A novel model for customer relationship management pathology

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Abstract
Customer relationship management is a strategy to gain competitive advantage and a novel idea to business competition area in 21st century and is the cornerstone of financial success. In this study a model has been developed for CRM system evaluation based on Huang model, inferential statistics and Entropy method for pathological purposes. Then, the model has been implemented in “Iran Khodro Emergency Services Co.” as the case study of this research and CRM experts were surveyed to respond model questionnaire. The results of the model implementation show the gap between current and ideal situation and point of improvements and also their priorities for future corrective actions.

Keywords: Customer relationship management (CRM), CRM indicators, Automobile emergency services

Introduction
In the era of internet transparency, organizations can no longer hide behind their policies and prices. Customers are intelligent enough to know that they have right to choose and when they have had bad experiences about services presented by an organization they make use of their rights and choose other organizations. That means that unlike previous decades, customers decide not organizations. Nowadays important technological and mercantile challenges consist of: Attracting and keeping his customers, increase customer satisfaction, loyalty, and ultimately the profitability of the company. Success in these challenges is essential for any organization. One way to achieve above mentioned goals is investment of CRM. CRM is a marketing strategy that not only aims to raise the level of trading and short-term profitability, but also tries to obtain integrated perspective of customer and find a solution for having cordiality towards customers in order to enhance customer satisfaction and increased profits in the long run. CRM is a business guideline to optimize profitability, creating revenue, and customer satisfaction which is designed based on following principles (King & Burgess, 2007): a) Coordinating the delivery of services based on customer needs. b) Raising the level of customer satisfaction with customer-oriented principles. c) Implementation of customer-centric processes.

Thus, organizations which are experiencing the moving toward economic data, competition market and globalization by using new strategies should strive to keep their customers satisfied. CRM can be the appropriate method to achieve this goal.

Research goals
One of the characteristics of the area origins in is more complex and competitive conditions; meanwhile the expectations of customers take a more modern look every day. They expect that organizations pay more attention to quality and variety of goods and services, and time dealing with customer. Therefore, organizations are successful which can adapt to the customer needs and cope with environmental demands and needs. And this is not possible; unless they understand to be customer-oriented. Fig. 1 shows the necessity of being customer-oriented.

![Fig. 1. Necessity of being customer-oriented](image-url)

In fact, customer oriented organizations schedule based on preferences and expectations of customers and tries to satisfy their requirement. Products are produced in terms of customer satisfaction. (Brown, 2002). It’s not sufficient for automobile manufacturers to focus only on development, manufacturing, quality improvement, and sale. Main challenge is to present individual transportation for customers. In other words there should be services such as repair, providing production services, finance, insurance, trip services, and road services (Edwards, 2002). So that CRM for long-term profitability and success is vital in current competitive market. Empowered managers, information technology experts, and executed marketers should be able to understand how to make a beneficial relationship with each customer. Besides, by CRM and potential costs reduction in customer maintenance, one can achieve success.
(Pricewaterhousecoopers, 2004). Therefore recognizing gaps, strengths and weaknesses of customer relationship management of Iran automobile emergency services, and the status quo and trying to improve it, makes it easy to show the customer requirements in terms of products, innovative services, and strategic brand management.

**The concept of customer relationship management**

Several definitions of CRM have been provided. Despite these seemingly simple concept of customer relationship management, there is little consensus so various definitions. For instance, CRM is defined as business procedure which aims to achieve long-term competitive advantage through optimum distribution of customer value (Colne, 2002). CRM is not a technology; it's a strategy or set of business procedures or a methodology, in fact it can be all (Greenberg, 2001). CRM is a cross-functional process that aims to increase customer value through marketing strategies and integrating information technology (tax & colleagues, 2003). Customer relationship management is in fact a set of activities done in economic enterprise for identifying, finding, attracting, developing, and maintaining beneficial customers through products, appropriate services in adequate time, and at a reasonable cost. Firms are not forced to buy CRM software and install it, whether principles such as relationship marketing, individual relationship, and customer-oriented is observed, this can be said that CRM is implemented to some extent.

**CRM indicators**

Kim *et al.* (2003) were presented a model for evaluating the efficacy of CRM projects as you see in Fig. 2. First step is to determine mission and goals of CRM. Second step is to define CRM strategy, its goal is to show portrayal of strategic main factors. Next step is to find relation between CRM and business goals (beneficial goals). In order to obtain better results by analyzing these relations can understand that what is better to do and which idea is important. Evaluation of results obtained by analyzing provides more insight which can help marketers to identify better strategies. This process continues until CRM can be effective.

Fig. 3 demonstrates the cause and effect relationship and perspectives on CRM evaluation process. In this figure organizations start with collecting and to accumulating a vast amount of information about customers, then establish their characteristics, and then organizations discover the covered and hidden characteristics of clients by tools and techniques of data exploring. CRM has the potential to collect and store customer preferences and ability to manufacture new products and customize current products in a very innovative way.

In the second phase, organizations merge all information related to customers in order to facilitate effective scheduling, marketing, and more efficient services. When customer requirements and expectations are met, constant customers are defined. Customer value increases by customizing goods and services, representing more info, and quality improvement.

Third stage is to have satisfactory and long-term relation with customer consequently income and revenue of organizations will increase. The cause and effect relation can be a clue in terms of which perspective can helps to gain important business goals.

The traditional approach to balanced scorecard has four perspectives: financial, customer, business, innovation and learning. As shown in Table 1 while evaluating CRM, in order to reflect customer-centric philosophy, traditional dimensions can be changed. Improved version has 4 dimensions including customer knowledge, interaction, customer value, and customer satisfaction. Table 1 shows dimensions associated with customer, situation, and data management. Customer knowledge focuses on technology learning, and customer requirements and characteristics learning which affect interaction. Customer knowledge is prerequisite for satisfying customers and improving management processes. Meanwhile organizations must have learned...
about modern technologies in order to have better understanding of their customers

Table 1. Customer oriented score card Vs organization oriented score card (Kim et al., 2003)

<table>
<thead>
<tr>
<th>Customer oriented prominence</th>
<th>Focus</th>
<th>Customer oriented prominence</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance dimension</td>
<td>Providing value to beneficiary</td>
<td>Customer value</td>
<td>Increasing loyalty and profitability</td>
</tr>
<tr>
<td>Customer dimension</td>
<td>Providing value to customers</td>
<td>Customer satisfaction</td>
<td>To achieve business value</td>
</tr>
<tr>
<td>Business dimension</td>
<td>Improving efficiency and effectiveness within the business</td>
<td>Interaction with customer</td>
<td>Monitoring operational excellence and promoting effective pathways</td>
</tr>
<tr>
<td>Innovation and learning dimension</td>
<td>Ability to change and sustain innovation through continuous improvement</td>
<td>Customer knowledge</td>
<td>Customer understanding and analyzing their data</td>
</tr>
</tbody>
</table>

Interaction dimension is demonstrator of operational excellence, customer services pathways management, and management processes. Management and maintenance impact customer value, operational excellence and high quality services of CRM.

Customer value dimension is demonstrator of the resulting benefits of customers such as lifetime value, and customer loyalty which seeks to make commitment. Besides, customers have been identified by their values and they are treated in accordance with it.

Satisfaction dimension is demonstrator of consent level derived from goods and services. Customer satisfaction is the feeling that goods and services meet customer expectations and identifies that whether they are real customers (same source). Proposed research model is designed according to Fig. 4.

This model commences with customer knowledge by gathering and a accumulating wide vast of customer data and characteristics, and ends with customer satisfaction which cause benefit and income.

Fig. 4. Research model

Research hypothesis and query

According to importance of CRM in company, following questions were posed: a) H1 : Whether current situation of CRM is desirable? b) H2 : Whether desirable situation of CRM and its indicators is important? c) H3 : Is there any gap between current situation of CRM and its desirable version?

According to above questions the hypothesis of the research are listed in Table 2.

Table 2. Hypotheses

<table>
<thead>
<tr>
<th>First hypothesis</th>
<th>Second hypothesis</th>
<th>Third hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>desirable situation of CRM and its indicators is important</td>
<td>current situation of CRM is desirable</td>
<td>is there any gap between current situation of CRM and its desirable version</td>
</tr>
</tbody>
</table>

Research methodology

Current research (CRM pathology) in Iran automobile emergency services in terms of its goal is considered as practical research; however, based on work methods, is descriptive. Independent variables of this research are including: elements of customer knowledge, customer interaction, customer value and customer satisfaction and dependent variable is under study. During implementation process it’s been tried to step based on questions and hypothesis raised according to the fundamental objectives of research. Considering that descriptive research is to describe and interpret what exists, and its attention is toward current situation, relations, prevalent perspectives on current processes, or developing procedures and its main focus is on primarily present time; therefore, study is to find out current condition of company. Approach to information gathering process was carried out isodimorphous at different time intervals as described in Table 3.

Table 3. Information gathering tool and approach

<table>
<thead>
<tr>
<th>Row</th>
<th>Approach</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Library</td>
<td>Study, search, and use of national and international conferences, texts, or magazines</td>
</tr>
<tr>
<td>2</td>
<td>Non-library</td>
<td>Questionnaire</td>
</tr>
</tbody>
</table>

Like other descriptive researches, in this study questionnaires were used for information gathering. Therefore, in line with variables, a comprehensive questionnaire was provided including 30 questions based on every single variable by experts’ opinions. 5 parts Likert scale was used in questionnaire and respondents were asked to specify their agreement by five options (very satisfactory, satisfactory, average, undesirable, very undesirable). Questionnaire has been designed based on four basic indicators of CRM including customer knowledge, customer interaction, and customer value and customer satisfaction.
According to the Cronbach alpha obtained from 30 questions in the questionnaire (68 people), 0.94 and 0.90, are respectively current and satisfactory situation. Thus the validity of the questionnaire is confirmed.

**Statistical population**

According to the purpose of this study population used in this study include call center experts and CRM of Iran automobile emergency services. These personnel are high school graduates, associate degree, undergraduate or higher, which is 110 people, so questionnaire included 30 questions, was sent to them. 68 questionnaires were returned and analyzed.

**Data analysis**

Questions of the questionnaire has been raised by a five-choice Likert range, in either current or satisfactory situation, numerical value of each option is 1 to 5 (Table 4).

<table>
<thead>
<tr>
<th>Criteria / CRM indicators</th>
<th>Number</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Distribution and statistical test</th>
<th>P-V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer knowledge</td>
<td>68</td>
<td>2.46</td>
<td>0.655</td>
<td>Normal - single sample T</td>
<td>0.58</td>
</tr>
<tr>
<td>Customer interaction</td>
<td>68</td>
<td>2.63</td>
<td>0.732</td>
<td>Normal - single sample T</td>
<td>0.50</td>
</tr>
<tr>
<td>Customer value</td>
<td>68</td>
<td>2.50</td>
<td>0.725</td>
<td>Abnormal - single sample Wilcoxon</td>
<td>0.01</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>68</td>
<td>2.60</td>
<td>0.678</td>
<td>Normal - single sample T</td>
<td>0.17</td>
</tr>
</tbody>
</table>

H0: current situation of CRM and its indicator is not desirable
H1: current situation of CRM and its indicator is desirable
H1: M1>3

**Conclusion**

Our analysis indicates that current CRM situation and its indexes are in average level from CRM experts view points. Also, desired situation has high level of importance. In customer’s knowledge dimension, The company must gather and analyze customer and integrate the current data base with CRM processes appropriately in order to convert the information to business intelligence. Gathering and storing of customer data without their analysis will have no value for the system. Consequently, accurate and timely information about customer relationship management cause reduction in complaints and increase satisfaction. In customer’s value dimension, company has to use useful applications for preparing customer’s loyalty plans, new services development and cooperation with future customers to achieve its goals. In customer’s interaction, high quality services, minimum service time and accurate response to customers’ needs must be considered by the company. In customer’s satisfaction dimension, the companies must promote and maintain the quality of guarantee, daily feedbacks, complains and etc. by accurate planning and effective management.

**Reference**