Uses and gratifications of sites on the World Wide Web. *Journal of Business Research*. 1998; 41(3):187-194. doi: 10.1016/S0148-2963(97)00061-1.
31. Jarvenpaa SL, Todd PA. Consumer reactions to electronic shopping on the World Wide Web. *Int J Electron Commer*. 1997; 1(2):59-88. doi: 10.1080/10864415.1996.11518283.
32. Teo HH, Chan HC, Wei KK, Zhang Z. Evaluating information accessibility and community adaptivity features for sustaining virtual learning communities. *Int J Hum Comput Stud*. 2003; 59:671-97.
33. Csikszentmihalyi M. *Flow: The Psychology of Optimal Experience*. New York: Harper & Row; 1990.
34. Pritchard MP, Howard DR. The loyal traveler: examining a typology of service patronage. *J Travel Res*. 1997; 35(4):2-11. doi: 10.1177/004728759703500401.
35. Lee MKO, Cheung CMK, Chen Z. Acceptance of internet-based learning medium: the role of extrinsic and intrinsic motivation. *Inf Manag*. 2005; 42(8):1095-104. doi: 10.1016/j.im.2003.10.007.
36. Rao S, Troshani I. A conceptual framework and propositions for the acceptance of mobile services. *J Theor Appl Electron Commer Res*. 2007; 2(2):61-73. doi: 10.4067/S0718-18762007000200006.
37. Wu J, Liu D. The effects of trust and enjoyment on intention to play online games. *J Electron Commer Res*. 2007; 8(2):128-40.
38. Li D, Chau PYK, Lou H. Understanding individual adoption of instant messaging: an empirical investigation. *J Assoc Inf Syst*. 2005; 6(4):102-26. doi: 10.17705/1jais.00067.
39. Igbaria M, Iivari J, Maragahh H. Why do individuals use computer technology? A Finnish case study. *Inf*

Manag. 1995; 29:227-238. doi: 10.1016/0378-7206(95)00031-0.

40. Moon JW, Kim YG. Extending the TAM for a world-wide-web context. *Inf Manag.* 2001; 38(4):217-30. doi: 10.1016/S0378-7206(00)00061-6.

41. Pikkarainen T, Pikkarainen K, Karjaluoto H, Pahnla S. Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Res.* 2004; 14(3):224-35. doi: 10.1108/10662240410542652.

42. Igbaria M, Schiffman SJ, Wicckowshi TS. The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology. *Behav Inf Technol.* 1994; 13(6):349-61. doi: 10.1080/01449299408914616.

43. Dickinger A, Arami M, Meyer D. Reconsidering the adoption process: Enjoyment and social norms—antecedents of hedonic mobile technology use. In: *Proceedings of the 39th Annual Hawaii International Conference on System Sciences*; 2006; Kauai, HI. p. 1-10. doi: 10.1109/HICSS.2006.515.

44. Davis FD, Bagozzi RP, Warshaw PR. User acceptance of computer technology: A comparison of two theoretical models. *Management Science.* 1989; 35(8):982-1003. doi: 10.1287/mnsc.35.8.982.

45. Ajzen I, Fishbein M. *Understanding attitudes and predicting social behavior.* Englewood Cliffs, NJ: Prentice-Hall; 1980.

46. Menon S, Kahn B. Cross-category effects of induced arousal and pleasure on the Internet shopping experience. *J Retail.* 2002; 78(1):31-42. doi: 10.1016/S0022-4359(01)00064-1.

47. Taylor S, Todd PA. Understanding information technology usage: A test of competing models. *Inf Syst Res.* 1995; 6(2):144-76.

48. Chau PYK, Hu PJH. Information technology acceptance by individual professionals: A model comparison approach. *Decis Sci.* 2001; 32(4):699-719. doi: 10.1111/j.1540-5915.2001.tb00978.x.

49. Eastin MS, LaRose R. Internet self-efficacy and the psychology of the digital divide. *Journal of Computer-Mediated Communication.* 2000; 6(1). doi: 10.1111/j.1083-6101.2000.tb00110.x.

50. Qiu YF, Chui YP, Helander MG. Usability analysis of mobile phone camera software systems. In: *Proceedings of IEEE Xplore, Cybernetics and Intelligent Systems*; 2006; Singapore. p. 1-6. doi: 10.1109/ICCIS.2006.252376.

51. Brinck T, Gergle D, Wood SD. *Designing Web Sites That Work: Usability for the Web.* San Francisco: Morgan Kaufmann Publishing; 2002.

52. Uehling DL. Handbook for designing a usable website: Issues of usability for web sites. 2000. <http://software.gsfc.nasa.gov/AssetsApproved/PA2.3.1.2.pdf>

53. Gould JD, Lewis C. Designing for usability: key principles and what designers think. *Commun ACM.* 1985; 28(3):300-11. doi: 10.1145/3166.3170.

54. Goodwin NC. Functionality and usability. *Communications of the ACM.* 1987;30(3):229-233.

55. Romano NC, Fjermestad J. Electronic commerce customer relationship management: An assessment of research. *Int J Electron Commer.* 2002; 6(2):61-113. doi: 10.1080/10864415.2002.11044255.

56. Trainor K, Andzulis J, Rapp A, Agnihotri R. Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM. *J Bus Res.* 2014; 67(6):1201-8. <https://doi.org/10.1016/j.jbusres.2013.05.002>.

57. Syoftika, R. T., & Rahmiati, R. (2025). Building Lasting Relationships: CRM Strategies and Customer Loyalty Maxim. *Journal of Management and Administration Provision*, 5(1), 50-60.

58. Rashid M, Ur H, Nurunnabi M, Rahman M, Masud M, Kaium A. Exploring the relationship between customer

loyalty and financial performance of banks: customer open innovation perspective. *J Open Innov Technol Mark Complex*. 2020; 6(4):108. doi: 10.3390/joitmc6040108.

59. Oliver RL. Whence customer loyalty? *J Mark*. 1999; 63(4):33-44. doi: 10.2307/1252099.

60. Dimitriadis ZS. Customer satisfaction, loyalty and commitment in service organizations: Some evidence from Greece. *Management Research News*. 2006; 29(12):782-800. doi: 10.1108/01409170610717817.

61. Lee-Kelley L, Gilbert D, Mannicom R. How e-CRM can enhance customer loyalty? *Mark Intell Plan*. 2003; 21(4-5):239-48. doi: 10.1108/02634500310490277.

62. Najm NA, Ali WW. Organizational readiness and innovation in the Jordanian telecommunication companies. *Int J Product Perform Manag*. 2024; 73(1):242-69. doi: 10.1108/IJPPM-09-2022-0458.

63. Sekaran U. Research methodology for business. 4th ed. New York, NY: John Wiley & Sons; 2003.

64. Hair JF Jr, Money AH, Samouel P, Page M. Research methods for business. London: John Wiley & Sons Ltd, Chichester; 2007.

65. Boomsma, A., Hoyle, R. H., & Panter, A. T. The structural equation modeling research report. 2012.

66. Christophersen, T., & Konradt, U. Development and validation of a formative and a reflective measure for the assessment of online store usability. *Behaviour & Information Technology*. 2012; 31(9): 839-857.

67. Sotirchos, E. S., Filippatou, A., Fitzgerald, K. C., Salama, S., Pardo, S., Wang, J., Saidha, S. Aquaporin-4 IgG seropositivity is associated with worse visual outcomes after optic neuritis than MOG-IgG seropositivity and multiple sclerosis, independent of macular ganglion cell layer thinning. *Multiple Sclerosis Journal*. 2020; 26(11):1360-1371.

68. Almousa AA, Kurt A. The impact of social media marketing on customer satisfaction through brand image (study case Turkey Telecommunication Companies). *Int Res J Mod Eng Technol Sci*. 2020; 2(9):267-82.

69. Shih Y, Fang F. The use of a decomposed theory of planned behavior to study internet banking in Taiwan. *Internet Res*. 2004; 14(3):213-23. doi: 10.1108/10662240410542645.

70. Cheong JH, Park MC. Mobile internet acceptance in Korea. *Internet Res*. 2005; 15(2):125-40. doi: 10.1108/10662240510590324.

71. Chiu YB, Lin CP, Tang LL. Gender differs: Assessing a model of online purchase intentions in e-tail service. *Int J Serv Ind Manag*. 2005; 16(5):416-35. doi: 10.1108/09564230510625741.

72. Luarn P, Lin HH. Toward an understanding of the behavioral intention to use mobile banking. *Comput Hum Behav*. 2005; 21(6):873-91. doi: 10.1016/j.chb.2004.03.003.

73. Devaraj S, Fan M, Kohli R. Antecedents of B2C channel satisfaction and preference: Validation e-commerce metric. *Information Systems Research*. 2002; 13(3):316-333. doi: 10.1287/isre.13.3.316.77.

74. Segars A, Grover V. Re-examining perceived ease of use and usefulness: A confirmatory factor analysis. *MIS Q*. 1993; 17(1):517-725. doi: 10.2307/249740.

75. Guriting P, Ndubisi N. Borneo online banking: evaluating customer perceptions and behavioral intention. *Manag Res News*. 2006; 29(1-2):6-15. doi: 10.1108/01409170610645402.

76. Casaló, L. V., Flavián, C., & Guinalú, M. The role of satisfaction and website usability in developing customer loyalty and positive word-of-mouth in the e-banking services. *International journal of bank marketing*. 2008; 26(6): 399-417.

77. Flavián, C., Guinalú, M., & Gurrea, R. The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information & management*. 2006 ; 43(1): 1-14.

78. Tarafdar M, Zhang J. Analyzing the influence of website design parameters on website usability. *Inf Resour Manag J.* 2005;18(4):62-80.
79. Aladwani AM, Palvia PC. Developing and validating an instrument for measuring user-perceived web quality. *Inf Manag.* 2002; 39(39):467-76. [https://doi.org/10.1016/S0378-7206\(01\)00113-6](https://doi.org/10.1016/S0378-7206(01)00113-6)
80. Loiacono ET, Watson RT, Goodhue DL. Web Quale: A website quality instrument. American Marketing Association, Winter Marketing Educators' Conference, Austin, TX; 2002.
81. Spiller P, Loshe G. A classification of the Internet retail stores. *Int J Electron Commer.* 1998; 2(2):29-56.
82. Corritore CL, Kracher B, Wiedenbeck S. Online trust: Concepts, evolving themes—A model. *Int J Hum Comput Stud.* 2003; 58(6):737-58. doi: 10.1016/S1071-5819(03)00041-7.
83. Nielsen J. Usability engineering. San Francisco: Morgan Kaufmann; 1994.
84. Spears N. The role of emotions and shopping enjoyment in visiting web sites announced in advertisements . 2005. <http://www.the-dma.org/dmef/proceedings05/TheRoleOf-Spears.pdf>.
85. Teo, T. S. To buy or not to buy online: adopters and non-adopters of online shopping in Singapore. *Behaviour & Information Technology.* 2006 ;25(6): 497-509.
86. Parasuraman A. Technology readiness index (TRI): a multiple-item scale to measure readiness to embrace new technologies. *J Serv Res.* 2000;2(4):307-21. doi: 10.1177/109467050024001.
87. Nure G. Customer relationship management in banking system (Case of Kosovo). *J Internet Bank Commer.* 2018;23(1):1-7.
88. Yerpude S, Singhal T. Internet of things based customer relationship management: A research perspective. *Int J Eng Technol.* 2018;7(2.7):444-50.
89. Ghafari P, Karjalian R, Mashayekhnia A. Studying the relationship between different dimensions of CRM and innovation capabilities in Melli bank of Iran. *World Academy of Science, Engineering and Technology.* 2011;5(5):906-910. <https://publications.waset.org/1307-6892/14908>.
90. Mangold W, Faulds D. Social media: the new hybrid element of the promotion mix. *Bus Horiz.* 2009;52(4):357-65. doi: 10.1016/j.bushor.2009.03.002.
91. Peppard J. Customer relationship management (CRM) in financial services. *Eur Manag J.* 2000;18(3):312-27. doi: 10.1016/S0263-2373(00)00013-X.
92. Bull C. Strategic issues in customer relationship management (CRM) implementation. *Bus Process Manag J.* 2003; 9(5):592-602. doi: 10.1108/14637150310496703.
93. Rishika R, Kumar A, Janakiraman R, Bezawada R. The effect of customers' social media participation on customer visit frequency and profitability: an empirical investigation. *Inf Syst Res.* 2013; 24(1):108-27. doi: 10.1287/isre.1120.0460.
94. Bhat S, Darzi M. Customer relationship management: An approach to competitive advantage in the banking sector by exploring the mediational role of loyalty. *Int J Bank Mark.* 2016;34(3):388-410. doi: 10.1108/IJBM-11-2014-0160.
95. Grisseemann US, Stokburger-Sauer NE. Customer co-creation of travel services: the role of company support and customer satisfaction with the co-creation performance. *Tour Manag.* 2012; 33(6):1483-92. doi: 10.1016/j.tourman.2012.02.002.
96. Fuchs C, Schreier M. Customer empowerment in new product development. *Journal of Product Innovation Management.* 2011; 28(1):17-32. doi: 10.1111/j.1540-5885.2010.00778.x.

97. Dutot, V. A new strategy for customer engagement: how do French firms use social CRM?. *International Business Research*. 2013; 6(9): 54.
98. Agnihotri R, Kothandaraman P, Kashyap R, Singh R. Bringing social into sales: The impact of salespeople's social media use on service behaviors and value creation. *J Pers Sell Sales Manag*. 2012; 32(3):333-48. <https://doi.org/10.2753/PSS0885-3134320304>
99. He W, Zha S, Li L. Social media competitive analysis and text mining: a case study in the pizza industry. *Int J Inf Manag*. 2013; 33(3):464-72. doi: 10.1016/j.ijinfomgt.2013.01.001.
100. Dick AS, Basu K. Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*. 1994; 22(2):99-113. doi: 10.1177/0092070394222001.
101. Fathi MR, Zeinali M, Torabi M, Alavizadeh SM. Structural analysis of the future of Iranian online banking employing a MICMAC approach. *Technological Forecasting and Social Change*. 2022; 183:121943. doi: 10.1016/j.techfore.2022.121943.
102. Wei C, Kolko BE. Studying mobile phone use in context: Cultural, political, and economic dimensions of mobile phone use. In: *Proceedings of the International Professional Communication Conference*; 2005 Jul 10-13; Limerick, Ireland.
103. Revilla-Camacho, M. A., & Al Hadid, A. Y. Challenges and Opportunities in Influencer Marketing on Purchase Behavior. *Journal of Business Sustainability*. 2024; 1 :14-17.
104. Al-Nassar, B. A. Y. The impact of e-service quality and ease of use of e-customer relationship management: a study of mobile phone services in Jordan. *International Journal of Electronic Customer Relationship Management*. 2021; 13(2): 146-165.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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