Investigating the Influence of Customer Knowledge Management on Customer Relationship Management: A Case study of Mellat Insurance

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Abstract

This paper aims at investigating the Influence of customer knowledge management (CKM) on customer relationship management (CRM). Therefore, the staff of Mellat insurance in Mazandaran province was selected as the research community. This study is based on quantitative methods and is a kind of descriptive correlational study. The questionnaire is used to collect data. In order to analyze the data SPSS and LISREL and Kronbach's alpha test, Friedman and Spearman were used, respectively, for reliability, ranking variables and correlation between variables. The research results show that there is a significant relationship between customer orientation and knowledge management.

Keywords: knowledge management, customer relationship management, Customer Knowledge Management

Introduction

Knowledge is considered a key competitive factor in the global economy, but for the successful presence in today's dynamic market should pay attention to an important component that is called customer. The use of knowledge management with customer relationship management creates opportunity for organizations which makes it more likely to detect opportunities in markets and increase their competitive advantage (One, 2007). Knowledge management is the organization's ability to capture, manage and deliver information, services, products and formal customers in real-time that improve responding to customers and provide make quick decisions based on reliable information (Alavi and Leidner, 2009). In fact, knowledge management builds up and then it is environmental management that encourages creating, sharing, learning, promotion and knowledge organization (Kebede, 2010). Since knowledge management requires a change in organizational vision and therefore has great deals with innovation and organizational learning, it will have a decisive role in the CRM implementation. Moreover, empirical studies have been published on this subject, is highlighted KM capabilities as a variable that has a significant impact on the success of CRM (Sin et al., 2005; Choteau, and Li, 2003; Love et al., 2009).

Thus, knowledge management is an integral part of CRM (Firoozabad, 2004). Organizations cannot effectively communicate with customers unless they understand what services, how and when is valuable for clients and how much it costs (Shahin and Nikneshan, 2008).

CRM is used as a management tool for managing relations with customers. To establish a good relationship with customers is essential that a communications of a company and its effects on clients is in favorable and satisfactory procedures and products to the market area should in the face of changing requirements for customer directly. This problem requires measured management from knowledge of customer (Tonsa et al., 2008). CKM has the ability for organization in designing and implementing customer relationship management, provides a strategic advantage (Sharpe and Alan

pelz, 2007). This study seeks to answer the important question to what extent knowledge management will effect on CRM.

Theoretical background

Use of customer knowledge management for CRM reduces risk factor in strategic decisions to maintain customer loyalty. Thus, decision-making process will be more effective and smartly (Sharpe and Alan pelz, 2007). These prospective companies understand that their future workforce will have the most efficient when they could use their knowledge. Not only successful companies have customer-oriented point of view but also them able to relate this knowledge with important business decisions (Pashne tala, 2007). CRM is an approach that emphasizes cooperation of mutual exchange in order to create value, in fact relationship marketing cause strengthening the organization (Divine Birth, 2008).

With acceleration of competition in today's business environment, it is important to pay attention to this issue. Thus, this research was done for providing recommendations on customer satisfaction and the need of organizations, and for the first time it investigated indicators on understanding and segmentation of customer, specializing in customer relationship, interact with the customers and to attract and retain the customers of Mellat insurance company. In today's world, knowledge management is emphasized as an essential element to survive and remain organization competitive advantage. Also, different strong factors are changing the business world, which in turn has led to fundamental changes in organizational processes. These factors can be globalization, environmental complexity and uncertainty rising, increasing competition, changes in choice pattern, customer's requirement and so on (Mohammad Zare, 2002). Organizations that use customer knowledge management to increase the quality of its services to clients, they understand the importance of using knowledge management to overcome in wasting customer information and proper use of it (Abtahi, 2004). Unlike the benefits of understanding of clients for companies, sometimes it has been criticized gain knowledge about customers, especially when organizations consider the clients as passive participants, not active this causes the incorrect concept of CKM is formed (Antikainen, 2011).

On a theoretical level, CRM provides a number of benefits, but a lot of studies show high failure rate in implementing of this strategy (Starkey and Woodcock, 2002). By reviewing these failures, a number of researchers (Rigby et al., 2002; Xu and Walton, 2005) argue that one of the main causes of failure is not CRM integration with overall company strategy, rather taking CRM as a purely technological tool regardless of cultural change and different organization. Many researchers believe that, while the majority of past researches have focused on the technological aspects of CRM, today's knowledge management has a very crucial role (Lambe, 2008; Shi and Yip, 2007).

There is a high failure rate of CRM implementation and the need to understand reasons for success of some activities (Roh et al., 2005). There is need for an explanation model for the success of CRM knowledge-based that includes variables that cause successful implementation of the strategy. Consequently, we can say the relationship between CRM and KM are a major issue in management research (Shi and Yip, 2007; Campbell Alexandre, 2008) including the potential for cooperation (synergy) in both sense, a theoretical model of the integration of these two concepts emerges that is the customer knowledge management model (Model CKM) (Gebert et al., 2003; Morgan, 2007; Guo Ying Chum, 2007). Since the markets, products and customers requirement constantly change, service providers should employ a vast amount of information about markets, competitors and solutions for customers (Sharpe and Alan pelz, 2007). Along with CRM, the importance of CKM in the organization must also be considered.

Another research done by Guoyingchun (2007) entitled as "the ability of knowledge in the CRM in Power Companies of China" was made to study knowledge management processes in conjunction with CRM and its application. The study variables included: (1 gaining and producing of customer knowledge 2) storing customer knowledge 3) distribution customer knowledge 4) using customer knowledge (Guoyingchun, 2007)

In a paper by Linyi Chen (2006) as "having knowledge in creation approach for customer relationship management" has written, states that the customer knowledge and customer knowledge management are factors that applying them are the key influence on their organization's performance.

In another study done by JyhjongLin (2006), "target-oriented method development for Customer Knowledge Management Information Systems" was done to investigate the application and development of customer knowledge management information systems in organization. The variables of this research are knowledge management, special and general applications and data base knowledge of the organization. The results of this study showed that the effective management of customer relationship management using customer knowledge in organizations is possible and it is the most important resource for creating competitive advantage in organizations.

Finally, in another paper done by ChoTonso (2006), "development of new products using customer knowledge" was presented by the development of new products using customer knowledge. In this paper, the results indicated that the use of customer knowledge helps organization in new product development and strategic decisions. And, it provided a model that emphasizes the importance of acquiring knowledge from customers to develop new products.

Hypothesis development and conceptual model

Main objective: To evaluate the impact of CKM on customer relationship management.

Secondary objectives: To evaluate the impact dimensions of gaining and producing of customer knowledge, storing customer knowledge, distribution and transferring customer knowledge, using customer knowledge on dimensions of CRM in Mellat insurance.

Main hypothesis: CKM has an impact on CRM.

Sub-hypotheses: Gaining and producing of customer knowledge, Storing customer knowledge, distribution and transferring customer knowledge, using customer knowledge have an impact on dimensions of CRM.
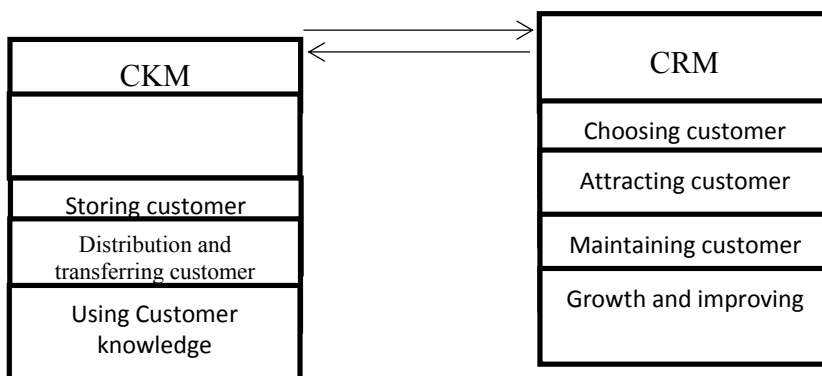
Figure 1: Conceptual model of research, the impact of CKM on customer relationship management

Materials and Methods

This study is considered as correlation research and is survey-based. The research population includes 108 employees of Mellat insurance in Babol and Babolsar. In this study, data analysis was conducted by descriptive and inferential statistical methods, which is done as follows:

In this study, Kronbach alpha test has been used in order to clarify the reliability of variables and the value of Kronbach alpha was obtained to be 0.78. Friedman test was used to rank each variable component.

The Pearson correlation test was also used to examine the relationship between variables. SPSSwin is the software used to data analysis.

Data analysis

Table 1: Demographic data

Total				man	woman	Quantity	Gender
120				90	30	Frequency	
100%				75%	25%	Percent	
Total			48-60	29-38	28-18	Quantity	Age
120			15	84	521	Frequency	
100%			12.5%	70%	17.5%	Percent	
Total				Married	Single	Quantity	Marital status
120				102	9	Frequency	
100%				92.3%	7.7%	Percent	
Total	Master's degree and above	Bachelor	Associate Degree	Diploma	Under diploma	Quantity	Education
120	6	72	6	36	0	Frequency	
100%	5%	60%	5%	30%	0	Percent	

Inferential data

In this paper, inferential tests such as Kronbach alpha, EGF and Pearson were used that some of these tests have removed from the paper for avoiding high volume of paper, and the results of some of them are mentioned. The above results are as follows: Kronbach alpha approved the reliability of the measurement tool. Friedman test indicated the ranking of components of each dimension.

Validity and reliability testing of measurement tool (questionnaires)

Kronbach alpha test was performed and Kronbach alpha coefficient is. /91. Therefore, the null hypothesis is approved, this means that internal consistency among the variables is desirable and measurement tool has reliability.

Table 2: Friedman test

Kronbach alpha of KM	Number of question
0.918	42

Friedman test for the dimension of CKM

According to the Friedman rank test, and the comments of the respondents and their level of importance assigned to dimension of knowledge management and indicators of gaining and

producing of customer knowledge, storing customer knowledge, distribution customer knowledge, using customer knowledge are discussed. The test results related to gaining and producing of customer knowledge showed that the significant level of test is greater than 0.05 (sig = 0.11), thus one hypothesis that is based on the ranking of the average are different, is not approved. The test results related to storing customer knowledge showed that the significant level is (sig = 0.08), and this value is greater than 0.05 therefore the null hypothesis is approved, and one hypothesis is rejected and this means that there is no difference between them. The test results related to distribution customer knowledge showed the significant level is (sig = 0.001). This value is smaller than 0.05, so we can say that the null hypothesis is rejected and one hypothesis is approved and this means that there is a difference between them. The test results related to indicator of using customer knowledge showed the significant level is (sig = 0.02), and this value is smaller than 0.05, therefore the null hypothesis is rejected and research hypothesis is approved and this means that there is a difference between them.

Friedman test for the dimension of CRM

According to the Friedman rank test, and the comments of the respondents and their level of importance assigned to dimension of CRM and indicators of choosing customer, attracting customer, maintaining customer and growth and improving customer are discussed. The test results related to choosing customer showed that the significant level of test is smaller than 0.05 (sig = 0.11), thus one hypothesis that is based on the ranking of the average are different, is approved. The test results related to attracting customer showed that the significant level is (sig = 0.08), and this value is smaller than 0.05 therefore the null hypothesis is rejected, and one hypothesis is approved and this means that there is a difference between them. The test results related to mmaintaining customer showed the significant level is (sig = 0.001). This value is smaller than 0.05, so we can say the null hypothesis is rejected and one hypothesis is approved and this means that there is a difference between them. The test results related to indicator of growth and improving clients showed the significant level is (sig = 0.02), and this value is smaller than 0.05, therefore the null hypothesis is rejected and one hypothesis is approved and this means that there is a difference between them.

Results of correlation test

There is a significant relationship between the two variables choosing customer and gaining and producing of customer knowledge and the value of correlation coefficient equals to 0.47.

There is a significant relationship between the two variables choosing customer and storing customer knowledge and the value of correlation coefficient equals to 0.46.

There is no significant relationship between the two variables choosing customer and distribution customer knowledge, and the correlation coefficient equals to 0.16.

There is no significant relationship between the two variables attracting customer and gaining and producing of customer knowledge and the correlation coefficient equals to 0.56.

There is no significant relationship between the two variables attracting customer and storing customer knowledge and the correlation coefficient equals to 0.72.

There is no significant relationship between the two variables attracting customer and distribution customer knowledge and the correlation coefficient equals to 0.22.

There is no significant relationship between the two variables attracting customer and using customer knowledge and correlation coefficient equals to 0.35.

There is no significant relationship between the two variables maintaining customer and gaining and producing of customer knowledge and the correlation coefficient equals to 0.60.

There is no significant relationship between the two variables maintaining customer and storing customer knowledge and the correlation coefficient equal to 0.54.

There is no significant relationship between the two variables maintaining customer and distribution customer knowledge and the correlation coefficient equals to 0.45.

There is no significant relationship between the two variables maintaining customer and using customer knowledge and the correlation coefficient equals to 0.32.

There is no significant relationship between two variables growth and improving customer and gaining and producing of customer knowledge and the correlation coefficient equals to 0.59.

There is no significant relationship between two variables growth and improving customer and storing customer knowledge and the correlation coefficient equals to 0.43.

There is no significant relationship between two variables growth and improving customer and distribution customer knowledge and the correlation coefficient equals to 0.28.

There is no significant relationship between two variables growth and improving customer and using customer knowledge and the correlation coefficient equals 0.01.

There is no significant relationship between two variables customer relationship management and customer knowledge management and the correlation coefficient equals to 0.67.

Structure Evaluation Model (SEM)

Research hypothesis

Null hypothesis: the totality of structural equation model of the relationship between customer knowledge management and customer relationship management is not always approved.

Hypothesis one: the totality of structural equation model of the relationship between customer knowledge management and customer relationship management is approved.

Statistical hypothesis
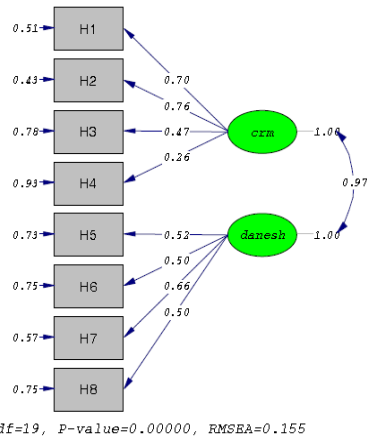
H0: RMSEA ≥ 0.10

H1: RMSEA <0.10

According to the amount of coefficients, the variables with "t" amount of more than two, their effectiveness on CRM is approved. Standardized coefficients shows the impact of variables such as gaining and producing of customer knowledge, storing customer knowledge, distribution customer knowledge, and using customer knowledge in each variable of CRM.

Pattern of causal relations of structural equation model of knowledge management dimension on effectiveness of CRM based on the software of structural equations is as shown in Figures 1-3.
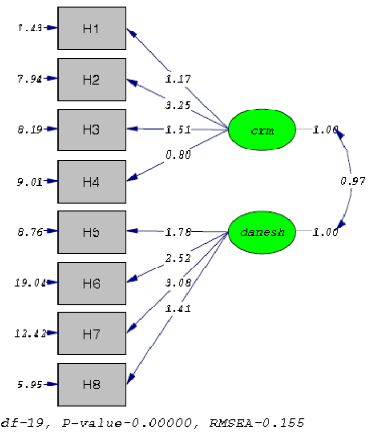
Conclusion and recommendations

Friedman test showed that in dimension of storing customer knowledge the component of each customer transaction information , in the dimension of distribution and transferring customer knowledge the component of transferring knowledge , in dimension of using customer knowledge the component of quick access information, in dimension of choosing customer the component of the best and important customer, in dimension of attracting customer the component of endeavor for potential and actual customer, in dimension of maintaining customer the component of handling and responding to customer complaints , in dimension of growth and improving customer the component of conduction E activities obtained the first rank.
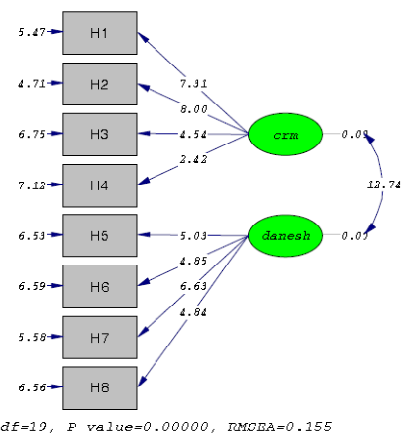
Figure 1: Standard Chart Software	Figure 2: Graph Estimating Software

Figure 1: Standard Chart Software

Chi-Square=67.22, df=19, P-value=0.00000, RMSEA=0.155

Figure 2: Graph Estimating Software

Chi-Square=67.22, df=19, P-value=0.00000, RMSEA=0.155

Figure 3: T-Value Chart Estimating Software

Chi Square=67.22, df=19, P value=0.00000, RMSEA=0.155

In accordance with the findings and results of statistical tests and other research findings, in order to improve KM on CRM of the staff of Mellat insurance and use of effective factors on them by implementation of applications for enhancing the productivity the following issues are recommended:

1- It is recommended that effective factors of relationship with customers within or outside the organization should be taken into consideration.

2- Since the effect of using customer knowledge on customer relationship management were confirmed in Mellat insurance, it is recommended that training class for staff to getting familiar with their duties and responsibilities to be held.

3-Choosing customer has positive effect on customer relationship management. Therefore, it is proposed to improve it among workers in Mellat insurance, workers better

understanding customer knowledge and choose the best and most efficient of it, enhance the productivity and success of Mellat insurance.

4- Since attracting and maintaining customers in customer knowledge management has the highest correlation coefficient than other levels , and in developing the organization's goal "attracting customer " has the highest and best advantage compared to other dimensions. It is recommended for Mellat insurance use empowering and participatory styles.

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