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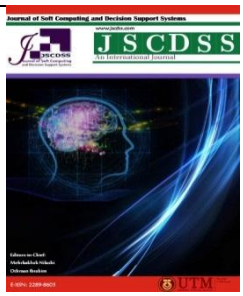

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A Framework to Predict the Adoption of Social Customer Relationship Management in Small and Medium Enterprises

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Abstract

This research develops a new model for the use of Social Customer Relationship Management in the Iranian Small and Medium Enterprises. Our model is based on Information Process components (Information Capture, Information Use, and Information Sharing), Technology Acceptance Model and several factors from the literature. By developing ten hypotheses, this model investigates how Social Customer Relationship Management can be adopted by the Small and Medium Enterprises for their business purposes. To evaluate the hypotheses and verify the research model, a survey questionnaire was conducted and the data was collected from 100 Iranian Small and Medium Enterprises. We use Partial Least Squares Structural Equation Modeling approach to analysis the data. The results revealed that all of the proposed hypotheses are accepted. The results on the data analysis are discussed and the limitation and the future work are presented.

Keywords: Social Customer Relationship Management, Small and Medium Enterprises, Information Process, Partial Least Squares Structural Equation Modeling

1. Introduction

Social Customer Relationship Management (Ahani, Rahim, & Nilashi, 2017b; Heller Baird & Parasnis, 2011; Payne & Frow, 2005) describes the potential uses of social media for customer relationship management in business purposes. According to Greenberg (2010) Social Customer Relationship Management is defined as "[…] a philosophy and a business strategy, supported by a technology platform, business rules, processes and social characteristics, designed to engage the customer in a collaborative conversation in order to provide mutually beneficial value in a trusted and transparent business environment". In another definition, Ahani et al. (2017b) defined Social Customer Relationship Management as "using at least one kind of social media technology to manage the relationship with customers". Its applications have been mainly for the business and marketing purposes by effective use of social media technologies for the management of customer relationship and to understand all operational tasks with the company' customers, i.e., marketing, sales and customer service (Ahani et al., 2017b). Initially, the social media are referred to Web 2.0 technologies. From a business point of view, social media provide numerous valuable starting points. Social web has a potential because of its high number of users for businesses which the users and companies can directly and in a cost-effective interact with each other (Ahani et al., 2017b). Malthouse, Haenlein, Skiera, Wege, & Zhang (2013) find Social Customer Relationship Management in two main dimensions: a Customer Relationship Management dimension and a social media dimension. The Customer Relationship Management includes three basic components of the traditional Customer Relationship Management process: relationship initiation (acquisition), maintenance (retention), and termination (see Fig. 1).

The application of Social Customer Relationship Management has been divided into sales applications, customer service and marketing applications (Hasani, Bojei, & Dehghantanha, 2017). The recent studies confirm that Social Customer Relationship Management has played an important role in start-up companies (Ahani et al., 2017b; Hasani et al., 2017). This type of Customer Relationship Management has made significant improvements on the SMEs performance (Ahani et al., 2017b).

Despite the advantages of Social Customer Relationship Management, its adoption is still in the early stage in many developing countries. According to the previous research, identifying the factors for the adoption of Social Customer Relationship Management by the Small and Medium Enterprises is a vital stage (Ahani et al., 2017b). In case of Iranian Small and Medium Enterprises, it is found that there is no study to investigate which factors are necessary for this critical stage. Accordingly, in this study we aim to fill this gap by providing a new adoption model which considers the main factors affecting the managers' intention to use Social Customer Relationship Management in their Small and Medium Enterprises. The main questions of this study are:

i. How can be Social Customer Relationship Management effectively adopted by the Iranian Small and Medium Enterprises?
ii. What factors are important for the adoption of Social Customer Relationship Management by Iranian Small and Medium Enterprises?
iii. What model is suitable for the adoption of Social Customer Relationship Management by Iranian Small and Medium Enterprises?

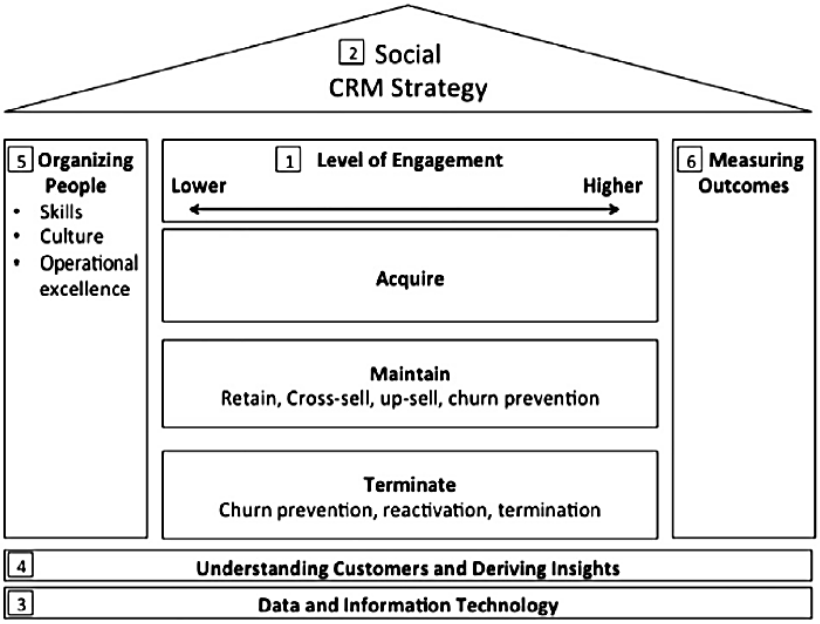

Fig. 1. Social Customer Relationship Management house (Malthouse, Haenlein, Skiera, Wege, & Zhang, 2013)

Our study is organized as follows. In Section 2, the related work is presented. In Section 3, we present the proposed model. In Section 4, we present the data collection and analysis. In Section 5, we provide the research discussion. In Section 6, we conclude this study.

2. Related Work

In case of Customer Relationship Management and Social Customer Relationship Management, many studies have been conducted. In this section we briefly describe some of these studies.

In a study by Ahani, Rahim, & Nilashi (2017b), the authors proposed a comprehensive adoption model. Their model included several critical factors (Customer information use, Cost of adoption, Competitive pressure, Compatibility, Complexity, Customer pressure, Government support, Information capture, Information sharing, IS Knowledge, Relative advantage, Top Management Support, Composite reliability) for the adoption of Social Customer Relationship Management by Malaysian Small and Medium Enterprises. In addition, they used Technology-Organization-Environment theory and Information process to develop the model. They used Partial Least Squares Structural Equation Modeling and Neural Network approaches for data analysis. This study results showed that all of the above factors have positively influence the adoption of Social Customer Relationship Management, except Complexity, Information sharing, and Government support. Trainor, Andzulis, Rapp, & Agnihotri (2014) focused on social media technology usage and customer relationship performance. They developed a model by several factors. Specifically they considered Customer-centric management system, Social Media Technology Use, Social CRM Capabilities, Training, Management Support, and Organization Size in the model. The output of their model was Customer Relationship Performance. They found that social media technology use and customer-centric management systems can have significant effect on Social Customer Relationship Management capabilities. Askool & Nakata (2011) developed a model for Social Customer Relationship Management acceptance. Their model has considered Web 2.0 elements, easy networking, easy of participation and ease of collaboration. They also

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investigated the roles of perceived ease of use, perceived usefulness and perceived ease of trustworthiness on attitude towards use. Moreover, familiarity, care and information sharing were incorporated into their model to assess the trustworthiness in Social Customer Relationship Management. Harrigan & Miles (2014) did a survey on 156 Small and Medium Enterprises to find the role of Social Customer Relationship Management on customer engagement in online communities. They found the usefulness of Social Customer Relationship Management for their engagement with the consumers. Malthouse, Haenlein, Skiera, Wege, & Zhang (2013) investigated the role of managing customer relationships in the social media era and introduced the Social Customer Relationship Management house. In addition, their study investigated how Customer Relationship Management needs to adapt to the rise of social media.

3. Research Model

From the literature on Social Customer Relationship Management, we found that there is no research in the case of Iranian Small and Medium Enterprises. This research accordingly tries to develop a comprehensive adoption model using a set of influential factors from the literature (Ahani, Rahim, & Nilashi, 2017; Askool & Nakata, 2011; Trainor, Andzulis, Rapp, & Agnihotri, 2014). Our model is presented in Fig. 2. The research model included Information Use, Information Capture, Information Sharing, Perceived Usefulness, Perceived Ease of Use, Customer-Centric Management System, Use of Social Media Technology, Social Customer Relationship Management Capabilities, Customer Relationship Function and Attitude toward Use for Social Customer Relationship Management. Overall, our model included ten hypotheses which are presented in Table 1.

Table 1
The proposed hypotheses

Hyp.	Definition
H1	Information Use positively influences Social Customer Relationship Management adoption.
H2	Information Capture positively influences Social Customer Relationship Management adoption.
H3	Information Sharing positively influences Social Customer Relationship Management adoption.
H4	Perceived Usefulness positively influences Attitude toward Use.
H5	Perceived Ease of Use positively influences Attitude toward Use.
H6	Customer-Centric Management System positively influences Social Customer Relationship Management Capabilities.
H7	Use of Social Media Technology positively influences Social Customer Relationship Management Capabilities.
H8	Social Customer Relationship Management Capabilities positively influences Customer Relationship Function.
H9	Customer Relationship Function Social positively influences Customer Relationship Management adoption.
H10	Attitude toward Use positively influences Customer Relationship Management adoption.

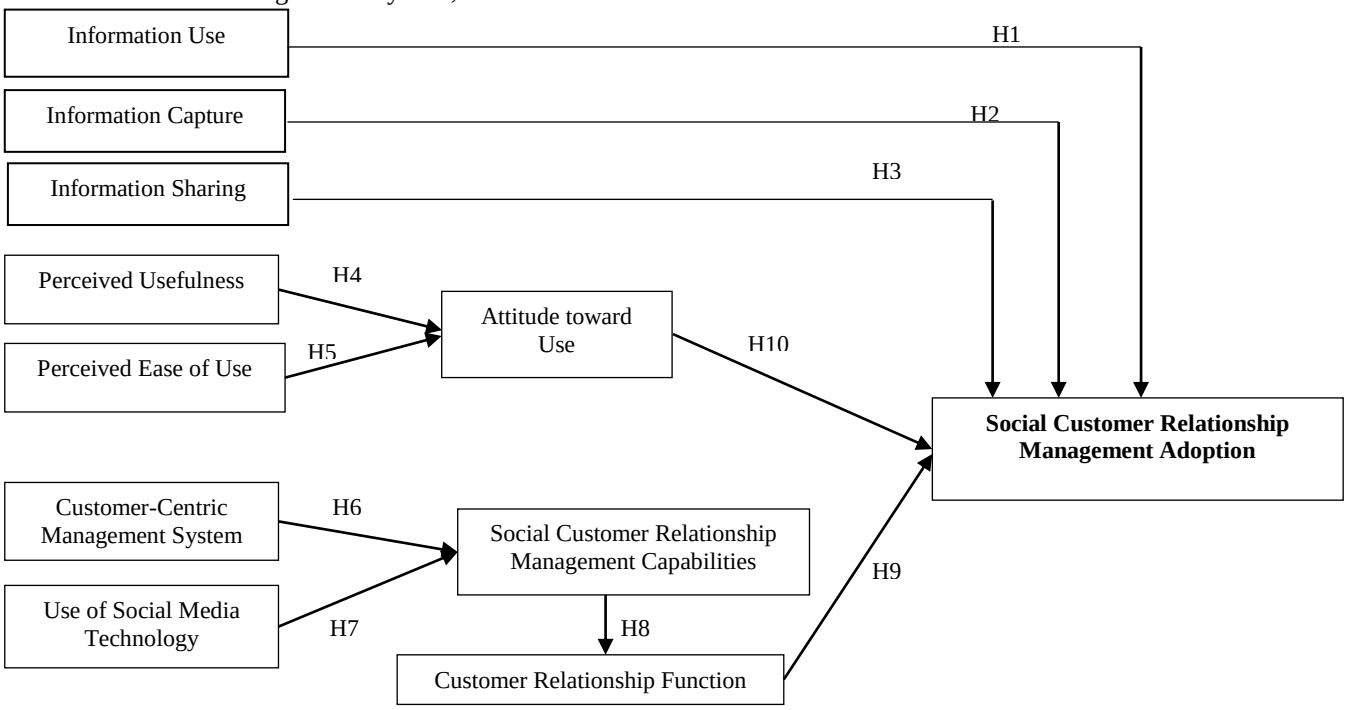

Fig. 2. Research model

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4. Data Analysis and Results

To test the proposed hypotheses of this research, we conducted a questionnaire survey and the data was collected from the 100 Small and Medium Enterprises in Iran. The demographic information of the respondents is shown it Table 2. It can be found that 60% of the respondents have been male and 40% of them have been female. In addition, 39% of respondents had Master degree and 3% of them had Bachelor degree. Furthermore, it can be found that 81% of the respondent had high experience with the Social Customer Relationship Management.

Table 2
The demographic information of the respondents

Information	Item	%
Gender	Male	60%
	Female	40%
Age	29-25	22%
	34-30	70%
	39-35	4%
	>40	4%
Education	Bachelor	3%
	Master	39%
	Others	58%
Experience with Social CRM	Very Low	5%
	Low	2%
	High	81%
	Very High	2%

We used Partial Least Squares Structural Equation Modeling approach to evaluate the hypotheses. This approach is widely used in information systems research (Ahani, Rahim, & Nilashi, 2017a; Mohammed, Ibrahim, Nilashi, & Alzurqa, 2017; Nilashi, Jannach, bin Ibrahim, Esfahani, & Ahmadi, 2016; Yadegaridehkordi, Nilashi, Nasir, & Ibrahim, 2018; Yadegaridehkordi, Shuib, Nilashi, & Asadi, 2018). The first test of Partial Least Squares Structural Equation Modeling approach is Average Variance Extracted (AVE) (Balaji, Roy, & Lassar, 2017; Dangelico, Pujari, & Pontrandolfo, 2017) for convergent validity of the constructs. According to Nilashi et al. (2016), "convergent validity refers to whether a latent variable is able to explain its indicators on average; it signifies the amount of variance shared between a construct and its indicators". It is suggested the value of 0.5 as the acceptable minimum AVE value (Mohammed et al., 2017; Nilashi et al., 2016). The results for this measurement are presented in Table 3. It can be found that the AVE for all constructs is in the acceptance levels.

Table 3
The AVE results

Construct	AVE
Information Use	0.850
Use of Social Media Technology	0.720
Information Sharing	0.789
Perceived Ease of Use	0.723
Perceived Usefulness	0.818
Customer-Centric Management System	0.793
Information Capture	0.838
Customer Relationship Function	0.849
Social Customer Relationship Management Capabilities	0.663
Attitude toward Use	0.799
Social Customer Relationship Management Adoption	0.938

The second test of Partial Least Squares Structural Equation Modeling approach is discriminant validity (Ali, Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018; Hur, Kim, Karatepe, & Lee, 2017). According to Nilashi, Jannach, bin Ibrahim, Esfahani, & Ahmadi (2016), it is suggested to evaluate Fornell–Larcker criterion for all construct of the model. The results are presented in Table 4. The results showed that all constructs have satisfied the Fornell–Larcker criterion.

Table 4
Fornell–Larcker criterion test for all constructs

	INF	USM	INS	PEU	PUS	CCM	INC	CRP	SCR	ATU	SCR
INF	0.922										
USM	0.222	0.849									
INS	0.557	0.408	0.888								
PEU	0.228	0.459	0.412	0.850							
PUS	0.339	0.460	0.483	0.450	0.904						
CCM	0.214	0.502	0.072	0.500	0.171	0.891					
INC	0.568	0.286	0.496	0.286	0.453	0.534	0.915				
CRP	0.563	0.265	0.488	0.270	0.396	0.334	0.559	0.921			
SCR	0.503	0.324	0.530	0.317	0.485	0.052	0.559	0.521	0.814		
ATU	0.043	0.487	0.058	0.494	0.166	0.519	0.034	0.102	0.043	0.894	
SCR	0.564	0.298	0.520	0.300	0.458	0.423	0.553	0.565	0.458	0.422	0.969

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In addition to the above analysis by Partial Least Squares Structural Equation Modeling approach, we also estimated the internal consistency which composite reliability and Cronbach's alpha (Ali et al., 2018; Munir, 2018) for all constructs. The results are presented in Table 5.

The final analysis of Partial Least Squares Structural Equation Modeling approach is the assessment of the structural model and research hypotheses. According to (Nilashi et al., 2016), "the structural or inner model represents the relationship between the variables and constructs". To perform this analysis, we apply two criteria to evaluate the structural model, the size and significance of the path coefficients and R2 (the coefficient of determination). The results of this analysis are presented in Table 6 and Table 7.

Table 5
Internal consistency of the constructs

Constructs	Cronbach's Alpha	Composite Reliability
Information Use	0.944	0.912
Use of Social Media Technology	0.884	0.801
Information Sharing	0.917	0.864
Perceived Ease of Use	0.885	0.801
Perceived Usefulness	0.930	0.898
Customer-Centric Management System	0.919	0.878
Information Capture	0.939	0.904
Customer Relationship Function	0.957	0.940
Social Customer Relationship Management Capabilities	0.885	0.828
Attitude toward Use	0.922	0.878
Social Customer Relationship Management Adoption	0.978	0.967

Table 6
Evaluation of research hypotheses

Link	Hyp.	t-value	Result
Information Use→ Social Customer Relationship Management Adoption	H1	4.673	Supported
Use of Social Media Technology	H2	2.045	Supported
Information Sharing→ Social Customer Relationship Management Adoption	H3	4.534	Supported
Perceived Ease of Use→ Attitude toward Use	H4	10.72	Supported
Perceived Usefulness→ Attitude toward Use	H5	3.518	Supported
Customer-Centric Management System	H6	1.951	Supported
Information Capture→ Social Customer Relationship Management Adoption	H7	3.852	Supported
Customer Relationship Function→ Attitude toward Use	H8	35.01	Supported
Social Customer Relationship Management Capabilities→ Customer Relationship Function	H9	4.854	Supported
Attitude toward Use→ Social Customer Relationship Management Adoption	H10	4.920	Supported

Table 7
R-squares of dependent variables

Link	R^2
Customer Relationship Function	0.758
Social Customer Relationship Management Capabilities	0.562
Attitude toward Use	0.782
Social Customer Relationship Management Adoption	0.994

5. Conclusions

This research developed a new model for the adoption of Social Customer Relationship Management. Totally, ten hypotheses were developed. To test the hypotheses, we conducted a questionnaire survey and collected the data from Iranian Small and Medium Enterprises. To analysis the data, we used Partial Least Squares Structural Equation Modeling approach. The results showed that all components of information process have positive effects on the adoption of Social Customer Relationship Management by Iranian Small and Medium Enterprises. In addition, the results of hypotheses testing showed that Attitude toward Use positively influences the Social Customer Relationship Management adoption. Our analyses further revealed that Customer Relationship Function have significant impact on the intention to use Social Customer Relationship Management by Small and Medium Enterprises.

Our study has considered a limited number of factors for the adoption of Social Customer Relationship Management. Future study may extend our model by considering other critical factors such as Small and Medium Enterprises' performance. In addition, more investigation is needed to show the usefulness of Social Customer Relationship Management on the Small and Medium Enterprises' financial and non-financial outcomes. Furthermore, we used Partial Least Squares Structural Equation Modeling approach to verify the research model. Other techniques such as multi-criteria techniques (Dalvi-Esfahani, Ramayah, & Nilashi, 2017; Mardani, Mardani, & Nilashi, 2017; Yadegaridehkordi et al., 2018) (e.g., Decision Making Trial and Evaluation Laboratory, Analytic Hierarchical Process and Analytic Network Process) can also be applied to measure the factors from the experts and managers' perspectives. Finally, the model of this study can be further evaluated by a larger population size in the other context.

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