

## Studying the Relationship Between Customer Relationship Management and Market Development in Tehran Medical Equipment Companies

Morteza Mousakhani, Hosein Vazifehdoust and Farid Gharavi  
Department of Management and Economics, Islamic Azad University, Tehran, Iran

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**Abstract:** The subject of this study is the relationship between customer relationship management and market development in Tehran Medical Equipment companies. Based on Cochran formula, 68 companies were chosen as the sample. The components of two variables of customer relationship management and market development are evaluated. The 5-point Likert scale questionnaire with demographic variables was developed that was used to the test hypotheses. Results showed that there is a significant positive relationship between customer relationship management and market development.

**Key words:** Customer relationship management, market development, medical equipment companies, sample, positive

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### INTRODUCTION

Traditional marketing strategies were about the 4p concept i.e., price, product, place and promotion in order to increase market share and their primary focus concerned on increasing the volume of trade between the seller and the buyer.

In this context, the volume of sales was the benchmark for strategies and marketing tactics performances. But, CRM is a business strategy that goes beyond the increase in trade volume and its aim is to increase profitability, revenue and customer satisfaction. To achieve these goals, organizations use a wide range of tools, procedures, methods and customer's relationship (Kalantari and Tayebi, 1969).

In marketing literature, similar definition are provided for CRM. Some have equated it with relationship marketing. For example, some definitions include: Attract, retain and strengthen the relationships with customers (Elahi and Heidari, 1964). The overall process of building and maintaining profitable customer relationships by delivering superior value to customers and gaining their satisfaction (Kotler, 2004). Customer Relationship Management is a set of methods that provides a strong, unified and integrated vision of customers in business provides a range. To ensure that every client receives the highest level of service (Karakostas *et al.*, 2005). CRM is a complex and sophisticated application that tracks customer data through customer touch points. And while it discovers the key customers' characters and forecasts purchase patterns, it provides a single and comprehensive view of the customer. Today, marketing

managers diagnosed that CRM focuses on building long-term and lasting relationships with customer, that value both the customer and the company. CRM is more than just technology and, in fact, is a strategic process (Nguyen *et al.*, 2007).

On the other hand, in the Age of Internet transparency and global selection, organizations can no longer hide behind their policies and prices. With the market divided into different sections and commodification of services, competing solely on price is difficult. Customers are smart enough to know that they have right to choose and if they have a bad experience from a service of an organization, they use their right to go to other competitors. In fact, power leverages have been passed on to customers from organizations. Expansion of services and the increase in the diversity of customers' needs are other important factors for changes in competition between companies. So, today the most important commercial and technological challenges include attracting customers and retention, increasing customer satisfaction and loyalty and ultimately profitability. The widespread use of information technologies, enables organizations to increase awareness of the needs and customers' requirements and a better understanding to benefit technical knowledge along with the skills and expertise. During the 1990s, interaction processes of information technology-based customer management, are also known as customer relationship management. The main focus on shaping customer relationship management system is to improve customer satisfaction and maximize profits from every customer. Therefore, in this study, the researcher sought

to answer this question what is the relationship between customer relationship management and market development in the medical equipment companies?

**Research literature:** In this study, expressions and theoretical framework are defined and described.

**Customer relationship management:** Although, CRM is a new concept, its principles have long existed. Marketers always have promoted close relationships with customers. Customer profitability has been considered dramatically for many years. The reason is that many organizations are organized based on product or line of relationships channel that is placed in front of the customer. Similarly, the concept of mass customization has been discussed around for nearly a decade in the literature. Primarily, all the discussed issues remained on the theoretical concepts in the form of wishes and not a commercial reality. But today, due to advances in information and communication technology, the promise of one-to-one communication, customer value analysis and mass production order is possible.

CRM is a customer-focused business strategy, as by providing more personalized service to each customer, his or her loyalty increases. Some consider CRM as a management approach which includes identifying, recruiting, developing and maintaining successful relationships with customers forever and in order to increase profitability. Studies show that five percent increase in customer retention, poses 95% increase in value for an organization.

Customer relationship management uses technology leverages to coordinate organization interactions to build long-term loyalty. Technological advances in the last decade has turned the business into a customer relationships. CRM is a business strategy that benefits the power of technology for integrating all aspects of the company's business with the goal of building long-term customer loyalty.

Kane Sid considers CRM as a strategic use of information, processes, technology and people for customer relationship management throughout the lifecycle of customers. considers CRM as integrated customer strategies within the organization for more effective customers management by providing certain goods and services and maximizing the lifetime value of the customer. Kumar and Raman, define customer relationship management as the process of achieving and maintaining an ongoing relationship with the customer through good and varied behavior with each customer based on their interests rather than implementing marketing programs. Customer relationship management

is a concept that empowers an organization in providing special services to each customer and therefore, creates an intimate relationship with the customer. CRM may create one by one experience. Thus, new marketing opportunities are created based on past customer preferences.

**Market development:** Moving toward globalization and advances in technology have led to increased competition between companies. At the present time, one of the new subjects that companies have focused on are marketing communications and customer relationship management. In today's markets, marketing concept is not limited to designing, delivering and products sales, thus, this concept oriented to the development of long-term bilateral relations with customer.

Market development in today's competitive global market is the biggest concern for organizations. Given the myriad changes in economic structures, organizations focus all their efforts and their views to follow customer-oriented approach than to product-oriented approach. It is necessary that they review substantively and structurally the potential and actual use of infrastructure and facilities for practical implementation of this principle. So that, on this basis, by the revision of the operational objectives of team units in public relations, marketing and customer relationship management they can provide coherence and relevance among these three sections. Each of the three public relations, marketing and customer relationship management are very important in the process of market development from operational perspectives. And therefore, the lack of cohesion and integrity of these sectors can reduce productivity of an organization in market development.

**Literature review:** In this section, we shall evaluate internal and external researches on the relationship between customer relationship management and market development. Among which internal researches can be as the following: assessed affective factors in the successful implementation of electronic customer relationship management strategies in private banking industry by using Analytic Hierarchy (AHP). The study used survey approach in terms of data collection. In this study, eight factors of successful implementation of electronic customer relationship reviewed, assessed and prioritized by using analytical hierarchy model. Which are: culture, senior management, employees, technology, system integration, organizational mechanism, customer satisfaction, employee incentives. Each of the eight

factors in the successful implementation of electronic customer relationship management included a group of components as well. After the evaluation, it was found that all eight factors were effective in the successful implementation of electronic customer relationship management strategy. The results revealed that among the eight factors, employee incentives earned the highest priority from the customers' points of view and managing organizational culture got the lowest priority and the studied bank showed too little attention to customers. In addition, senior management is relatively weak in terms of their views. The pathology in customer relationship management. To investigate and identify methods of consumers dealing with dissatisfied companies, the place and importance of customer satisfaction in food manufacturers in Iran, and to identify shortcomings and challenges in this field, a project with 15 interviewers project was planned in four major cities. The results showed that due to lack of awareness and lack of consumer confidence in dealing with their complaints, the majority of people refuse to interact with customer complaints system. More than half of people who have contacted customer complaints system, have not received an appropriate response from the respective companies. The studies also showed that transmission rates are almost twice by dissatisfied customers than satisfied customers. examined the relationship between CRM and Markazi Gas Company's performance. According to assessments, the company plans to assess the effect of customer relationship management system on the performance of the company. This study tries to investigate the subject after drawing conceptual model of research and development of hypothesis for the company. In this study, after testing hypotheses through chi-square, it is concluded that there is a relationship between customer relationship management system and performance of gas companies in Markazi Province.

Researches has also been done in this regard abroad: found that the implementation of customers' relationship process is positively related to economic, objective and perceptual performance of company. They suggest process-indicators to assess the effectiveness of this concept in three distinct phases of initial, retention and termination. Measurement systems and their technologies require combination of skills and roles. Such measurement systems can be emphasized internally and have a tendency to employees and effective process, that produce and supply goods and services or they can be emphasized externally and have a tendency to behaviors

and mentalities of customers. Minami and Dawson (2008) assessed the process of CRM in retail and service sector companies in Japan in regard to loyalty development and financial return. It tests three hypotheses:

- Orientation of a company's relationship has a positive effect on the implementation of CRM (data warehouse, data mining and the use of customer data for decision-making)
- The implementation of CRM has a positive effect on return on equity
- The implementation of CRM has an indirect effect on return on equity with the mediator variable of customization

Using structural equation model, the first hypothesis was confirmed, but only part of the third hypothesis was confirmed. The results also showed that the implementation of CRM has a positive effect on Return On Equity (ROE). However, the negative impact of customization on ROE was also found. CRM process and its impact on business performance. The results showed that implementing CRM provides superior performance in business. examined the aspects of customer relationship management on the performance of the staff in population of 152 hotel managers in Malaysia. The results showed that there was a significant positive relationship between CRM and performance. the effects of CRM on customer satisfaction and customer loyalty. The study used a quantitative approach and carried out on 300 respondents in a store in Tehran, Iran. The findings show that employees' behavior significantly affects customer satisfaction and customer loyalty and helps to improve it.

## **MATERIALS AND METHODS**

The present study is a descriptive study in terms of data collection and hypotheses test. In addition, since the results of this study can be applied, this is an applied research in terms of the objectives and nature. In terms of statistics, since sampling and the sample was used to generalize the findings to the community and for inference, this is an analytical study.

In this study, descriptive statistics was used to determine tables, graphs and central indexes to describe the data by using SPSS software, and inferential statistics (Cronbach's alpha test to determine the reliability, K-S test for normality of statistical distributions, Pearson test and path analysis (regression) to determine the relationship between variables) were used. According to carried out studies, the conceptual model is presented as Fig. 1.

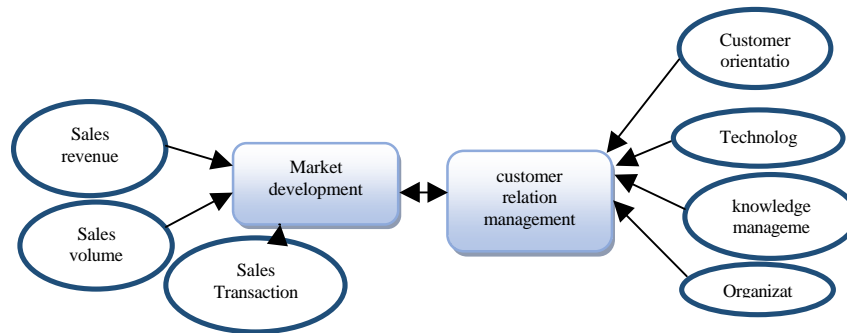


Fig. 1: The conceptual model

This study model has two variables of customer relationship management and market development. Customer relationship management is measured by dimensions of:

- Customer-orientation
- Knowledge management
- Customer relationship management
- Customer relationship management technology

Market development is measured by dimensions of:

- Sales revenue of last year compared with sales revenue of rivals
- Volume (number)
- The sales transaction (Minami and Dawson, 2008)

**Customer relationship management (concept):** According to the Swift definition, customer relationship management is an organizational approach to understand and influence the customer behavior through meaningful communications in order to improve business processes, retention, loyalty and customers' profitability. Kane Sid considers CRM as a strategic use of information, processes, technology and people for customer relationship management throughout the lifecycle of customers. considers CRM as integrated customer strategies within the organization for more effective customers management by providing certain goods and services and maximizing the life time value of the customer.

**Customer relationship management (operational):** It is measured by dimensions of:

- Customer-orientation
- Knowledge management

- Customer relationship management
- Customer relationship management technology (Kalantari and Tayebi, 1389)

**Market development (concept):** The concept of growth is meant growing up and it is quantitative. The reason for using long-term in the definition above is to ensure continuity of economic growth. The word development literally means to spread and improve. Development is quantitative as well. Thus, we can say that growth is part of the development. And by economic development, economic growth—although with delay—will be achieved for sure. Market development (operational) is measured by dimensions of:

- Sales revenue of last year compared with sales revenue of rivals
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- The sales transaction (Minami and Dawson, 2008)

The study population consisted of 68 managers of Medical Equipment Companies in Tehran. The questionnaire was distributed among them. Data were collected by using two questionnaires of customer relationship management and market development with demographic variables.

In this study, to assess the validity of questionnaire, standard questionnaires used in the first attempt and initial questionnaire was developed. The researchers then distributed it among a number of professors and experts and administrators of the studied population. After receiving the feedback, corrective measures had been done in the questionnaire. Also, the reliability (Cronbach's alpha) was obtained from the questionnaire as presented in the table below through SPSS software (Table 1).

Table 1: Cronbach's alpha coefficient of research components

Indices	Alpha coefficient
CRM	0.842
Market development	0.732

## RESULTS

In this study, we test hypotheses by using the comments collected from managers of Medical Equipment Companies in Tehran. Half of respondents have MS degree and most of respondents have work experience of 10-20 years. Now, we discuss the study hypothesis:

**Hypothesis test:** Studying the relationship between customer relationship management and market development:

- $H_0$ : There is no relationship between customer relationship management and market development in Medical Equipment companies
- $H_1$ : There is a relationship between customer relationship management and market development in Medical Equipment companies

Since, collected data are not normally distributed, non-parametric tests were used. Given the fact that in the present study, we have used Likert scale rating and we were supposed to measure the relationship, direction and intensity between the two variables, the Spearman correlation coefficient was used. In this test, due to the significant amount equal to 0/000 which is much  $< 0.05$  and confidence level of 95%,  $H_0$  hypothesis  $H_0$  is rejected and  $H_1$  hypothesis is confirmed. According to the results, this relationship is quite significant. And according to the direction and intensity (0.452) of the relationship it can be inferred that the relationship is linear and direct. And, the intensity of this correlation is low, and one can be quite sure that it is true statistically and empirically. In other words, as customer relationship management increases market development will increase (Table 2).

Multivariate regression analysis is a method for analyzing individual and collective participation of two or more independent variables of  $X_i$ , in the changes of the dependent variable  $Y$ . This test is for variables to explain and evaluate the distance and direction, intensity and the type of relationship (Table 3).

As can be seen, multiple correlation coefficients, the coefficient of determination, adjusted coefficient of determination, estimation standard error are shown. So, it can be said that correlation of market development in a linear combination with entered variables in the equation is equal to 0/139. The coefficient of determination

Table 2: Spearman correlation test for customer relationship management and market development

Variables	Values
Correlation rate	452/0
Significant value	000/0
Number of samples	68

Table 3: Model results summary

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	SE of the estimate
1	0/139	019/0	005/0	56174/0

Table 4: Results of multivariate regression analysis

Model	Index of changes	Sum of squares	df	Mean square	F-values	Sig. level
1	Regression	411/0	1	411/0	303/1	025/0
	Remaining	827/20	66	316/0		
	Total	21.238	67			

Table 5: Multiple regression analysis coefficients of market development in variable of customer relationship management

Model	Non-Standardized regression coefficients	SEM	Standardized regression coefficients	t-values	Sig.
(constant)	3/082	0/218		3/796	0.000
customer relationship management	0/22	0/192	0/139	1/142	0/025

coefficient is obtained 0/019 and adjusted coefficient of determination is equal to 0/005. In fact, about 2% variance of market development variable is explained and justified through variable of customer relationship management (Table 4).

The results of the regression analysis in Table 4 shows that the regression of variable in market development in variable of customer relationship management is statistically significant (Sig. = 0/025). And, these components explain part of the variance in the dependent variable (Table 5).

As you can see, regression equation can be written based on standardized coefficients. This means that with an increase of one unit in customer relationship management, an increase of 0/139 in the standard deviation in market development occurs. The standard regression equation is as follows: Market development = (0/139) × customer relationship management.

## DISCUSSION

In this study, we studied the relationship between customer relationship management and market development in Medical Equipment companies in Tehran. The results showed that there is a significant relationship customer relationship

management and market development and this relationship is positive and direct. Various studies have been done in this regard:

Moghaddam and Rezaei (2010) studied on the relationship between Customer Relationship Management (CRM) with their marketing performance. The population consisted of all central banks in Tehran's public and private sectors. Several studies show that CRM has a significant impact on the marketing performance of organizations. Lu and coauthors examined the relationship between CRM and Markazi Gas Company's performance. In this study, after testing hypotheses through chi-square, it is concluded that there is a relationship between customer relationship management system and performance of gas companies in Markazi province. found that the implementation of customers' relationship process is positively related to economic, objective and perceptual performance of company.

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Today's world is full of changes and transformations: changes in technology, changes in information, changes

in the people's demands, changes in consumer adoption and changes in global markets. But, the most important changes in the business scene is the change in supplied values to the buyer which are recognized as a critical success factor in the institutes, and leading organizations in every industry owe their success to their ability to launch and deliver more value to customers than competitors do. "Warren Keegan" one of the experts in marketing believes that only by focusing resources on opportunities and creating values for customers, we can achieve sustainable competitive advantage and find a cover for the survival of the organization and its leadership in competition.

Customer relationship management seeks to establish such relationships with target customers, so they go shopping and encourage others to do so again in the future. The best approach to keep customers is to create a great satisfaction for the customer and consider what is considered valuable to customer as a result of his or her loyalty to the company becomes strong. Customer relationship management is also seeking to provide greater value for customers and achieve tangible and intangible benefits arising from this relationship. In today's world, acting according to the principles of relationship marketing and customer relationship management are considered as a competitive advantages.

In recent years an increased interest in the study of economic knowledge of long-term relationships with customers aroused. Hasket introduced the concept of market economy for the first time. In fact, he meant that instead of focusing on the creation of economies of scale, companies can focus on understanding customers to achieve their goals. In this regard stated that a 5% increase in customer retention, increases corporate profits 60% in the 5th year. Similar results have been reported in other industries by Reichheld and Sasser. In long-term relationships that groups learn the best ways to communicate with each other, the cost of communications for customers as well as for the supplier or service provider will be reduced. Gronroos in his relationship cost theory which is based on the cost of quality and interactivity states that one should prevent costs caused by mutually satisfying relationship of switching supplier or service provider and prevent unnecessary expenses adopting customer relationship management causes creates changes in company structure and its interactions. Therefore, the following suggestions are offered:

**Marketing resources and variables:** In customer relationship management, enterprise is not able to predict marketing variable factors. But according to the nature of

the relationship with each customer, resources should be applied in order to create appropriate marketing. So that customer satisfaction be achieved and values would be created for them.

**Product:** In customer relationship management, company should not rely on a prefabricated product. But should develop their resources (such as personnel, technology, etc.). And create a system that could provide services for customer satisfaction through optimal management of resources in a growing relationship with customers.

**Organizational structure:** In customer relationship management, marketing should not be a separate organizational unit. But marketing knowledge should be developed in all over the organizations. However, marketing professionals are required to perform some traditional actions such as advice to senior managers (for decision).

**Outsourcing:** Implementation of customer relationship management in companies should be outsourced through part-time marketing expert. In this regard, companies should be assured that marketing tasks are done with customer-oriented attitude

**Marketing Planning:** In customer relationship management, marketing planning should not be the traditional program. Customer-oriented understanding and customer relationships must exist in the planning.

**Individual attention to customers:** In the customer relationship management, decisions and marketing activities should not be based on the traditional market segmentation techniques. Customer selection and providing services to the customer should be based on customer database and data mining.

**Information resources:** In customer relationship management, enterprise have to obtain information through face to face relationships of staff with customers.

**Relationship attitude:** To successfully implement customer relationship management in the organization, marketing title is better be replaced with other titles (such as interactions with customers' management) that customers prefer more.

## CONCLUSION

With regard to the referred issue, a study is proposed to be conducted with the subject of the relationship between E-CRM and market development. According to the results of this study, the same researches is proposed to be conducted in other organizations and health centers.

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