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The Identification and Ranking of Effective Indicators in Assessing Organization Readiness to Accept Social CRM Using FANP

Sajjad Shokohyar[1]
Faculty Member of Information Technology Management Group, Shahid Beheshti University, Tehran, Iran

Ruhollah Tavallaee
Faculty Member of Information Technology Management Group, Shahid Beheshti University, Tehran, Iran

Khadijeh Keramatnia
Master of Information Technology Management, Department of Information Technology Management, Shahid Beheshti University, Tehran, Iran

Abstract

For today's organizations, customers have become important resources and communications with them have been considered as valuable assets and investments. Therefore, the effective management of customer relationship has become a preferred task and an approach for managing in many organizations. The dilemma, the organizations are faced with is that they go ahead directly toward the preparation and implementation of new technologies, especially the technology without determining their level of readiness and this causes that they fail at the implementation stage or they do not benefit from the investment and spending they have done. This study wants to investigate the indicators involved in successful acceptance of this product and the degree of importance of these indicators compared to other indicators. After identifying these indicators, according to the research background and internal experts' opinion, the status of these indicators has been assessed and they were ranked using multi-criteria decision-making model known as fuzzy analytic network process in Iran's Mellat Bank. Finally, by examining the fuzzy average of the studied organization data, a general consensus has been achieved about the importance of each indicator as well as their ranking based on the weight of each indicator compared to other indicators in assessing Iranian organization readiness to accept social customer relationship management. It is worth mentioning that this research paid more

[1] *Corresponding author's email: shokohyar@gmail.com*

attention to negotiations and meetings with chief technology officers, customer relationship experts, strategic managers, project managers and human resource managers.

Keywords: Customer relationship management, social customer relationship management, social network, technology, customer, fuzzy analytic network process.

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Introduction

Competitive environment and dynamic economy dominating the contemporary industrial world have left no option for organizations except managing the customer's profitability in the long run. Improving the level of access to information on the one hand and examples such as the advent of the technological facilities on the other hand increase the pressure and create new challenges in the management of customer relationships. The banking system was influenced by these changes as well. In our country, especially in recent years, the industry has been faced with another challenge which is the emergence of private banks. Given the fact that there was no competition among banks before the advent of the private banks, the issue of analyzing the value of bank customers and attracting the valuable customers has been paid little attention. With regard to private banks' activities, the level of competition among banks has increased and attracting the customers with the highest profitability is considered by the country's banks more than before.

The emergence of the phenomenon called social web has forced organizations to concentrate on a target more than optimizing their relationships and the customers and in addition to this important matter, they increase a set of virtual interactions with customers as well. Accordingly, while provided traditional CRM solutions integrate customer data, their analysis and workflow automation to improve the organization’s processes and performance. Considering the implemented changes, organizations need to find new and innovative solutions for interacting with social customers, enriching their experience through interacting based on communities and creating solutions that are flexible in one hand, and provide the fields of inter-organizational cooperation and partnerships staff on the other hand (Band & Petouhof, 2010). Web 2.0 and social media provide new opportunities to create added value in the field of management organizations’ applicants. Social customer relationship management pursues the mentioned opportunities and seeks greater participation of stakeholders in the organization affairs in order to create mutual and useful communications based on that (Lehmkuhl & Jung, 2013).

CRM is a new pattern that aims to create meaningful dialogue and high-value relationships between an organization and customers, partners and employees. Being customer-centric as the main rule in SCRM can be considered which means that organizations must focus more on customers and their relationships with them instead of products and services. Accepting SCRM is closely related to the social and behavioral fields and different researchers in organizational behavior and social psychology show

that there is a need to examine the social aspects of in relations management and ICT acceptance. Therefore, it can be discussed that in the acceptance of SCRM systems, there is a high value in investments in the client-employee social networks. As a result, SCRM has the potential to focus on removed investigations in social and technical interactions adjacent CRM as it focuses on people and social network.This study wants to take an important and basic step in this field through the identification and ranking of effective indicators in assessing organization readiness to accept social customer relationship management and help the organization to recognize and assess the state of readiness with respect to these indicators.

Theoretical foundations and research literature

History of social customer relationship management

During recent years, customer relationship management has been considered in the form of an attractive title for various research and studies. In 2007 and especially in 2008, CRM was gone through a great transformation and it changed from a strategy that focuses on customer transactions to the strategy that both consider customer transactions and customer interactions. It could be a great contribution for obtaining required information for customer insight, if successful. As a result, it was renamed to CRM2.0 or social CRM. Most of these changes were due to a revolution in social relations that led to huge changes in the way of communicating with each other, especially in the younger generations.

Social networks are one of the key reflections of this change. Through the use of these social networks and other digital technologies, communication has become global and uninterrupted. The issue which was important in a unique way was that the information sharing tools as well as internet access and data loading tools have become simple and cheap. The low cost and availability of these tools changed the personal expectations. People expected the institutions for which they work to provide these tools and permission to use them. Trade was not ready for such a change. Customers gained access to information about how to deal with a business more than that business itself. Companies had to find new ways to deal with these customers. Finding the customer purchase history and identifying their buying patterns did not work anymore. Insights obtained through traditional transactional information did not satisfy the required knowledge to meet the needs of customers. Access to customers' conversations about companies and other related topics is more important than ever since the customers act upon these conversations and they affect the trade. All these issues mean that the customer command the business ecosystem now. The profound change of 2004 has changed the quality of customers' trust. This change showed that the customer was not the sales target but an activist. Today, the customer is known as social customer. The social customer shows the need for CRM 2.0. CRM 2.0 represents the strategies and tools for new levels of customer insight. This insight allows the customers to personalize their interactions and experiences with companies. This can lead to profit from these experiences. Companies and customers together provide the required knowledge for this insight. If companies realize the benefits of this work, the customer provides this insight for the company more willingly. The customer of new generation should be the center of attention to understand what CRM2.0 does to help businesses to gain more knowledge of customer within an organization.

Definitions, goals, vision and social CRM capabilities

Social CRM is considered as a kind of philosophy and trade policy which is supported by the technology infrastructure, business rules, social processes and characteristics and it is looking to engage customers in dialogue based on cooperation to create a mutual value in a transparent and safe business environment. This company's response to the customer's ownership is based on the dialogue. The suffix 2.0 for CRM is an indicative of the fact that a fundamental change has been occurred in the customer paradigm, but there is a need for operational and transactional capabilities of CRM at the same time (Greenberg, 2008). Some of the most important thinkers' definitions for this concept are as follows:

Social customer relationships management is a new paradigm that seeks to create and develop useful dialogues and valuable communications among organization, customers, employees and its partners. Customer orientation can be considered a target that social CRM has been created to achieve it. In other words, the main goal of the mentioned paradigm development was to change the organizations' focus from products to customer and related components (Askool and Nakata, 2010).

Web 2.0 and social media have provided new opportunities to create added value in the field of applicants' management of organization. Social customer relationships management pursues these mentioned opportunities and seeks a greater participation of beneficiaries in the organization affairs to create mutual and useful relations based on (Lehmkuhl and Jung, 2013).

CRM is an emerging concept and it is a kind of e-business strategy that empowers the organization to better manage relationships with their customers using social technologies (Chen and Vargo, 2014).

Unlike its traditional form, social CRM is a concept which provides the possibility of developing bilateral relations between the organization and its audience through facilitating dialogue and the authorization of the customers to create the content, (Shimp, 2009).

Considering the presented materials, accepting social CRM distinction from traditional CRM is obvious. Following this subject matter, functional areas of this important matter can be divided into five sections such as market research, marketing, sales, after-sales services and product development. A brief set of capabilities and goals in each of these areas are presented in Table 1 (Band and Petouhof, 2010).

Table 1 SCRM goals and capabilities

SCRM capabilities	SCRM goals	functional area
Constant monitoring of customer dialogue with each other instead of using focus groups and conducting research interrupted	Follow-up and attention	market research
Participating and stimulating conducting customers bilateral talks with each other instead of one-sided interaction with them	Dialogue	Marketing
Providing necessary facilities for interested customers to help sell or introduce (or product) to others.	Stimulation	Sales
Empowering customers to support each other	Support	After sales services
Helping customers to express ideas with the aim of improving products and services	Accepting comments	Product development

The investigation of organizational readiness assessment models for accepting technology and SCRM

In order to determine the most important factors that led to the acceptance and consequently the use of SCRM, there are patterns and models to assess the readiness of organizations for accepting the technology in general which can be the basis for the evaluation model of organizational readiness in accepting SCRM. Here we refer to these models.

Technology Acceptance Model (TAM)

In the last two decades, many studies have created a framework for research in the field of information technology acceptance and information system. Among them technology acceptance model (TAM) which was proposed by Davis in 1989 as the strongest and most influential model in describing the behavior and the determination of factors affecting the acceptance of information technology by the users of the system are taken into account (Wang et al., 2003). Technology Acceptance Model is derived from the theory of Ajzen and Fishbein as the theory of rational behavior. In the Technology Acceptance Model, a matching of the theory of rational behavior has been done by users for modeling acceptance and two main perceptions (perceived usefulness and ease of perceived use) form the basis of technology acceptance.

The developed technology acceptance model (TAM2)

In 2000, Davis and Venkatesh introduced Secondary Technology Acceptance Model (TAM2) which was the new version of the original model of acceptance. This is the initial model of TAM that explain the benefits and practical purposes resulting from social influence theory processes (Koury and Yang, 2010). In this

model, external variables that affect the usefulness of perceived and ease of perceived use were studied. For example, the impact of external variables such as social influence (mental norms) and cognitive tools (the relevancy of technology with jobs, image, quality and visibility of results) were studied. Venkatesh defined external variables that affect the perceived ease of use, such as the self-effectiveness of the use of computers, individual perceptions about behavior external control, fear and joy with computer use. after all, studies that were done in the this period contributed to reveal the factors that influence the perceived ease of use and perceived usefulness and the developed model (TAM2) was selected as an outstanding theoretical basis for next studies and research.

The more developed model of the Technology Acceptance Model (TAM3)

In later years, this model (Technology Acceptance Model 2) by adding indicators that explain perceived ease of use such as reference factors (computer self-efficiency, the perception of external control, computer anxiety and computer recreations) and comparative factors (perceived pleasure and objective usability) explains has been developed (Venkatesh and Bala, 2008).

Unified Theory of Acceptance and Use of Technology (UTAUT)

In 2003,Venkatesh et al. added some elements to the Davis' early acceptance of technology that had a major influence on behavioral intention, and finally the use of technology.

Venkatesh and Davis developed the initial model of technology acceptance to describe the usefulness perception and intention to use based on cognitive processes and social impacts (Venkatesh and Davis, 2000). According to the conducted studies, four important elements have a considerable impact in behavior acceptance and technology use, including:

- Performance prediction
- Efforts prediction
- Social influence
- Facilitation of conditions

Venkatesh et al. (2003) refer the performance prediction to the degree that the person believes that using the system will be beneficial in enhancing the perfossional performance. Effort prediction also refers to the degree of the ease of working with the system (Venkatesh et al., 2003).

Social influence refers to the condition that the person understands that credible people want him to use a technological system. Facilitating conditions refers to the

degree to which a person believes that organizational and technical infrastructures exist to support the use of system.

Unified Theory of Acceptance and Use of Technology, consists of two theoretical mechanisms that can indirectly influence people intention through perceived usefulness on the basis of subjective norm. This theory believes that subjective norms can have a positive impact on people imagination, because when important people in a social group convince someone that he should accept the new technology, users are also going to accept this new technology.

The unified theory of acceptance development model and use of technology (UTAUT 2)

Venkatesh et al. (2012) developed the previous model by adding two-variables model (hedonic incentive added value) that affect behavioral tendency, and a variable (habit) that determines the behavioral tendency and using behavior.

In addition to these models, there are other models that match previous theories by the SCRM area:

Organizational readiness assessment model for internet-based customer relationship management system

In 2001, Jutla et al. provided their research in the field of empowerment and organization readiness assessment for internet-based customer relationship management. The centrality of their model was the efficiency of beneficiaries' interactions.

Internet-based customer relationship management framework that they offered to support e-business beneficiaries' model includes the two main aspects: the identification of the components and associated enablers to support Internet-based customer relationship management and criteria and indicators for evaluating the effectiveness of beneficiaries' interactions. Components can include the entire process or tasks within them, infrastructure, technology, organizational culture or people. Enablers include technology, reliability, management and other support components necessary for proper implementation (Jutla et al., 2001).

In the readiness assessment model, Jutla et al. (2001) used criteria for measuring performance changes, costs and effectiveness of business processes for Internet-based customer relationship management. The criteria that were categorized in their research were placed in four groups, customer retention, customer satisfaction, customer acquisition and customer profitability. For presenting its own readiness evaluation model, Jutla divided Internet-based customer relationship management processes into four main components: commitment, buying, serving and support.

Each of these components have subsidiary enablers. These enablers represent kinds of technology, knowledge management and reliable enablers. In addition, enablers should integrate with enterprise resource planning, supply chain systems and partner relationship management systems, (Jutla et al., 2001).

Conceptual model of social networking, Web 2.0 and SCRM

Mohan et al. discuss about a conceptual model that uses social networking, web 2.0 and SCRM. In their own research, they show that social networking help organizations to increase their customers lifetime and they can find new customers and introduce a conceptual architecture that results from the integration of a CRM system, social network engine and web 2.0 (Mohan et al., 2008).

Readiness assessment model for organization 2

While referring to the adoption and use of web2.0 technologies in the organization reflects the same sense of organization2, Jorge Ramirez-Medina points out that many organizations are still not ready to become the organization 2. Therefore, they should measure their readiness to take advantage of all the benefits of the organization 2. Thus, in his study, he provides a system for quantifying of assessing the readiness of the organization 2 and says that this system can be used as guidance for the implementation arrangements of the organization 2. His readiness evaluation system factors have been obtained based on research in the field of assessing the readiness for accepting new technologies in organizations. Thus, factors that he used in his readiness evaluation system include technology readiness factor, organizational culture, environmental factors and technology factors (Ramirez-Medina, 2009).

The conceptual model for application understanding and accepting SCRM

TAM is the general base of this model. However, it influences Web 2.0 elements, perceived usefulness variables and perceived ease of use and familiarity, maintenance and sharing of information. Attitude toward using depends on the perceived usefulness and perceived ease of use and perceived reliability (Askool and Nakata, 2010). Askool and Nakata in their conducted research on the conceptual model of accepting in the field of SCRM believe that SCRM as an added value tool is used for improving customer communications. They argue that SCRM is a new paradigm that contribute to the creation of meaningful and valuable communication between the organization and its customers, partners and employees (which leads to a stable and rational interaction between them). Customer orientation plays a key role in the SCRM, which means that organizations should focus on their customers and their relationship with their organization instead of focusing on their products and services. Also, they argue that a SCRM system may include social networking websites, wiki workspaces for faster collaborations and integrated blogs for continuous conversations. SCRM

acceptance is closely related to behavioral and social background and diverse research in organizational behavior and social psychology suggest a need to studying the social aspects in accepting ICT. As a result, in accepting SCRM, investing on social networks, customer and staff has a high weight (Askool and Nakata, 2010).

The conceptual model for engaging customers in SCRM

Like the previous model, this model tries to explain SCRM system acceptance through the use of an adaptive model TAM and drawing user engagements elements as a result of the attitude toward the use defined by traditional definition TAM. Because of user involvement, this model defines the contact data process and finally CRM technology acceptance (Harrigan and Choudhury, 2012).

The customer acceptance and use of SCRM systems model

This model as a result of previous models is different. Components defined for shaping the behavioral intention to use SCRM in the this model are as follows:

- Perceived usefulness (Davis, 1985; Askool and Nakata, 2010; Harrigan and Choudhury,2012)
- Perceived Ease of Use (Davis, 1985; Askool and Nakata, 2010; Harrigan and Choudhury,2012)
- Perceived reliability capability (Askool and Nakata, 2010)
- social impact (Venkatesh et al., 2003, 2012)
- Hedonic motivation (Venkatesh et al., 2012)
- Habit (Venkatesh et al., 2012)
- And facilitating conditions (Venkatesh et al., 2003, 2012)

This model includes an explanation of the relationship between intentional and behavioral tendency.

Research methodology

This study has selected the banking industry to assess the readiness of organization for accepting the social customer relationship management (SCRM). Banking is considered to be one of the most dynamic and competitive industry in Iran. Therefore, the importance of the customer and his supporting technology can be clearly understood in this matter. Today, banking industry is not limited the traditional financial and credit knowledge. Nowadays, numerous banks and

financial institutions and organizations are moving towards the use of new technologies and methods to restore and improve the commonly used traditional methods. Customer relationship management is one of the most important areas of activity or perhaps the most important areas in banking which has recently benefited from tools and new technologies in order to be improved. It has professional and scientific workshops in advanced societies. Given the increasing competition in the banking industry in all aspects, accurate recognition of customers' needs has become a deeply important issue for banks to increase their satisfaction and loyalty. Customer relationship management is a business strategy to create mutual value which identifies all aspects of customer specifications, forms the relationships with the customer and makes the customers' perceptions about the organization's products or services. For this reason, it is very necessary to investigate this valuable concept in the banks which deal with the customer. In this regard, Mellat Bank in Tehran province was chosen as a case study.

In this research, fuzzy analytic network process (FANP) was selected as the multi-criteria decision-making model. With comprehensive study of existing literature, various models of assessing the organizational readiness to accept new technologies, especially in the field of information systems technologies, and social networks, a set of components and sub-components has been achieved. Finally, after studying the frequency of these components in resources and 4 main components and 14 sub-components were extracted according to the expertise inventory, academic experts' opinion and the organization experts.

For data collection, the matrix inventory of fuzzy analytic network containing all the components and sub-components was designed and confirmed by the experts. This questionnaire has been distributed among 15 organizational experts in the marketing department and informatics department. Typology of this study is as follows:

- From the perspective of purpose: This study is an applied research. It seeks to develop practical knowledge in the field of identification and ranking of effective indicators in assessing organization readiness to accept social customer relationship management. Therefore, it can be introduced in the range of applied researches.

- From the perspective of data collection method: This study is a descriptive survey research which aims to describe and explain certain aspects of a situation.

Administration template of this study is shown in Figure 1.

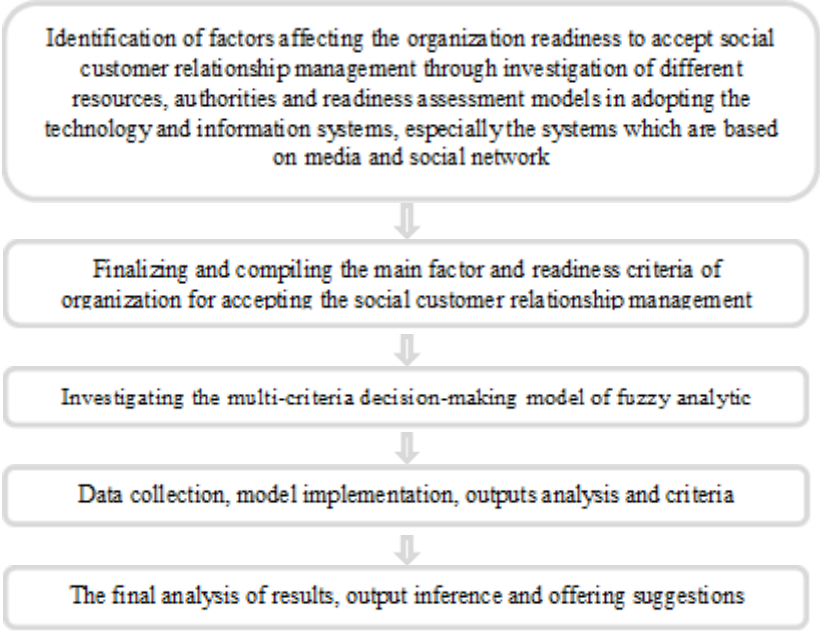

Figure 1 The research administration template

Research findings

Components, sub-components and the conceptual model for organization readiness assessment for accepting social customer relationship management (SCRM)

As previously mentioned, after obtaining and collecting domestic experts' opinion and professors' verification, the effective components has been finalized. This finalization has been done considering two perspectives of resources authors as well as domestic experts and professors' opinion. Finally, a conceptual model containing 4 main components and 14 sub-components has been presented. In the following, this conceptual model is presented. After identifying effective components and sub-components in readiness for acceptance of SCRM, it is necessary to specify the relationship between these factors (components and sub-components). To do this, the opinions of a group of relevant experts were used. The network model for explaining the relationship between the target elements, components and sub-components is presented in the following graph.

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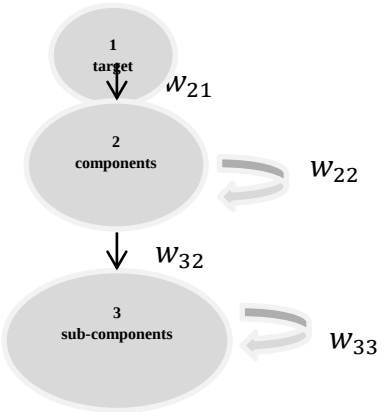

Figure 2 network model

The graph shows that our target affects the components and sub-components. This graph also suggests that the components and sub-components are inter-dependent. This relationship and dependency is shown by w_{21}, w_{22}, w_{32} and w_{33} which are used in designing a suitable questionnaire.

Table 2 Final components

Target	Components	Sub-components
Readiness for SCRM acceptance	Organizational	Senior management support
		Customer orientation
		Plan development for specific organizational change SCRM
		Culture
		Organizational resources (assets, knowledge and business processes enterprise)
	Technological	Updating company's technology
		Investment in information technology
	Human	Human resources readiness for activities on the web 2.0
		The definition of collaborative workflows, activities and social processes
		Rebuilding relationships within the ecosystem created by customers
	Environmental	Competitors
		Partners
		External pressures and market conditions
		Customers

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Unlike the analytic hierarchy process (AHP) in which the relationship between the target, components and sub-components is hierarchical and unidirectional, in the analytic network process (ANP), in addition to the hierarchical relationship, there are mutual dependency and relationship between the components as well as the sub-components in some parts of the model. These relationships (external dependency) in the model are shown by arrows. The elements in a cluster may be mutually connected (internal dependency). These relationships will be represented in the form of an arc in the model. In this study, after consulting with organizational scholars, the dependency between the components and sub-components was confirmed and the research model was formed (Figure 3**)**.

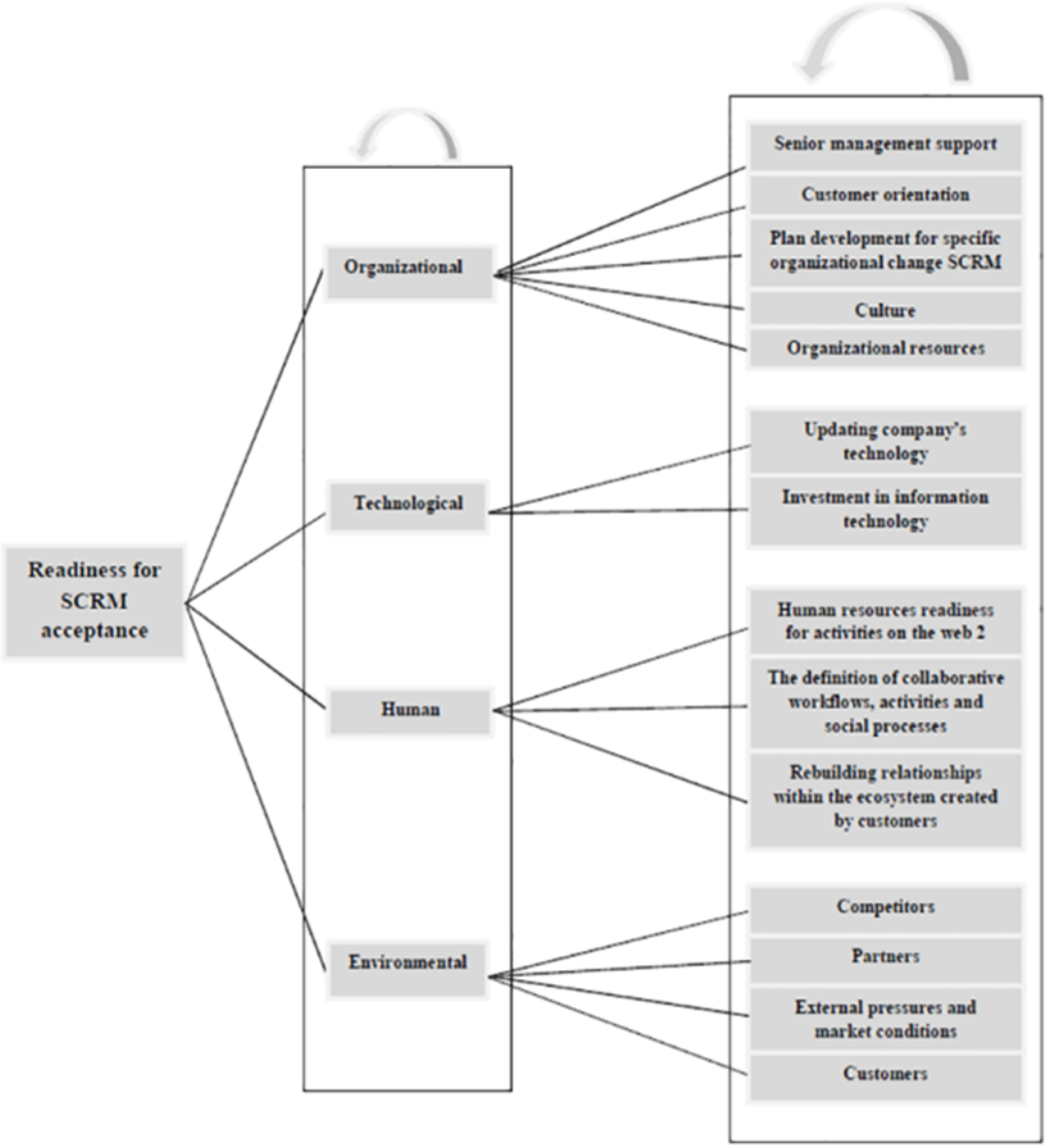

Figure 3 Conceptual model

Formation of pairwise comparison matrix and determination of priority vectors

Decision elements in each cluster are compared in a pairwise manner on the basis of their importance in relation to the control measures. Based on their role and impact in achieving the target, the clusters are also compared with together in a pairwise manner. Furthermore, the interdependencies between elements of a cluster should be checked as well. Therefore, the comparison matrices of the main components, the dependency of the main components to each other and sub-components and their interdependency are formed at this stage. The compatibility of the mentioned cases will be controlled as well. Saaty (1999) believes that 10 experts is sufficient for pairwise comparison-based studies. In this study, 15 organizational experts in the marketing department and informatics department were selected to answer the relevant questions. To get more precise output of this approach, the experts' opinions were accumulated using the concept of geometric mean based on the equation 1.

$$f_{ij} = (f_{ij}^1 \times f_{ij}^2 \times \dots \times f_{ij}^k)^{\frac{1}{k}} \quad (1)$$

In this equation, f_{ij} is the accumulated crisp of ith measure (components) and jth measure of k and faithful expert for i , j = 1, 2 ,..., n.

Pairwise comparison of the main components

The pairwise comparison of the main components of this research is done based on Saaty's 9-unit scale. The result of the pairwise comparison of the main components and its weighted vector which is marked with the symbol W_{21}can be seen in Table 3. To calculate the eigenvector of each table of accumulated pairwise comparison, the logarithmic least squares method (LLS) is used according to equation 2.

$$w_k^s = \frac{\left(\prod_{j=1}^{n} a_{kj}^s\right)^{1/n}}{\sum_{i=1}^{n}\left(\prod_{j=1}^{n} a_{ij}^m\right)^{1/n}} \quad , \quad s \in \{l, m, u\} \quad (2)$$

$$w_{k=\left(w_k^l, w_k^m, w_k^u\right)} \quad k=1, 2, 3, \dots, n$$

Table 3 The matrix of Pairwise comparison of the main components

Main criteria	Organizational	Technological	Human	Environmental	The importance of criteria (W_{21})
Organizational	(1,1,1)	(0,0,0)	(0,0,0)	(0,0,0)	0.403
Technological	(1.66,2.17,2.71)	(1,1,1)	(0,0,0)	(0,0,0)	0.215
Human	(2.08,3.08,4.09)	(0.36,0.44,0.55)	(1,1,1)	(0,0,0)	0.276
Environmental	(1.62,2.08,2.66)	(1.54,1.95,2.42)	(1.10,1.37,1.71)	(1,1,1)	0.104

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Pairwise comparison of internal dependencies in main components

Based on the opinions obtained from the meetings with the relevant experts, Table 3 indicates the relationships between the research main components. To understand the interdependencies between the main components of this study, the pairwise comparison of the components of this research was done based on Saaty's 9-unit scale. To do this, the pairwise comparison of other triple components has been done by controlling each of the quadratic cases.

	Environmental	Human	Technological	Organizational
Organizational	*	*	*	
Technological	*	*		
Human	*			
Environmental				

Table 3 Internal dependencies in main criteria

For example, in the first case, the first criterion which is the organization is controlled. The following question is raised. What is the relative importance of technical criterion in comparison with human criterion when the organizational criterion is controlled? The outcome obtained from doing these processes is the internal dependencies among the main criteria which are marked with the symbol W_{22} in this research.

Table 4 The matrix of interdependencies between main research components

criteria	Organizational	Technological	Human	Environmental
Organizational	0	0.575	0.562	0.620
Technological	0.340	0	0.299	0.106
Human	0.532	0.272	0	0.273
Environmental	0.127	0.152	0.138	0

Pairwise comparison of sub-components and their internal dependencies

Similar to the previous process, the pairwise comparison of the sub-components of this research was done based on Saaty's 9-unit scale. Expression of this scale is denied due to the use of its abbreviation. Matrix W_{32} which is the weighted vector obtained from the pairwise comparison of the sub-components is presented. Due to the use of abbreviation, the components presented in Table 1 are determined with the letters A, B, C and D, respectively and the sub-components are shown by A1, A2, A3, A4, A5, B1, B2, C1, C2, C3, D1, D2, D3 and D4, respectively.

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Table 5 Pairwise comparison of the research sub-components (W_{32})

components / sub-components	A	B	C	D
A1	0.395	0	0	0
A2	0.254	0	0	0
A3	0.091	0	0	0
A4	0.147	0	0	0
A5	0.111	0	0	0
B1	0	0.165	0	0
B2	0	0.834	0	0
C1	0	0	0.340	0
C2	0	0	0.532	0
C3	0	0	0.127	0
D1	0	0	0	0.093
D2	0	0	0	0.370
D3	0	0	0	0.177
D4	0	0	0	0.359

The weights and the percentage of dependency between these sub-components were compared with each other. The result is given in Tables 6 and 7.

Table 6 Internal dependencies in sub-components

	D4	D3	D2	D1	C3	C2	C1	B2	B1	A5	A4	A3	A2	A1
A1						*		*	*		*	*		
A2	*													
A3							*		*					
A4														
A5									*					
B1								*						
B2														
C1														
C2														
C3	*													
D1		*												
D2														
D3	*													
D4														

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Table 7 The matrix of internal dependencies between the research sub-components(W_{33})

	A1	A2	A3	A4	A5	B1	B2	C1	C2	C3	D1	D2	D3	D4
A1	0	0	0.726	0	0	0.569	0.727	0	0	0	0	0	0	0
A2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.162
A3	0.265	0	0	0	0	0.105	0	0	0	0	0	0	0	0
A4	0.196	0	0	0	0	0	0	0	0	0	0	0	0	0
A5	0	0	0	0	0	0.096	0	0	0	0	0	0	0	0
B1	0.257	0	0.144	0	0	0	0.272	0	0	0	0	0	0	0
B2	0.227	0	0	0	0	0.228	0	0	0	0	0	0	0	0
C1	0	0	0.129	0	0	0	0	0	0	0	0	0	0	0
C2	0.053	0	0	0	0	0	0	0	0	0	0	0	0	0
C3	0	0	0	0	0	0	0	0	0	0	0	0	0	0.226
D1	0	0	0	0	0	0	0	0	0	0	0	0	0.312	0
D2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D3	0	0	0	0	0	0	0	0	0	0	0	0	0	0.610
D4	0	0	0	0	0	0	0	0	0	0	0	0	0.687	0

The formation of limited super matrix

To achieve the overall priorities in a system with mutual influences, the vectors related to domestic priorities (calculated Ws) enters the specified matrix columns. As a result, a super matrix (divided matrix) is obtained which shows the relationship between two clusters in a system in each part. The weighted super matrix is calculated by multiplying the values of non-weighted super matrix by clustered matrix. Then, the obtained values will have random columnar mode through normalization. Finally, the limited super matrix is calculated through exponentiation of all elements of weighted super matrix until the divergence is achieved or, in other words, all elements of the super matrix become alike. In fact, the purpose of limiting the weighted super matrix is to determine the relative and long-term impact of each element on each other. It is noteworthy that the elements of super matrix must be normalized to obtain random mode (the columnar elements' sum must be one). Table 8 shows the limited super matrix.

International Journal of Management, Accounting and Economics
Vol. 4, No. 7, July, 2017
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Table 8 Limited super matrix

	target	components				sub-components													
target		1	2	3	4	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
components	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sub-components	1	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235
	2	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071
	3	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106
	4	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073
	5	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
	6	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148	0.148
	7	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
	8	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114	0.114
	9	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101
	10	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096
	11	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033
	12	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
	13	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109
	14	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042

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The final weights of sub-components

With regard to the limited super matrix, the final weights of sub-components in comparison with the target are presented in Table 9.

Table 9 The final weights of sub-components in comparison with the target

sub-components	weight	priority
Senior management support	0.235	1
Customer orientation	0.071	10
Plan development for specific organizational change SCRM	0.106	6
Culture	0.073	9
Organizational resources (assets, knowledge and business processes enterprise)	0.04	12
Updating company's technology	0.148	2
Investment in information technology	0.123	3
Human resources readiness for activities on the web 2.0	0.114	4
The definition of collaborative workflows, activities and social processes	0.101	7
Rebuilding relationships within the ecosystem created by customers	0.096	8
Competitors	0.033	14
Partners	0.038	13
External pressures and market conditions	0.109	5
Customers	0.042	11

Findings analysis

In accordance with the results of analysis, the organizational factor is the most important factor in readiness for accepting the social customer relationship management in Mellat Bank. The environmental factor is the least important factor. Human and technological factors are the second and the third priority, respectively. Given the fact that bank is a service organization, the importance of human resources in banks is quite clear. It is obvious that the efficient human resources are the most important asset of any organization. In explaining the importance of human resources in comparison with technology (both of which are major factors in increasing the productivity), almost all experts consider human resources as the most important factor. They believe that, if needed, we can buy technology from other countries, but human resources are not like technology. Human resources must be developed as the main public funds. With the use of appropriate policies, the human resources must be motivated. The environmental factor is in the last place, but it has an important role in acceptance of CRM. Today, the commercial competitors try to overtake their counterparts by using these types of technology. As it is the age of media and social network, the expectations of organization customers and target audiences increases. Therefore, the environmental factors can play a good role in accepting the technology. This factor should be considered as a contributing factor by organizations.

- As it is observed from table 9 of final weights, the support of senior management has the first place among effective factors in readiness of organization for accepting social management of relationship with customer which this factor is among the most important factors in reception of novel technology in this organization and our dear country, Iran. Here it plays an important role. The support of organization senior management is one of the most important factors which simplifies the reception of new technologies in the organization and has positive relationship with the reception of technology. Many studies showed that the support of senior management plays an important role in reception and publishing innovations in the organization and senior management can make a suitable environment for the reception of innovation and technology with his support and positive landscape in the organization.

- Updating company's technology and investment in information technology had the second and third ranks respectively in this process of reception. Its reason is clear. Because banks and financial institutions have so important role in the process of developing countries such as the country of Iran. Hence investment of this section in information technology should be carefully done until along with preventing the loss of national capitals, efficiency and utilization will be increased.

- The factor of human resource readiness for activities on the web 2.0 had the fourth rank among other factors. Because human capital is among important and effective variables and complement for accepting information technology and labor efficiency in banks and financial institutions. Because whatever the level of education of labor will be more, they have more ability in performance and reception of new technologies.

- Next criterion of external pressures and market conditions by having close weight to the readiness of human resource has important effect in the organization for this purpose. Whereas private banks are increasingly equipped with novel technologies and based on novel discussions of social banking and utilizing the competitors of this bank from this technology and the effect of market and its situation which is always changed, has an important role on the reception of social management of the relationship with customer in this bank.

- Plan development for specific organizational change SCRM is the next factor. The managers of this organization are increasingly noticed this fact which separated attempts are not sufficient for solving complicated organizational problems and wider and comprehensive planning is necessary so that coordinated strategies will be achieved for nurturing organizational environment, method, relationships among people, communicational and informational systems and they should be compatible with predictable and unpredictable situation and necessities in the future years.

- Organizational culture is always one of the most important factors in the reception of new organizational technologies and in this organization they had the ninth rank in terms of the importance for purpose. Because this organization had the experience for the reception of novel organizational technologies and culture making is sufficiently performed and fortunately organization has suitable readiness for the reception of this

product and this matter caused that the resistance of personnel is lower against the reception of this technology.

- Customer orientation factor has the tenth rank in this regard. The reason is that this organization inserted this factor in ethical charter of its personnel and it indicates the importance of this organization to this item and hence being customer-based in all sides of this organization has its placement and for this reason it has lower priority towards other components in terms of the importance in the reception of SCRM.

Discussion and implications

Banking is involved in technology more than each industry on presenting other services. In the industry of banking, technology acts as a competitive and distinguishing factor. For this reason, top banks in the world annually perform large investment on improving their technological infrastructures. Studying organization performed valuable proceedings for applying new technologies. Hence making an integrated approach in using technology and improving infrastructures, systems and instruments are necessary for qualitative increasing of the services. This organization should take good and effective steps for making competitive advantage in improving the level of required technology.

Iranian banks need human capital for the success in the world area more than each capital. Attracting talents and individuals by high capability is resulted in improving the quality and professional power of Iranian banks in addition to it can increase the level of knowledge and the skill of Iranian bankers. This organization should perform common program of development and empowerment of human force with world leading banks especially in the form of common collaborations for nurturing professional forces and improving the level of their capabilities. Also referring to professional labor market of banking in addition to local market is one of the instruments for equipping banks to capable human force and having professional capabilities.

Since the factor of senior management support plays fundamental role in the reception of this technology and also we know that SCRM is a new phenomenon and there is resistance against each new changes in the organization. For being successful in the route of reception and performing SCRM, agreed idea and the cooperation of related managers must be attracted in SCRM projects and proceed to the correction of manager viewpoint in this regard. Senior managers of this organization should have dynamic and smart thought in this regard and also they should have suitable orientation power when there is necessity for risk analysis until he can select suitable solution. But it is proposed that educational courses in above fields will be held for managers and experienced advisors should be applied in this regard and also by holding educational seminars, the knowledge and skill of managers will be improved in the reception of new technologies and utilizing it and also managerial methods must be trained in accordance with the structure based on information technology to them.

Conclusion

Organizations employ information and communication technology (ICT) in their organization in different ways. The readiness of organizations cannot be determined and developed without a proper system. Therefore, using a comprehensive pattern to assess the organization readiness for accepting the social customer relationship management as an unavoidable precondition can increase the probability of success considerably. In this research, the social customer relationship management and its relevant concepts have been investigated. The components and sub-components of the main factors have been specified, prioritized and ranked. Capability assessment models and frameworks have been studied. By enlisting the experts' opinions, the organizational readiness in accepting social customer relationship management was evaluated, identified, explained, ranked and classified using fuzzy analytic network process. It contains four components including organizational, human, technological and environmental factors and 14 sub- components. It is obvious that the model presented in this study as well as the approaches indicating the assessment condition of organization readiness for accepting the social customer relationship management before its implementation can help the successful implementation of social customer relationship management programs. This model can help the organization to get rid of their confusion. This confusion raises two questions; "are they in a position to use this technology or not?" and "will they use it efficiently?".

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