Contents lists available at GrowingScience

International Journal of Data and Network Science

homepage: www.GrowingScience.com/ijds

Mediator-moderator, innovation of mobile CRM, e-service convenience, online perceived behavioral control and reuse online shopping intention

Jassim Ahmad Al-Gasawneh^{a*}, Abdullah Matar Al-Adamat^b, Ra'd Almestrihif^c, Nawras M. Nusairat^a, Marhana Mohamed Anuar^d, and Abdalrazzaq Aloqool^a

^aDepartment of Marketing, Faculty of Business, Applied Science Private University, 11931 Amman, Jordan

^bDepartment of Business Management, Faculty of Economics and Administrative Sciences, Al Al-Bayt University, 130040 Mafraq, Jordan ^cDepartment of Marketing, Faculty of Business, Middle East University, 11831 Amman, Jordan

^dDepartment of Marketing, Faculty of Business, Economics and Social Development, Universiti of Malaysia Terengganu, 21030 Kuala Nerus,

Terengganu, Malaysia	
CHRONICLE	A B S T R A C T
Article history: Received: March 18, 2021 Received in revised format: April 18, 2021 Accepted: June 30, 2021 Available online: June 30, 2021 Keywords: Mobile CRM E-Service Convenience Online Perceived Behavioral Con- trol Reuse Online Shopping Intention	Stimulating customers' reuse of online services, such as online shopping, is integral for compa- nies. Consequently, this study assessed the effects of mobile customer relationship management on reuse online intention and the impact of mobile customer relationship management on service convenience. Additionally, the study analyzed the effect of service convenience on reuse online intention, the mediating role of service convenience between mobile customer relationship man- agement and reuse online intention and the moderating role of online perceived behavior control between service convenience and reuse online intention. This study utilized two theories: the tech- nology acceptance model and planned behavior. A total of 249 responses from customers were analyzed with Smart Partial Least Squares. According to the study, mobile customer relationship management positively impacts service convenience and reuse online intention. Additionally, ser- vice convenience mediated the connection between mobile customer relationship management and reuse of online intention, and online perceived behavioral control moderated the association between service convenience and reuse online intention. The study focused on consumers' moti- vations regarding reuse online services intention. The goal here is to aid organizations in the im- plementation of service convenience and innovative online strategies and applications that provide services to consumers.

© 2021 by the authors; licensee Growing Science, Canada.

1. Background

Internet shopping has exploded in popularity over the last decade, since it is a more cost-effective and convenient alternative to conventional shopping. In the current global business world, businesses are increasingly relying on information and communication technologies (ICT) to gain a competitive superiority by accessing global markets for their goods and services. several transactions can be performed over the internet, a mechanism known as e-commerce (Kasemsap, 2016). E-commerce benefits both sellers and buyers, e-commerce enables sellers to remove friction points and make it convenient for buyers to purchase the products they want. And allows customers to meet the shopping expectations (Roggeveen & Sethuraman, 2020). Net surfers have been drawn to online shopping by the revolution in information technology and the related advantages of e-

* Corresponding author. E-mail address: <u>J_algasawneh@asu.edu.jo</u> (J. A. Al-Gasawneh)

© 2021 by the authors; licensee Growing Science, Canada. doi: 10.5267/j.ijdns.2021.7.001

commerce (Kumar, Sachan & Dutta, 2020). Despite the rapid growth of online shopping and the use of electronic services, strong competition among businesses forced them to develop aggressive strategies to stay within the competition's bounds and maintain profits (Vasi, Kilibarda & Kaurin, 2019). Returning tactics, such as customer retention practice, are very important for firms to move beyond satisfying both current and new customers, according to Gengeswari, Padmashantini, and Sharmeela-Banu (2013), the practices has been increasingly become an important tool to improve the firm's performance from across all aspects. As a result, the practice should become a required management solution for retailers to stay competitive in the retail industry.

In the online world, the reuse online service represents the returning customer in the real world and business life, as well as returning customers of online customers meaning the customer reuse the online services (Kianpour et al., 2017). Recent studies show that use of online service is meant to increase both short- and long-term profits (Saarijärvi, Sutinen & Harris, 2017). As a result, online shopping platforms are critical for businesses to grow and maintain their operations. In Jordan, competition between companies and organizations is fierce, the retail or other sectors, seek to improve their ability to retain consumers by raising the likelihood that they will continue to make a purchase, either electronic or conventional (Al-Gasawneh, Alnaser, Nusairat & Anuar, 2020). Several studies Duarte, Silva & Ferreira (2018) and Jiang, Yang & Jun (2013) have shown that online shopping is more convenient than physical shopping. Similarly, service convenience is often thought of as a subset of overall customer convenience (Chang et al. 2013). According to Otim and Grover (2006), convenience of services leads to satisfactory navigation experiences, which motivates customers to use electronic services again. In addition, Mehmood and Mehmood & Najmi (2017) reported that the convenience of online retailing's home delivery service requires more knowledge of its consistency, as well as digital and online strategies to enhance it. In a similar vein, Pothal et al. (2021) and Shaikh (2015) advocated that a mobile customer relationship management program is an effective tool for maintaining long-term relationships with consumers and incentivizing them to return to buy more products or use online shopping services. Similarly, customer relationship mobile apps are a convenience tool for introducing services (Liljander et al., 2007; Sinisalo et al., 2007). Consequently, the current study is the first study that investigates the role of service convenience in mediating the relationship between mobile CRM and shopping intention to reuse. Prior researches, such as (Lee and Kwon, 2011; Küster, Vila & Canales, 2016), have tested the impact of service convenience and reuse shopping intention, and explained, the convenience of online services has led to the realization that all of the effects that are able to increase online purchasing intentions, and reuse online services have led to the awareness that all of the effects are able to increase online purchase intentions, as well as reuse online services. Excluding Khazaei, Manjiri, Samiey, and Najafi (2014) discovered a negative relationship between service convenience, customer satisfaction on purpose, and reuse online shopping intention, implying that the relationship between service convenience and reuse online shopping intention fluctuates. Furthermore, Kianpour et al. (2017) and Alalwan, (2020) noted that online perceived behavioral control influences reuse intention. Also, Collier & Sherrill (2010) explained that via directing and controlling customer behaviour we can affect their tendencies towards services, making it distinctive in their view and worthy of use. Therefore, the second goal of this study is to investigate the moderating role of online perceived behavioral control in the relationship with service convenience, reuse, and online shopping intention.

2. Literature review

2.1 Theoretical foundation and model

First, the technology acceptance model determines the link between discerned functionality, practicality, and potential utilisation of new technologies (Davis & Venkatesh, 1996). Second, the theory of planned behaviour, proposed by Ajzen (1985) to refine the notion of reasoned action, predicts customers' behaviour in terms of their intent to use and reuse services. The theory comprises viewpoints, subjective standards, and perceived behavioural control. Planned behaviour also estimates upcoming actions, including financial motivations (Mansor, Ariff & Hashim, 2020). Thus, this research utilised the technology acceptance model to assess the ways in which new technology drives consumers to reuse online services and retail, and the planned behaviour theory to assess attitudes regarding the reuse of online services, as shown in Fig. 1.



Fig. 1. research model

2.2 Mobile CRM

Customer management, including interactive contact between a company and a customer through a mobile device, is referred to as M-CRM (Liljander et al., 2007). The goal of M-CRM is to allow continuous two-way interactivity between the customer and the business in a convenient way (Dursun & Çelik, 2018). Furthermore, M-CRM can also be seen as an approach that enhances CRM using advanced wireless communication tools (Nath et al., 2009). Leppitsch (2009) summarized that Mobile CRM is a tool that aims to (1) nurture customer relationships, acquire or retain customers, (2) support marketing, sales, or service strategies, and (3) deliver to customers through wireless networks. The performance of a mobile CRM strategy is determined by the quality of the application, the nature of the interface and facilities, and the customers' assessment of the service content in relation to any increased costs associated with using it (Wang, Ou & Chen, 2019). Although consumers have been hesitant to use mobile services in the past (Leppitsch, 2009), mobile apps are expected to have a significant effect on user acquisition and retention in the future, by providing additional services and benefits to customers (Liljander et al., 2007; Sinisalo et al., 2007). The current study uses four multidimensional factors to measure Mobile CRM, including Service content and usability, Comfort and security, Mobile feedback, Brand assets, as recommended by Rodriguez & Boyer (2020).

Regarding the relationship between mobile CRM and the intention to reuse online shopping, Shaikh (2015) reported that mobile CRM applications positively influence reuse of online purchases, indicating that using mobile CRM applications satisfied customer's needs, and therefore consumers can re-use the online purchasing method. Furthermore, Wulfert (2019) indicated that mobile app services applications have a positive impact on repurchase intentions. Additionally, Simanjuntak et al. (2020), revealed that customer relationship management applications have a positive impact on the desire to reuse. As a result, it is proposed that customer relationship management applications be used to improve customer satisfaction or repeat behaviour. Similarly, Jamali, Mehrabadi, and Pouri (2017) discovered that implementing an E-CRM electronic framework has a positive impact on online shopping re-use. Furthermore, Jarvenpaa, Lang, Takeda & Tuunanen (2003), proposed that customers are more willing to use mobile applications services because it makes services more appropriate. In a similar vein (Liljander et al., 2007; Sinisalo et al., 2007), explained that accessibility of technological devices such as mobile CRM is becoming increasingly familiar. Therefore, the present research hypothesis:

H₁: Mobile CRM positively influences reuse online shopping intention.H₂: Mobile CRM positively influences service convenience.

2.3 Service convenience

The rapid growth of e-commerce represents the compelling benefit that provides retailers and customers over conventional commerce (Pereira, Salgueiro & Rita 2016). Several studies (e.g., Duarte, Costa, Silva & Ferreira 2018; Jiang, Yang & Jun 2013) have shown that online shopping is more convenient than traditional shopping. Consumers' time and energy spent in the consumption process are commonly regarded as non-monetary expenditures that are crucial to the perception of service convenience (Chang et al., 2013). Some consumers consider service convenience to be a subset of general customer convenience (Chang et al., 2013). Convenience has grown from a single time-saving component of the shopping experience to a multidimensional construct because of marketing research (Alba et al., 1997). Bloemer, Ruyter and Peeters (1998), defined service convenience as "consumers' perception of time and effort related to purchasing or using a service." They added that "service convenience encompasses all forms of convenience that save customers time or effort when shopping". Further, Berry, Seiders & Grewal (2002) and Kumar et al. (2020) divide convenience into five categories based on customer service activities: decision, access, transaction, benefit, and post-benefit convenience. Regarding the relationship between service convenience and intention to reuse online shopping, the relevance of online services had a positive impact on reuse intention, according to Lee and Kwon (2011) and Küster, Vila and Canales (2016), the online services provided have assisted researchers and practitioners to understand the impact of such services in increasing online purchase capabilities. Similarly, Otim and Grover (2006) noted that convenience of services (support for product search and evaluation, web appearance/aesthetics, and product pricing) and transactional services (delivery arrangements, privacy/security policy, and billing and payment mechanism) influenced customer satisfaction with electronic services, including e-commerce. accordingly, we hypothesis:

H₃: Service convenience positively influences reuse online shopping intention.

2.4 Online perceived behavioural control

Perceived behavior control can occur for any entity, a community, or an organization, and it can include programs, ideas, and tangible items as well as to a variety of careless circumstances (Kardes, Cronley & Cline, 2010). Banyte & Raišyte (2009) recommended that when a person's buying decision is tied to a particular brand, and what they have bought in the last few days, they have engaged in consumer behaviour. consumers are often thinking about what to buy and how they feel about the goods, even if the customer does not make a purchase. Also, Kardes, Cronley and Cline (2010) revealed that the customer will be subjected to marketing information in the form of advertisements, product information on packages, recommendations from friends or family members, and brand perceptions. customer behavioural control consists of all consumer activities, including the purchase, use, and disposal of products and services, are correlated with the consumer's emotional, mental, and

behavioral responses that precede, decide, or follow these activities through online (Huang, Wang & Boulanger, 2011; Kardes, Cronley & Cline, 2010) and it's a difficult subject since different customers may react differently to the same product.

2.5 Reuse online shopping intention

The goal of reuse or continuation intention has been the focus of significant theoretical advances (Ashrafi et al., 2017). These include IS continuation (Lew, Lau & Leow, 2019; Amoroso & Chen, 2017; Han et al., 2018; Susanto, Chang & Ha, 2016), as well as post-adoption use (Amoroso & Chen, 2017; Han et al., 2018; Susanto, Chang & Ha, 2016). Jia, Guo & Barnes (2017) and Ong & Lin (2016) and Limayem & Cheung (2011) found that continuance intention echoes post-adoption behavior and intention to continue using an information system in their research. The desire to buy goods or services again after the first purchase is known as reuse intention. Hellier et al. (2003) went on to say that there is a correlation between reuse intention and a personal decision to buy goods and services from similar businesses on a regular basis, taking into account their current circumstances. The decision to reuse an information system (IS) (of IS continuance usage) has been compared to the decision to repurchase goods and services, according to Bhattacherjee (2001) and Al-Gasawneh et al. (2020), this is due to the fact that the original use of IS has an impact on the decision to reuse it. This study defines reuse purpose as a user's willingness to purchase online services or purchase the product online again. Other factors that influence include the ease of use of the purchasing system, the customer's opinion of the system, and their intention to suggest the system to others.

2.6 Mediating effect of service convenience

A mediator variable, according to Baron & Kenny (1986), is a variable that shows the relationship between a predictor variable and a criterion variable. Mediators provide information on how or why something works. The mediator is an intermediary variable that reflects the relationship between a predictor and a criterion variable. The conditions to assume any variable as a mediator (M) to measure it between two variables (X) and (Y), according to Baron & Kenny (1986) and Al-Gasawneh & Al-Adamat (2020), are a persistently in the relationship between the variables through previous studies, which must find previous literature provided. Influence between the independent variable (X) and the dependent variable (Y), as well as between the independent variable (X) and the mediator (M), and between the mediator (X) and the dependent variable (Y). You may use (M) as a mediator in the study to evaluate these relationships if the literature supports them. As a result, previous studies that demonstrated the impact of mobile CRM on reusing online shopping intentions, such as (Shaikh, 2015; Wulfert, 2019; Jamali, Mehrabadi & Pouri, 2017). And the impact of mobile CRM on service convenience (Jarvenpaa, Lang, Takeda & Tuunanen, 2003; Liljander et al., 2007; Sinisalo et al., 2007), as well as the influence of service convenience on reuse online shopping purpose (Lee and Kwon, 2011; Küster Vila & Canales, 2016; Otim and Grover, 2006), the latest study exploring service convenience as mediator. Therefore, we hypothesize:

H4: Service convenience arbitrates the connection between mobile CRM and reuse shopping intention.

2.7 Moderating effect of online perceived behavioural control

Perceived behavior control encompasses all consumer activities ranging from the purchase, use, and dispose products and services, and even the consumer's emotional, mental, and behavioral responses that accompany, decide, or follow these activities through online (Huang, Wang, & Boulanger, 2011), Lee and Kwon (2011) and Küster, Vila & Canales (2016) and Otim and Grover (2006), found a positive relationship between service convenience and reuse shopping intention. On the other hand, Khazaei, Manjiri, Samiey and Najafi (2014) discovered a negative relationship between service convenience, consumer satisfaction on intention, and reuse intention. A moderating variable should be included if the relationship between the predictors and the dependent variables tends to be inconsistent, according to Baron and Kenny (1986), Bibi, Pangil and Johari (2016), and Al-Gasawneh and Al-Adamat (2020). As a result, the relationship between service convenience and reuse intention required a moderator, and since online perceived behavioral control affects reuse intention as in (Kianpour et al., 2017; Alalwan, 2020). As well, Collier & Sherrill (2010) explained that via directing and controlling customer behaviour we can affect their tendencies towards services, making it distinctive in their view and worthy of use. The study mainly would include the construct of online perceived behavioral control as a moderator between service convenience and reuse intention. As a result, the following hypotheses is developed:

Hs: The connection between mobile CRM and reuse online shopping intention will prove stronger if online perceived behavioral control is high.

3. Method

The aim of this research is to assess the mediation effect of service convenience among Mobile – CRM and Reus intention, as well as the moderating role of online Perceived Behavioral Control between Service convenience and Reus intention, in the context of retail Jordan. A survey-based quantitative approach is considered suitable for the analysis. The following articles go over the analysis methods in more depth. The survey was carried out using a two-part questionnaire. Demographics (gender, age, income, and frequency of online purchase) were included in the first part of the questionnaire, while the second part included measurements of the constructs included in the study model. The questionnaire elements used to assess each build

are as follows: According to Rodriguez and Boyer (2020), mobile-CRM performed multidimensionality consisting of Service content and usability four items, comfort and security four items, Mobile feedback six items, Brand assets five items. Multidimensionality of service convenience included: decision three items, access two items, transaction three items, benefit two items, and post-benefit three items based on Kumar, Sachan & Dutta (2020). Meanwhile, Online Perceived Behavioral Control used uni-dimensionality with four items based on Huang, Wu, Wang, and Boulanger (2011), and Reuse Online Shopping Intention used uni-dimensionality with three items based on Al-Gasawneh et al. (2020), with all build scales using a 5-point Likert scale. To address the problem of traditional system variance (CMV), the study collected the measurements of independent and dependent variables from various sources, and these various sources were used to calculate the variables in this study as (Tehseen, Ramayah & Sajilan, 2017).

3.1 Sampling

This study's population consists of all online shoppers who purchased merchandise or services from e-retailers' websites. Meanwhile, the information was gathered from an online survey. Social networking platforms such as Facebook and Instagram were used to distribute the questionnaire to web users. Respondents were also urged to share the connection with their colleagues who were interested in online selling. The convenience sampling technique was used in this research since the nature of the study emphasizes the veracity of the theoretical results (Hafaz Ngah et al., 2020). To ensure respondent authenticity, they were asked to list the firms from which they purchase their services. Given that the study used structural equation modeling with SmartPLS (Hair et al., 2017), power of analysis was used to calculate the study's minimum sample size. The minimum sample size is determined by the model's complexity. With a power of 0.8 and a medium impact size as suggested by (Gefen et al., 2011), the minimum sample size for the study's three predictors is 74. Therefore, for this study, the survey was sent to 350 respondents in order to obtain as many responses as possible; additionally, the sample size of 350 respondents was adequate to validate the research model in this study based on the limited sample size that we derived from power analysis.

4. Result

In total, 280 responses were gathered for this research. Even so, 31 were dismissed because their data was of inferior quality (i.e., brief answers and partial data). This resulted in 249 credible answers to be analyzed.

4.1 Moderating and mediating analysis approaches

The data was analyzed using the partial least squares technique, which allowed for many approaches to moderator analysis, including the product indicator approach with reflective-reflective construct, which lacks significant statistical ability, and a two-stage approach with formative indicators (Fassott et al., 2016). Regardless of whether formative or reflective constructs are used, the latter approach is thought to be more suitable in situations where the aim is to determine the importance of the moderator effect (Chin, 2010; Hair et al., 2017). As a result, the moderator effect was explored in this work using a two-stage methodology focused on current reflective-reflective constructs, minimizing concerns linked to the product indicator approach's inferior statistical capacity. The first stage involved assessing convergent and discriminant validity before taking the relationship concept into account. The second stage involved identifying the structural model's specification, with the product indicator determination contributing to the inclusion of the interaction concept, as well as the predictor and moderator variables (Hair et al., 2017). Even, in terms of the mediating analysis technique, the bootstrapping method is consistent with PLS-SEM because it requires no assumptions about the type of the variable distribution. As a result, it is specific to small-sized samples. As a result, the present analysis used bootstrapping to analyze the indirect influence of the exogenous variable on the endogenous variable through the mediating variable (Preacher & Hayes, 2008). As a result, the results of the moderator analysis, and mediator, as well as the direct relationships, were collected at the same time.

4.2 Measurement model

The key variables studied in this study were reuse shopping intention and online Perceived Behavioral Control as first-order contracts, and M-CRM and service convenience as reflective-reflective structures as second-order contracts. M-CRM was evaluated using the factors of Service content and usability, Comfort and security, Mobile feedback, Brand assets, while service convenience was evaluated using the factors of decision, access, transaction, benefit, and post-benefit convenience. M-CRM and service simplicity were selected as second-order elements to achieve a wider understanding of relevant logical and consensus functions. The second order, as recommended by Hair et al. (2016), was used to reduce the amount of interactions and assumptions to be discussed in the structural model, simplifying the PLS direction model and making its understanding easier. Meanwhile, the strategy was implemented in two phases in accordance with Becker et al. (2012). As a result, the repetitive indicator technique was used in the first stage to obtain first-order scores for first-order constructs. The second step involved calculating the CR. AVE of the second-order contract based on the first-order variables' weighting. To determine convergent validity, Hair et al. (2017) measured factor loadings, Cronbach Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE). As a result, it was determined that any object had a loading greater than the suggested value of 0.5 (Table 1 – Figure 2). Furthermore, both constructs had CA and CR values greater than 0.7, while AVE values were greater than 0.5, which was compatible with Hair et al. (2017). As a result, convergent validity was verified.



Fig. 2. The Measurement Model

Table 1 Measure

First order Construct	Items	Factor loading	CR	AVE
Service content and usability	SCU 1	0.907	0.939	0.794
	SCU 2	0.894		
	SCU 3	0.876	0.939 0.794 0.961 0.860 0.907 0.622 0.946 0.780 0.906 0.762 0.906 0.762 0.901 0.752 0.889 0.800 0.844 0.643 0.928 0.764 0.904 0.758	
	SCU 4	0.887		AVE 0.794 0.794 0.860 0.622 0.780 0.762 0.762 0.752 0.800 0.643 0.764 0.758 0.814 0.703
Comfort and security	CS 1	0.875	0.961	0.860
	CS 2	0.918		
	CS 3	0.950		
	CS 4	0.965		
Mobile feedback	MF 1	0.846	0.907	0.622
	MF 2	0.837		
	MF 3	0.824		
	MF 4	0.770		
	MF 5	0.795		
	MF 6	0.645		
Brand Assets	BA 1	0.991	0.946	0.780
	BA 2	0.852		
	BA 3	0.857		
	BA 4	0.838		
	BA 5	0.850		0.780
Decision	DE 1	0.831	0.906	0.762
	DE 2	0.910		
	DE 3	0.877		
Access	AC 1	0.865	0.844	0.731
	AC 2	0.840		
Transaction	TR 1	0.894	0.901	0.752
	TR 2	0.887		
	TR 3	0.824		
Benefit	BE 1	0.892	0.889	0.800
	BE 2	0.895		
Post-Benefit Convenience	PBC 1	0.765	0.844	0.643
	PBC 2	0.854		
	PBC 3	0.790		
Brand Assets Decision Decision Access Transaction Benefit Post-Benefit Convenience Online Perceived Behavioral Control Reuse Online Shopping Intention Second Order Constructs M-CRM	OPBC 1	0.885	0.928	0.764
	OPBC 2	0.876	0.020	01/01
	OPBC 3	0.855		
	OPBC 4	0.875		0.622 0.780 0.780 0.762 0.731 0.752 0.800 0.643 0.764 0.758 0.814 0.814
Reuse Online Shopping Intention	RI 1	0.876	0.904	0.758
rease change chopping interaction	RI 2	0.853	0.001	01700
	RI 3	0.882		
Second Order Constructs				
M-CRM	Service content and usability	0.929	0.946	0.814
	Comfort and security	0.868		
	Mobile feedback	0.914		
	Brand Assets	0.896		
Service Convenience	Decision	0.895	0.922	0.703
	Access	0.866		
	Transaction	0.802		
	Benefit	0.802		
	2 short	0.002		

To test discriminant validity, the Heterotrait-Monotrait (HTMT) criterion was used. Since the HTMT values obtained were less than 0.90, discriminant validity was verified (Henseler, Ringle & Sarstedt, 2015). Table 2 contains additional material on this topic.

Table 2	
Discriminant	,

Discriminant validity (HTMT)													
	AC	BA	BE	CS	DE	M-CRM	MF	OPBC	PBC	RI	SC	SCU	TR
AC													
BA	0.574												
BE	0.836	0.533											
CS	0.167	0.106	0.141										
DE	0.083	0.557	0.794	0.151									
M-CRM	0.765	0.812	0.622	0.415	0.675								
MF	0.795	0.759	0.613	0.054	0.654	0.860							
OPBC	0.813	0.537	0.517	0.129	0.667	0.650	0.636						
PBC	0.833	0.622	0.780	0.257	0.843	0.720	0.676	0.655					
RI	0.803	0.591	0.550	0.152	0.700	0.685	0.667	0.634	0.668				
SC	0.778	0.601	0.767	0.171	0.509	0.717	0.710	0.697	0.565	0.704			
SCU	0.776	0.814	0.584	0.137	0.677	0.771	0.604	0.664	0.617	0.656	0.677		
TR	0.709	0.488	0.643	0.081	0.729	0.552	0.576	0.581	0.642	0.550	0.616	0.507	

The build research results, as well as the associated convergent validity and discriminant validity, all validated the consistency and suitability of the measurement scale used for this work (Tables 1 and 2).

4.3 Structural model

According to Hair et al. (2016), the structural model was tested using a variety of measures, including R^2 , beta, t-values from bootstrapping with a 1,000 resample, predictive significance Q2, and VIF as seen in Fig. 3.



Fig. 3. Hypotheses Testing

Testing	direct relationships								
	Path	St, β	St. d	\mathbb{R}^2	Q^2	F^2	VIF	T-value	P-value
H1	M -CRM \rightarrow RI	0.306	0.146	0.483	0.540	0.670	2.187	2.095	0.002
H2	M -CRM \rightarrow SC	0.633	0.197	0.439		0.610	2.121	3.213	0.000
Н3	$SC \rightarrow RI$	0.314	0.104			0.465	2.136	3.019	0.000

Table 4

Table 3

Testing mediating effect								
	Path	St, β	St. d	T-value	LL (2.5%)	UL (97.5%)	P-value	
H4	M- $CRM > SC > RI$	0.212	0.066	3.217	0.091	0.505	0.001	

Table 5	
Testing moderating (interaction) effect	



Fig. 4. OPBC moderator (interaction) plot

In terms of direct relationships, the structural model (Table 3) states: H1 focused on the impact of M-CRM on the intention to reuse online shopping, while H2 reported the impact of M-CRM on service convenience. Regarding H3, the effect of service convenience on reuse online shopping intention was also considered. The structural model for H4 (Table-4) claimed the mediating function of service convenience between M-CRM and reuse shopping intention, while the structural model for H5 (Table-5) measured the moderating role of online perceived behavioral influence between service convenience and reuse online shopping intention. The following findings were obtained from the H1 study regarding the effect of M-CRM on reuse online shopping intention: T-value 2.095, St, B 0.306, and p-value 0.002 (one-tailed). The following findings were obtained from the H2 review of the effect of M-CRM on service convenience: T-value 3.213, St, B 0.633, and p-value 0.000 (onetailed). The following findings were obtained from the H3 study regarding the effect of service convenience on reuse online shopping intention: T-value of 3.019, St, B of 0.314, and p-value of 0.000 (one-tailed); additionally, the study referred to H4 regarding the mediating impact of service convenience on the relationship between M-CRM and reuse online shopping purpose produced the following results: T-value 3.217, St, B 0.212, and p-value 0.001 (two-tailed). Finally, the study of H5 the moderating effect of online perceived behavioral influence on the relationship between service convenience and reuse shopping purpose generated the following results: T-value = 3.674, St, B = 0.327, and p = 0.003 (one-tailed). Since the R² value correlated with online shopping intention was estimated to be 0.483 (Table 3), the findings accounted for approximately 48.3 percent of the difference in online shopping intention, which was compatible with Chin (1998) proposed threshold value of 0.19. In terms of F² values, the predictor of M-CRM with reuse intention was 0.670, the predictor of service conveniences with reuse intention was 0.465, and the predictor of M-CRM with service convenience was 0.610. These values represented the extent to which each of the predictors illustrated the online shopping intention. Furthermore, the Q² value correlated with online shopping intention was greater than zero (0.540), confirming the model's suitability for prediction (Chin, 2010). Furthermore, the overall goodness of fit and statistical relevance of the model is sufficient, with the VIF significance associated with each inner model being (2.121-2.187), not exceeding 5 (Hair et al., 2017). The findings obtained, as seen in Table 3, verified the validity of the models relative to the direct relationships (H1, H2 and H3). In addition to the models relevant to the mediating effects of service convenience between M-CRM and reuse shopping intention (H4), which are seen in Table 4. Furthermore, as seen in Table 5, the moderating influence of online perceived behavioral regulation on the relationship between service convenience and reuse shopping intention (H5). In a similar way, the moderating effect seen by the non-parallel lines in each plot (Fig. 4) and the rise in the R2 value (Table 5) after including the interaction effect.

5. Discussion

Despite the rapid growth of the internet purchasing mechanism and the usage of electronic services, the fierce rivalry among businesses compelled them to devise tactics to stay within the competition's boundaries whilst maintaining long-term partnerships with consumers to benefit (Kazan, Tan, Lim, Sørensen, & Damsgaard, 2018). Thus, the current study found that the mobile technologies, and applications with implementing communication strategies, such as CRM innovation via activation through mobile application, leads customers to be drawn to use online services such as payment and reuse these services where this represented H1, Meanwhile, the technology and M-CRM are being used as a strategy and framework that make the service more user-friendly this reflects H2, Similarly, correct consumer decisions that result from the flow of information as a result of technological advances, and quick access to information, the presence of easy purchases to comply with and with their processes, and post-benefit convenience are both seen as incentives to inspire customers to repeat internet resources such as online payment methods, this is what the H3 meant. One of the most interesting findings of this study is that the convenience of services mediates and strengthens the relationship between M-CRM and the intention to reuse online shopping, and that if the services included in electronic applications such as phone applications are acceptable and convenient to use, this would lead to an improvement in the intent to buy and use the electronic services and this achieved the H4. Finally, by introducing the marketing information in the form of advertisements, product information on packages, feedback from friends or family members, and brand icons on almost anything, he could control the user behavior, community online activity. This, in essence, would make the service easier to access and more suitable, as seen by the reuse of electronic resources such as internet shopping and payment in line with H5.

5.1 Theoretical and practical implications

From the theoretical term, the study attempted to supplement existing evidence by examining the effect of mobile CRM on reuse online shopping purpose and service convenience. It also examined the impact of service comfort on repeat online shopping intentions. The study was beneficial because it provided additional insights of e-commerce from a Jordanian viewpoint, with a particular emphasis on how service convenience mediates between mobile CRM and reuse online shopping intention. Furthermore, this is the first research to examine the moderating effect of online perceived behavioral regulation in relation to service convenience and online shopping intention to reuse. The study used the technology acceptance and planned behavior models as theoretical criteria, with data analysis using PLS-SEM. As for the practical implications, this study focused on online shoppers and the introduction of innovative strategies and technology, as well as how much smartphone CRM and service convenience influenced reuse online shopping intention. Furthermore, the research looked at how service convenience mediated the correlation between mobile CRM and reuse online shopping purpose, as well as how online perceived behavioral management moderated the two components. And such a methodology helps to assist companies and the digital marketer in enticing users to buy and pay for products and services online while simultaneously providing high-quality, money-saving software that is user-friendly.

6. Future work

The unit of research is a significant shortcoming of the current work, since the emphasis was solely on customers. As a result, in order to produce a more accurate understanding of the current study's priorities, a further investigation from the viewpoint of companies is warranted. Another flaw in this work is the use of a quantitative analysis approach. As a result, future experiments should be undertaken using a longitudinal methodology and observational or other analysis approaches to get a better understanding of possible shifts in customers' attitudes and intentions toward online shopping. Furthermore, since this study investigated the mediating effect of service convenience and the moderating effect of online perceived behavior control on how M-CRM and service convenience influenced reuse online shopping intention, future research could investigate the moderating effect of other variables on the relationship between service convenience and reuse online shopping intention. which should investigate the impact of M-CRM on the implementation of financial technologies and services (fentic), since this is the direction of financial factories.

References

- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer, Berlin, Heidelberg.
- Alalwan, A. A. (2020). Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse. *International Journal of Information Management*, 50, 28-44.
- Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A., & Wood, S. (1997). Interactive home shopping: consumer, retailer, and manufacturer incentives to participate in electronic marketplaces. *Journal of Marketing*, *61*(3), 38-53.
- Al-Gasawneh, J. A., & Al-Adamat, A. M. (2020). The relationship between perceived destination image, social media interaction and travel intentions relating to Neom city. Academy of Strategic Management Journal, 19(2), 1-12.
- Al-Gasawneh, J. A., Alnaser, A. S., Nusairat, N. M., & Anuar, M. M. (2020). Website Usability, Content Marketing and Reuse Intention of Airline E-Tickets Services.
- Al-Gasawneh, J., & Al-Adamat, A. (2020). The mediating role of e-word of mouth on the relationship between content marketing and green purchase intention. *Management Science Letters*, 10(8), 1701-1708.
- Amoroso, D. L., & Chen, Y. A. N. (2017). Constructs Affecting Continuance intention in consumers with mobile financial apps: a dual factor approach. *Journal of Information Technology Management*, 28(3), 1-24.
- Ashrafi, R., Mian, M. H., Rahman, M. M., & Jahiruddin, M. (2017). Reuse of spent mushroom substrate as casing material for the production of milky white mushroom. *Journal of the Bangladesh Agricultural University*, 15(2), 239-247.
- Banyte, J., & Raišyte, V. (2009). Global financial crisis: reasons, effects and solutions. *Stockholm School of Economics in Riga, Izmir.*
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.
- Becker, J.M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: Guidelines for using reflective-formative type models. Long Range Planning, 45(5-6), 359-394

Berry, L. L., Seiders, K., & Grewal, D. (2002). Understanding service convenience. Journal

800

of Marketing, 66(3), 1–17. doi:10.1509/jmkg.66.3.1.18505.

- Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370.
- Bibi, P. A. L. W. A. S. H. A., Pangil, F., & Johari, J. (2016). HRM practices and employees' retention: The Moderating Role of Work Environment. *European Academic Research*, 3(12), 12994-13015.
- Bloemer, J. M. M., Ruyter, K. D., & Peeters, P. (1998). On the relationship between financial institutions image, quality, satisfaction and loyalty. *International Journal of Bank Marketing*, 16(7), 276-286.
- Chang, M. Y., Chen, K., Pang, C., Chen, C. M., & Yen, D. C. (2013). A study on the effects of service convenience and service quality on maintenance revisit intentions. *Computer Standards & Interfaces*, 35(2), 187-194.
- Chin, W.W. (1998). Commentary: Issues and opinion on structural equation modelling. *Management Information Systems Quarterly*, 22(1), 7-16.
- Chin, W.W. (2010). How to write up and report PLS analyses. In V. Esposito Vinzi, W.W. Chin, J. Henseler & H. Wang (Eds.), Handbook of Partial Least Squares. Springer.
- Collier, J. E., & Sherrell, D. L. (2010). Examining the influence of control and convenience in a self-service setting. *Journal* of the Academy of Marketing Science, 38(4), 490-509.
- Davis, F. D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance model: three experiments. *International Journal of Human-Computer Studies*, 45(1), 19-45.
- Duarte, P., e Silva, S. C., & Ferreira, M. B. (2018). How convenient is it? Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM. *Journal of Retailing and Consumer Services*, 44, 161-169.
- Dursun, T., & Çelik, S. (2018). Mobile Customer Relationship Management: An Overview. Digital Marketing and Consumer Engagement: Concepts, Methodologies, Tools, and Applications, 59-72.
- Fassott, G., Henseler, J., & Coelho, P.S. (2016). Testing moderating effects in PLS path models with composite variables. Industrial Management & Data Systems, 116(9), 1887-1900
- Gefen, D., Rigdon, E. E., & Straub, D. (2011). Editor's comments: An update and extension to SEM guidelines for administrative and social science research. *Management Information Systems Quarterly*, 35(2), 3-14.
- Gengeswari, K., Padmashantini, P., & Sharmeela-Banu, S. A. (2013). Impact of customer retention practices on firm performance. *International Journal of Academic Research in Business and Social Sciences*, 3(7), 68.
- Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). Advanced issues in partial least squares structural equation modeling. saGe publications.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In European Business Review (Vol. 31, Issue 1, pp. 2–24). Emerald Group Publishing Ltd. Https://doi.org/10.1108/EBR-11-2018-0203
- Hair, J.F., Hult, G.T.M., Ringle, C., & Sarstedt, M. (2016). A primer on partial least squares structural equation modeling (PLS-SEM). Sage publications
- Han, M., Wu, J., Wang, Y., & Hong, M. (2018). A model and empirical study on the user's continuance intention in online China brand communities based on customer-perceived benefits. *Journal of Open Innovation: Technology, Market, and Complexity, 4*(4), 46.
- Hellier, P. K., Geursen, G. M., Carr, R. A., & Rickard, J. A. (2003). Customer repurchase intention. European Journal of Marketing, 37(11/12), 1762-1800.
- Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Huang, Y. C., Wu, Y. C. J., Wang, Y. C., & Boulanger, N. C. (2011). Decision making in online auctions. *Management Decision*, 49(5), 784-800.
- Jamali, M., Mehrabadi, M. A., & Pouri, M. (2017). The effect of the implementation of E-CRM electronic satisfaction and loyalty, electronic consumers of Mellat Bank's website. *Revista Administração em Diálogo-RAD*, 19, 117-135.
- Jarvenpaa, S. L., Lang, K. R., Takeda, Y., & Tuunanen, V. K. (2003). Mobile commerce at crossroads. Communications of the ACM, 46(12), 41-44.
- Jia, Q., Guo, Y., & Barnes, S. J. (2017). Enterprise 2.0 post-adoption: Extending the information system continuance model based on the technology-Organization-environment framework. *Computers in Human Behavior*, 67, 95-105.
- Jiang, L. A., Yang, Z., & Jun, M. (2013). Measuring consumer perceptions of online shopping convenience. Journal of Service management.
- Kardes, T., & Cronley, F. M. & Cline, (2010). Consumer Behavior. Mason: South-Western Cengage Learning.
- Kasemsap, K. (2018). Advocating electronic business and electronic commerce in the global marketplace. In Mobile Commerce: Concepts, Methodologies, Tools, and Applications (pp. 1139-1162). IGI Global.
- Khazaei, A., Manjiri, H., Samiey, E., & Najafi, H. (2014). The effect of service convenience on customer satisfaction and behavioral responses in bank industry. *International Journal of Basic Sciences & Applied Research*, 3(1), 16-23.
- Kianpour, K., Jusoh, A., Mardani, A., Streimikiene, D., Cavallaro, F., Nor, K. M., & Zavadskas, E. K. (2017). Factors influencing consumers' intention to return the end-of-life electronic products through reverse supply chain management for reuse, repair and recycling. *Sustainability*, 9(9), 1657.
- Kumar, R., Sachan, A., & Dutta, T. (2020). Examining the Impact of e-Retailing Convenience Dimensions on Behavioral Intention: The Mediating Role of Satisfaction. *Journal of Internet Commerce*, 19(4), 466-494.
- Küster, I., Vila, N., & Canales, P. (2016). How does the online service level influence consumers' purchase intentions before

a transaction? A formative approach. European Journal of Management and Business Economics, 25(3), 111-120.

- Lee, S. H. (2015). The impact of convenience value of mobile banking service on customer satisfaction and Re-usage intention: the moderate effect of technology anxiety. *Journal of Information Technology Services*, 14(2), 1-14.
- Lee, Y., & Kwon, O. (2011). Intimacy, familiarity and continuance intention: An extended expectation–confirmation model in web-based services. *Electronic Commerce Research and Applications*, 10(3), 342-357.
- Leppitsch, B. (2009). Customer Relationship Management Tools to Optimize Customer Satisfaction and Loyalty.
- Lew, S. L., Lau, S. H., & Leow, M. C. (2019). Usability factors predicting continuance of intention to use cloud e-learning application. *Heliyon*, 5(6), e01788.
- Liljander, V., Polsa, P., & Forsberg, K. (2007). Do mobile CRM services appeal to loyalty program customers?. *International Journal of E-Business Research (IJEBR)*, 3(2), 24-40.
- Limayem, M., & Cheung, C. M. (2011). Predicting the continued use of Internet-based learning technologies: the role of habit. *Behaviour & Information Technology*, *30*(1), 91-99.
- Mansor, T. M. T., Ariff, A. M., & Hashim, H. A. (2020). Whistleblowing by auditors: the role of professional commitment and independence commitment. *Managerial Auditing Journal*, 35(8).
- Mehmood, S. M., & Najmi, A. (2017). Understanding the impact of service convenience on customer satisfaction in home delivery: Evidence from Pakistan. International Journal of Electronic Customer Relationship Management, 11(1), 23-43.
- Nath, V., Gugnani, R., Goswami, S., & Gupta, N. (2009). An insight into customer relationship management practices in selected Indian service industries. *Journal of Marketing & Communication*, 4(3).
- Ngah, Abdul Hafaz, Gabarre, S., Eneizan, B., & Asri, N. (2020). Mediated and moderated model of the willingness to pay for halal transportation. Journal of Islamic Marketing. Https://doi.org/10.1108/JIMA-10-2019-0199
- Ong, C. S., & Lin, M. Y. C. (2016). Is being satisfied enough? Well-being and IT post-adoption behavior: An empirical study of Facebook. *Information Development*, 32(4), 1042-1054.
- Otim, S., & Grover, V. (2006). An empirical study on web-based services and customer loyalty. European Journal of Information Systems, 15(6), 527-541.
- Pereira, H. G., de Fátima Salgueiro, M., & Rita, P. (2016). Online purchase determinants of loyalty: The mediating effect of satisfaction in tourism. *Journal of Retailing and Consumer Services*, 30, 279-291.
- Pothal, L. K., Tripathy, S., Kumar, K., & Dash, A. (2021). Study of Customer Relationship Management in Automobile Industry. In Advances in Mechanical Processing and Design (pp. 649-660). Springer, Singapore.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Rodriguez, M., & Boyer, S. (2020). The impact of mobile customer relationship management (mCRM) on sales collaboration and sales performance. *Journal of Marketing Analytics*, 8(3), 137-148.
- Roggeveen, A. L., & Sethuraman, R. (2020). Customer-Interfacing Retail Technologies in 2020 & Beyond: An Integrative Framework and Research Directions. *Journal of Retailing*, *96*(3), 299-309.
- Saarijärvi, H., Sutinen, U. M., & Harris, L. C. (2017). Uncovering consumers' returning behaviour: a study of fashion ecommerce. The International Review of Retail, Distribution and Consumer Research, 27(3), 284-299.
- Shaikh, R. (2015). Mobile CRM (mCRM): A CASE STUDY OF MOBILE CRM STRATEGIES.
- Simanjuntak, M., Putri, N. E., Yuliati, L. N., & Sabri, M. F. (2020). Enhancing customer retention using customer relationship management approach in car loan bussiness. Cogent Business & Management, 7(1), 1738200.
- Sinisalo, J., Salo, J., Karjaluoto, H., & Leppäniemi, M. (2007). Mobile customer relationship management: underlying issues and challenges. *Business Process Management Journal*.
- Susanto, A., Chang, Y., & Ha, Y. (2016). Determinants of continuance intention to use the smartphone banking services. Industrial Management & Data Systems, 116(3), 508-525.
- Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *Journal of Management Sciences*, 4(2), 142-168.
- Vasić, N., Kilibarda, M., & Kaurin, T. (2019). The influence of online shopping determinants on customer satisfaction in the Serbian market. *Journal of Theoretical and Applied Electronic Commerce Research*, 14(2), 70-89.
- Wang, W. T., Ou, W. M., & Chen, W. Y. (2019). The impact of inertia and user satisfaction on the continuance intentions to use mobile communication applications: A mobile service quality perspective. *International Journal of Information Man*agement, 44, 178-193.
- Wulfert, T. (2019). Mobile App Service Quality Dimensions and Requirements for Mobile Shopping Companion Apps. Junior Management Science, 4(3), 339-391.



 \odot 2021 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).