

Study the Impact of Customer's Profile and Participation on the Performance of Customer Relationship Management in Service Organizations

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ABSTRACT

CRM or customer relationship management is a continuous process consisting of creating and applying knowledge and market intelligence to establish and maintain the relationships with customers that have the most efficiency. The customer relationship management (CRM) software is an important application in e-commerce. The concept of customer relationship management has come into the consideration in today's world. Nowadays, the organizations put their customers in the heart of all their activities, and their marketing and sales strategies are being revised based on this. On the other hand, it should be kept in mind that the most crucial concern of all today firms and enterprises can be recognized as how to communicate with the customers and the customer relationship management. Today's organizations consider themselves committed to provide the bests for their customers, and the goal of customer relationship management is to develop permanent and long-term dependencies between company and customers. Sometimes even the CRM is known as a customer-oriented strategy that deals with the most valuable assets of a business, which are the customers. Two important influencing factors on the performance of customer relationship management include the customer' profile and the customer participation.

1. Introduction

Companies have focused now on strongly maintaining customer through good long term relationships with the customer more than ever [1].

The customer relationship management is the top customer retention strategy. It is so important to be aware of the customers' needs and provide for them customized products as well as services that will improve their satisfaction and loyalty [2]. Two main strategies, including collecting the customer profile and promoting customer participation are used to fulfill the customer's needs. In prominent research of customer relationship management topic, the customers' knowledge has been considered

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very important, but the tacit knowledge of customers has been emphasized largely. Companies need to get the activities of customer relationship management more efficient [3].

Therefore, companies should follow strategies such as a new mechanism of interaction in order to improve the customer relationships by achieving full relationship with customers, creating participation with customers and gaining more non-structured information about customers; the latter is the guiding force of CRM activities. The customer participation in service delivery as well as the customer profiles due to the urgent need to the customer related tacit information, which is obtained by the database technology, should be considered as one of the most important sources of customer knowledge. Also, obtaining the customers' active participation enables the company to increase the understanding of services that are provided directly by the company. The customer communication section in a company acts like a ship scout; this scout improves the product quality by understanding the consumer needs and expectations and transferring them to the manufacturer [4].

2. Literature Review

To research the impact of customer profile and customer participation on the customer relationship management performances, this study examines the theories of CRM, customer profiling and customer participation.

2.1. Customer Relationship Management

New marketing paradigm has been founded based on knowledge and experience. The knowledge-based marketing paradigm shows that the companies need more knowledge about their customers; and the experience-based marketing paradigm suggests having more interaction in the customers' activities. Since 1990, several efforts have been done: customer management, customer information systems, customer value management, customer service and sometimes customer-orientation or customer-oriented management, but now, as clearly seen, customer relationship management is widely used. The CRM is an interactive process that converts the customer information to customer relationships through active using and learning of the information. This is a cycle to learn a major group of measures: knowledge discovery, market planning, customer engagement, analysis and refinement. Brown refers to CRM as " your key competitive strategy lies within knowing that you need to focus on your customers needs and to integrate the customer interaction approach across your organization" [4].

2.2. Customer Profiles

Certainly, some of the characteristics are interdependent for proper performance of the company in customer relationship management: excellent products, excellent management and consciously use of customer knowledge. Insufficient knowledge of the customers confines the value of what a company can offer to his customers [4].

With a better understanding of customers, a company can investment on valuable customers value and decrease the costs spent on customers with low performance [5].

The main component is to know the customer's intellectual profile that is obtained using a database and information data mining technologies, which exist in organizations [6]. The customer intellectual profile is one of the most popular strategies for greater recognition of the customers. In summary, the use of customer intellectual profile is a technique that converts the raw data related to the customers into the knowledge-supporting strategic information, which enhance the value of goods provided by the company for customers [4].

The customer relationship management system stores all information related to his customers in a database. Data such as customers' names, what purchased, and what problems they have faced within their purchases will remain in the CRM database. The system uses this information not only to provide reports, but also to generate important information, which helps to coordinate sales, marketing and customer service sections for better and faster responding to customer needs. Complete information about the customer profile and his previous requests or preferences will be instantly available to service sales representatives (Ibid).

2.3.Customer Participation

The customer intellectual profile is a more structured part of the customer's knowledge, while the lower structured part can be obtained from the customer participation part. In research services, the customers provide information or try to complete the service process by cooperating with the service provider. They complete the process together while provided service is produced and consumed simultaneously [7].

Participation has various aspects, including personal interaction, information sharing and responsible behavior. This indicates that participation has a positive impact on customer perception about the product quality, service, satisfaction as well as its multi-aspect impact on customer maintenance [8].

Different participatory perspectives are not helpful equally in these models. In particular, personal interaction is more effective while it was assumed that sharing information has a particular importance in conceptual perspective [9].

There is a similar result in new product of development research area (In information system research development). This shows that through close interaction with customers, the designers can accurately identify the market needs, correct the product specifications and reduce the time for marketing, and thus remain more competitive [10].

Special efforts have been made in research on customer relationship management to take and use non-structured information about the customers [3]. It has been shown that customer participation in the processes of providing service is in close relationship with the customers' understanding of service quality, customer satisfaction and the performance of new products [9].

Customers can share their information in the process of participation, and also receive information about the company. This is a two-way communication between buyers and sellers that has positive effects on the performance of customer relationship management [4].

There are similar arguments in different fields of research. In research services, the customer participation refers to getting help and sharing customer information and effort spent on service

encountering process [11].

The customer participation influences on service quality [9]. In information systems research development, the user's participation, the user's understanding of system success and the user's satisfaction have been considered effective. In advertising research, the researchers study the effect of customer participation, advertising and products on purchase decision-makings [12].

3. The research framework and hypothesis

To study the effect of customer mental profile and customer participation on CRM performance, here we examine the theories of customer relationship management, customer mental profile and the customer participation. There are two main sources of knowledge related to customers: the customer profile and the customer participation. The first demonstrates using technology to obtain and generate information about customers in the organization, and the latter shows the two-way communications and interactions between company and the customers. The structure of CRM performance includes three parameters: customer satisfaction, customer loyalty and customer retention [4].

3.1. The effect of the customer profile on perceived goods quality

Product is a goods or services that the companies provide to their customers. Although there are many parameters to investigate the quality of products, customers usually evaluate the quality of products based on their points of view. From this perspective, the main factor about the quality of goods should be measured based on the degree of its consistency with the customer demands. However, measurement of service quality is more difficult due to its intangibility [13]. The output of services is a process that it is done by itself. Judgment on service quality should be based on customer experience and their understanding of this process [14].

What mentioned shows that the measurement of customer perception of the products quality is very important. The customer profile is a basic form of customer knowledge. By obtaining and analysis the customer profile mentalities, companies can develop their products and services tailored to customer needs. It had to be shown to the customers that the company uses their specifications and profiles to provide customized products for them; this will enhance the customers' perception of products quality [4].

H1: Companies that use mental characteristics of the customers would be able to influence on perceived quality of products that are offered to the customers.

3.2. The effect of customer participation on perceived goods quality and customer relationship management performance

The performance structure consists of three parameters: customer satisfaction, customer loyalty and customer retention [15]. In addition to obtaining the customer profile to identify the customers' needs, companies also need to seek a solution to obtain more tacit information from their customers to know them better [3].

This situation indicates that companies must provide reliable channels and sales activities to

be able to exchange the tacit data with customers. Based on these statements on customer participation, the companies can interact with their customers through their participation and identify their needs. Customers' participation in company's value-delivery processes helps customers to know more about the company's abilities, which enhances the perceived goods quality of customers. Also, customer participation has positive effects on customer satisfaction, customer loyalty and customer retention [10].

H2: Customer participation influences on perceived quality of a product that the company offers to customers.

3.3. The effect of goods quality on customer relationship management performance

Certainly, the quality of services provided by companies is effective on the quality of customer relations, customer satisfaction and customer loyalty. The product quality will influence the customer purchase decisions. When the quality of products is higher than customer expectations, the customers will be motivated to buy the products. The products quality depends on the subjective perception of customers about how the high quality of products will bring benefits to them [16].

High perception of products quality leads to high satisfaction, loyalty and customer retention [4].

H3: The third hypothesis: Perceived product quality is effective on CRM performance.

H3-a: Perceived product quality is effective on customer satisfaction.

H3-b: Perceived product quality is effective on customer loyalty.

H3-c: Perceived product quality is effective on customer retention.

3.4. Conceptual model

In this study, to evaluate the performance of CRM we will first study the effects of two variables of customer profile and customer participation on perceived product quality and then impact of this quality on CRM according to the model presented by [4]; finally, we will evaluate the customer relationship management performance by measurement of three factors, namely, customer satisfaction, customer loyalty and customer retention. The relationships between these variables are given below briefly.

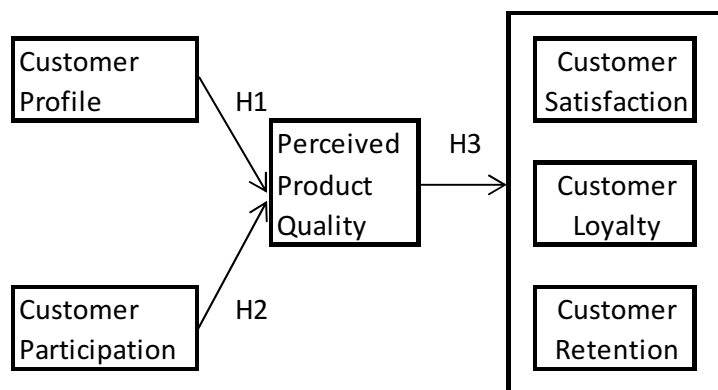


Figure 1. Conceptual model [4]

4. Research methods

The type of this research is applied objective-oriented and the used methodology is "descriptive, correlative, surveying" method. The research can be considered surveying type based on the data collection time, since the answer to the problem is related to the present time. Library and field methods (group meetings and questionnaire) have been used for data collection in this study.

4.1. Research statistical population

The research statistical population study includes the customers of "Industrial Management Organization", "Studies and Productivity of Human Resources Institute" and "Scientific and Industrial Research Organization of Iran", which is considered as an unlimited statistical society. The research sample is the customers of mentioned three organizations. The research sampling method is random-stratified sampling method. Given the undetermined customers' number of these three organizations and the almost doubled customers' number of Industrial Management Organization, 185 subjects were selected among Industrial Management Organization customers as a random sample; also, two 100-subject samples were selected from the customers of Studies and Productivity of Human Resources Institute and Scientific and Industrial Research Organization of Iran. In total, 385 questionnaires have been completed by the subjects.

4.2. Data analysis method

Data analysis has been performed using descriptive -inferential statistical techniques. After data entry and data refining, descriptive statistics were calculated using the SPSS 11.5 software. Linear regression test was used to investigate the hypotheses and the Enter method to for confirmation; ultimately, Durbin – Watson test has been used for self-correlation test (consecutive correlation test in error sentences). Also, the normalization test (Kolmogrov-Smirnoff test) has been used for the residuals. Following significant regression test, the significance of each coefficient has been evaluated using the T-test.

4.3. Questionnaire

The designed questionnaire for this study consisted of 40 questions. The questions have been designed to collect data from the statistic society that five response levels have been considered for each of them (very low, low, moderate, high, very high); the response levels were valued by numbering from 1 to 5 and measured based on Likert scale.

Table 1 - The main research factors in the questionnaire

Factors	Structures	Questions No.
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Customer Profile	Individuals perception of using the customer profile, specifications and information	1-4
Customer Participation	Customer participation understanding	5-11
Product Quality	Reliability, Accountability, Guarantee, Thought Exchange, Intimacy	12-25
Customer Satisfaction	Useful Perception ,Satisfaction Process, Decision-making Consent	26-29
Customer Loyalty	Positive Attitude, Mouth-to-Mouth Advertizing, Purchase Intension, Price Sensitivity, Complaining Behavior	30-37
Customer Retention	Suggestion of Using Again	38-40

5. Results and findings

5.1. Data Validation

Cronbach's alpha criterion has been used for reliability assessment of the questionnaire. The calculated Alpha value is equal to 0.9316, which is higher than 0.7; then the questionnaire is reliable. Therefore, the statistical operations on this questionnaire can be started.

Table 2 - Cronbach's alpha test for questionnaire reliability assessment

Sample Count	Question Count	Cronbach's Alpha Value
385	40	0.9316

Table 3 - Reliability of the main research variables

Indicators	Question Count	Cronbach's Alpha Value
Customer Mental Profile	4	0.7572
Customer Participation	7	0.7511
Perceived Product Quality	14	0.8547
CRM Performance	15	0.8483

To increase the content validity of the questionnaire, the following devices tools were used:

- 1 – Using the research specialists and experts' opinions
- 2 - Study the same questionnaires, articles, books and magazines
- 3 - Initial distribution of questionnaires among a number of people for initial testing and evaluation of experimental validity and modification based on the results
- 4 – Performing the CVR test: It was distributed among 12 marketing professors. The value for each question was calculated higher than 0.5 obtained, which is acceptable.

5.2. The Effect of Customer Profile & Customer Participation

Statistical results

Using linear regression test, the values for correlation coefficient, T-test and standardized coefficient of the hypothesis 1 have been obtained as 0.726, 6.243 and 0.265, respectively. In hypothesis 2, the values have been respectively as 0.726, 12.793 and 0.543.

Interpretation

Hypothesis 1

The hypothesis 1 is concluded with 95% reliability. Also, we conclude that the customer mental characteristics or customer profile has a significant effect on perceived product quality, and the effect value is equal to 26.5%, which is a positive (direct) value. Then, the hypothesis 1 is confirmed.

Hypothesis 2

The hypothesis 2 is concluded with 95% reliability. Also, we conclude that the customer participation has a significant effect on perceived product quality, and the effect value is equal to 54.3%, which is a positive (direct) value. Then, the hypothesis 2 is confirmed.

5.2. The Effect of the Quality of Goods

Statistical analysis

Using linear regression test, the values for correlation coefficient, T-test and standardized coefficient of the hypothesis 3 have been obtained as 0.741, 21.602 and 0.741, respectively.

Interpretation

Hypothesis 3

The hypothesis 3 is concluded with 95% reliability. Also, we conclude that the perceived product quality has a significant effect on CRM performance, and the effect value is equal to 74.1%, which is a positive (direct) value. Then, the hypothesis 3 is confirmed.

Hypothesis 3-1: The perceived product quality influences on the customer satisfaction.

Statistical analysis

Using linear regression test, the values for correlation coefficient, T-test and standardized coefficient of the hypothesis 3-1 have been obtained as 0.703, 19.372 and 0.703, respectively.

Interpretation

Hypothesis 3-1

The hypothesis 3-1 is concluded with 95% reliability. Then, the perceived product quality variable remains in the model, and its coefficient value is equal to 0.794. Also, we conclude that the perceived product quality has a significant effect on customer satisfaction, and the effect value is equal to 70.3%, which is a positive (direct) value. Then, the hypothesis 3-1 is confirmed.

Hypothesis 3-2: The perceived product quality influences on the customer loyalty.

Statistical analysis

Using linear regression test, the values for correlation coefficient, T-test and standardized coefficient of the hypothesis 3-2 have been obtained as 0.639, 16.274 and 0.639, respectively.

Interpretation

Hypothesis 3-2

The hypothesis 3-2 is concluded with 95% reliability. Also, we conclude that the perceived product quality has a significant effect on customer royalty, and the effect value is equal to 63.9%, which is a positive (direct) value. Then, the hypothesis 3-2 is confirmed.

Hypothesis 3-3: The perceived product quality influences on the customer retention.

Statistical analysis

Using linear regression test, the values for correlation coefficient, T-test and standardized coefficient of the hypothesis 3-3 have been obtained as 0.609, 15.031 and 0.609, respectively.

Interpretation

Hypothesis 3-3

The hypothesis 3-3 is concluded with 95% reliability. Also, we conclude that the perceived product quality has a significant effect on customer retention, and the effect value is equal to 60.9%, which is a positive (direct) value. Then, the hypothesis 3-3 is confirmed.

The "Descriptive" (s)

Table 4

	Minimum	Maximum	Mean	Std. Deviation
Customer Profile	2.25	5.00	3.6909	0.38390
Customer Participation	1.57	4.71	3.7009	0.37048
Perceived Product Quality	2.18	4.83	3.7637	0.37053
CRM Performance	2.34	4.24	3.6494	0.34120

Table 5

	Minimum	Maximum	Mean	Std. Deviation
Customer Satisfaction	2.50	4.67	3.8333	0.41840
Customer Loyalty	2.50	4.67	3.4586	0.29869
Customer Retention	2.00	4.67	3.6563	0.44864

Table 6 - Results of ANOVA

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.783	2	13.892	212.794	.000 ^a
	Residual	24.938	382	0.065		
	Total	52.721	384			

a. Predictors: (Constant), Customer Participation, Customer Profile

b. Dependent Variable: Perceived Product Quality

Table 7 - Results of MANOVA

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.553	1	24.553	466.651	.000 ^a
	Residual	20.152	383	0.053		
	Total	44.705	384			

a. Predictors: (Constant), Perceived Product Quality

b. Dependent Variable: Customer Relationship Management Performance

Table 8 - Confirmation of linear regressions and review the linear attribute of the regression

Regression(s)	Correlation Coefficient	Determination Coefficient	Corrected Determination Coefficient	Significance Level	F Statistic Value	Freedom Degree	Error Value
Linear regression (1)	0.726	0.527	0.525	0.000	212.794	2	0.05
Linear regression (2)	0.741	0.549	0.548	0.000	466.651	1	0.05
Linear regression (3)	0.703	0.495	0.494	0.000	375.283	1	0.05
Linear regression (4)	0.639	0.409	0.407	0.000	264.833	1	0.05
Linear regression (5)	0.609	0.371	0.369	0.000	225.920	1	0.05

Table 9 - Correlation test of disruption sentences

Regression(s)	Durbin-Watson Statistic
Linear regression (1)	1.802
Linear regression (2)	1.845
Linear regression (3)	1.785
Linear regression (4)	2.039
Linear regression (5)	1.751

Table -10 - Tolerance and multiple shared linear regression

Independent variables of regression (1)	Tolerance	VIF
Customer Profile	0.686	1.457
Customer Participation	0.686	1.457

6. Discussion

Table 11 shows the study results, in which the correlation coefficient, standardized coefficient and the T-test statistic are presented for each hypothesis. Their values have confirmed all the hypotheses by 95 percent reliability.

Table 11 - Results of the research hypotheses

Hypothesis	Correlation Coefficient	T Statistic	Standard Coefficient	Reliability	Conclusion
Hypothesis 1	0.726	6.243	0.265	95%	Confirmed
Hypothesis 2	0.726	12.793	0.543	95%	Confirmed
Hypothesis 3	0.741	21.602	0.741	95%	Confirmed
Hypothesis 3-1	0.703	19.372	0.703	95%	Confirmed
Hypothesis 3-2	0.629	16.274	0.639	95%	Confirmed
Hypothesis 3-3	0.609	15.031	0.609	95%	Confirmed

7. Suggestion and future research

We suggest in a short summary that:

A database system including the characteristics, specifications and needs of customers and their participation in the affairs will be designed, since as a result, the information level of our customers and the information and understanding of customers about our organization will increase and a bilateral relationship with services quality recognition will be created.

Understanding of organizational external environment as well as identifying customers will be reinforced through customer classification and recognition of each class tastes, and predicting their future needs.

Customer profile, customer participation, data warehouse techniques and data mining will be used for better understanding of customers' information and proving superior service, and greater advantages should be given to old customers for their retention.

Specialized and up to date training courses associated with the CRM principles for the detailed familiarity of employees with the concept of customer relationship management and its application competitive advantages in organization should be held. Since the he most influencing indicator in customers' satisfaction is related to our recognition of the organization customers, it is especially recommended to the executive managers to identify their key customers; in addition to the personnel communication with the customers, the managers should also participate in the communication process with the customers.

Attracting the key customers should be performed through market share development and creating further facilities.

Reasons for lack of widespread use of customer relationship management system and the failure causes of this project in the organizations should be assessed and the way to implement CRM systems must be examined. Some strategies to develop tacit information collection of customers and sharing the organization information and services with them and the impact of CRM on customer profile should be provided.

Also, some strategies for development of customer participation and the impact of CRM on customer participation must be provided, and the effects of customer relationship management in providing solutions related to expanding services for customers should be examined.

It is recommended to develop a comprehensive training program for the staff in future studies, in which the current position of employees will be first evaluated regarding the specialized skills and the way of establishing communication with customers and compare with the standard conditions; then, the needs should be assessed based on the results and a training program will be developed.

8. Conclusion

This research studies the effects of customer profiles and customer participation on the product quality. The findings suggest that organizations should have insight in using the customer profiles to provide products or services. Doing this increases the customers' perception of products quality, and has a greater impact on CRM performance. Generally, it can be said that the customer profile is effective on to perceived product quality improvement and increased CRM performance. The results show that using customer profile reflects the customers' perception of product quality. The using level of customer profile by a company is positively related to the customer perceptions of product quality. This means that the people have understood that the services have been designed based on their historical transactions; so, anybody who has enhanced his perception of the goods quality, he would have been more satisfied.

The CRM performance improves due to greater perception of customer than to product quality. The customer satisfaction, loyalty and retention have a direct relationship to the customer perception of the product, which ultimately influences on CRM performance.

These findings can be considered as strong structured elements in CRM, which are required in order to survive in today's competitive environment.

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