EFFECTS OF THE E-CRM IMPLEMENTATION ON CUSTOMER-BANK RELATIONSHIP

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Abstract

This study aimed to investigate the effect of implementing electronic customer relationship management (e-CRM) systems on the quality of bank-customer relationship. The population of the present research was all customers of private banks in Rasht and the sample size was determined as 384 through using Morgan Table. The sampling design of the present study was convenience non-probability. The questionnaire used in the study was adopted from Sivaraks et al. (2011) and Cronbach's reliability index (α) for the questionnaire was calculated. The amount of α for all variables and dimensions of the questionnaire was more than 0.7. Data analysis using structural equation modeling and LISREL software indicated that implementation of the e-CRM had a positive significant relationship with both customer-based service attributes and quality and outcomes of bank-customer relationship. Moreover, implementation of the e-CRM had an indirect effect on quality and outcomes of bank-customer relationship through customer-based service attributes. However, since the effect of two variables of the e-CRM and quality and outcomes of bank-customer relationship on each other through customer-based service attributes was less than the direct effect of these variables on each other, the mediator role of customer-based service attributes in the relationship between e-CRM and quality and outcomes of bank-customer relationship was not accepted.

Keyword: e-CRM, Service Attributes, Customer-bank Relationship,

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1- Introduction

Nowadays, learning how to use the Internet provides financial institutes and banks with an opportunity to take its advantages in the unstable competitive environment (Abdolvand & Abdolazimi, 2012). Today's competitive, complex, and dynamic market have obliged the managers to do their bests to catch the potential customers and retain the existing ones. The need analysis of the customer and the market and posing a balance between them can be an appropriate solution to this issue. Previous studies have presented various patterns to achieve this goal. Among these patterns, customer relationship management has reflected acceptable results in most of the researches. Moreover, improving communication channels have solved most of the existing problems. The combination of these two factors has put customer relationship management as a revolution in the business industry in front of the researchers and managers (Benam, 2012).

The main purpose of the e-CRM may be apprehension of values and better encounter with the customers to increase their loyalty and therefore profitability of the company. In other words, instead of reliance on traditional model of "attempt for more sale" try to "reconstruct the relationship between companies and customers" (Mirfakhreddini et al., 2009).

2- Problem Statement

At the present time, organizations work in a dynamic and complicated environment. Competition between organizations is increased, life span of the products is reduced, and the life of the organizations wanes very soon. In most cases, manufacturers produce goods with similar qualities and it is just on the customer to choose the product (Mehrabi et al., 2011). Therefore, the first and foremost principle of the marketing is attention to the needs of the customers. Attention to needs and preferences of the customer leads to his satisfaction and loyalty and, as a result, increases the reputation, prestige, and profitability of the company (Ranjbarian & qolami Karin, 2006). In fact, the main asset of a company is its customers. Products are always changing and just "having a continuous relationship with the customer" remains. So, those organizations are prosperous that can take lifelong customers (Firouzian et al., 2006). But, it is not possible for the organization to focus on all of the customers because of limited resources. Therefore, recognition and ranking of the effective customers is an important issue. This is mostly true for

industrial markets that most of their customers willing to have relationships (Noorbakhsh & Pashang, 2011).

On the other hand, the emergence of electronic commerce has led to salient changes in most aspects of commerce including establishment of new companies with new models of trading, commercial job opportunities, new methods of business processing. To the extent that electronic commerce has turned to a substitute for relations in the areas of sale, marketing, and customer protection.

Previous researches in this field presented different patterns for this purpose. Among them, customer relationship management has revealed acceptable results. In addition, improving communication channels has solved most of the problems. Combination of these two factors has put customer relationship management as a revolution in the business industry in front of the researchers and managers (Mirfakhreddini et al., 2009). This newly developed concept includes all of the required processes to capture, create, and retain the relationship with customers through electronic business activities. E-CRM is mostly based on the web or internet transactions conducted between companies and customers. By starting to use the web commercially, e-CRM was increasingly concentrated by workers and researchers (Kamalian et al., 2009).

Todays, private banks for different reasons, including alacrity in processes and services, customer-orientation, increasing attention to the development of electronic banking services, inviting specialists of governmental banks into cooperation, welcomed generally and took a considerable share of the customers of the banking market especially retail customers. The private banks also could function better than the governmental banks regarding presentation of customer-oriented services (faqihi et al., 2011). As the evaluation of the implementation of customer relationship management system needs longtime implementation (at least three years), private banks are appropriate for this purpose (Sivaraks et al., 2011). Various studies about customer relationship management have been conducted by different researchers, but a few of them have investigated CRM from the customers' point of view. This study attempted to investigate the implementation of customer relationship management from the customers' viewpoint. The main research question of this study was 'Does the implementation of the electronic customer relationship management in private banks of Rasht affect the quality of bank-customer relationship?'

3- Significance of the Study

Through implementation and establishment of electronic customer relationship management approach, the opportunity of acquisition and retention of the customers in banking has been raised and consequently, the income of the banks has been increased and their advertisement charge has been decreased. Grading customers, identifying valuable and high-interaction customers, providing specific services to these customers, and satisfying high ranking customers and making them loyal are among the main purposes of electronic customer relationship management in the banking industry (Hasanzade & Dalilotejari, 2012). Utilizing customer relationship management softwares decreases information processing charges and relationship with customers occurs in a short time with a high speed the final result of which is the enhancement of the competitive power of the organization in the current unstable environment. If the customer relationship management occurs truly and successfully, it can alter those parts of a company or organization which are in direct relationship with customers and ultimately the future and destiny of the company or organization will be transformed essentially (Heydari & Mahmoudi alashti ,2013).

4- Literature Review

4.1 Electronic Customer Relationship Management

Philip Kotler believes that e-CRM is a part of electronic business which explains use of electronic instruments and platforms to manage companies and organizations and it helps the institutes to serve their customers quickly and precisely, in a broad temporal and locational range, with lower charges and to make the customers' goods and services custom-built (Sarfarazi & Memarzade,2009). In fact, e-CRM is a combination of hardware, software, functions, and management commitments that can took different shapes based on the purposes of the organization. It includes business processes based on customer-oriented strategies and is supported by different softwares and technologies (Zangirchi et al., 2012).

4.2 Customer-based Service Attributes

Previous studies indicate that there is a far distance between implementation of e-CRM and its outcomes. Therefore, there should be a ring to link them and this ring is 'customer-based

service attributes'. Customer-based service attributes as the service activities of CRM (and sometimes supported by IT softwares) are called e-CRM, that is, outcomes of CRM/e-CRM in the serving industry from the customer's point of view. Customer-based service attributes are measured based on two factors of information and customer's convenience (Sivaraks et al., 2011).

4.2.1 Information

A part of the value created by CRM is related to the customers' information. Therefore, the customers' understanding about delivered services is necessary to evaluate the system. Delon and McKain emphasized on the relationship between the high quality of the customer's information and success of electronic customer relationship management and, of course, mentioned that most of the relationship between quality and success is intuitive (Kheiri & Naeiji, 2010). Among different factors that should be taken into account about information are providing valid, relevant, useful, and up-to-date information for the customer, timely access to the information, and having access complete information (Sivaraks et al., 2011).

4.2.2 Customer's Convenience

Customer's convenience includes providing personalized information and services, providing data consistency, and non-stop services for him (Sivaraks et al., 2011). In fact, convenience is defined as the consumer's perception of time, the attempt related to purchase, and receiving service. Moreover, from the researchers' point of view, every convenience which leads to reduction of time or consumer's attempt to purchase, such as operational time or accessibility, belongs to the range of service convenience (Chang et al., 2013).

4.3 Quality and Outcomes of Bank-customer Relationship

Relationship quality is defined as the customer's perception about how his expectations are met, his predictions, his purposes, and his desires. In fact, the quality of the relationship includes some key elements that reflect the overall nature of the relationships between companies and their customers. Quality and outcomes of bank-customer relationship is evaluated based on four factors of trust, satisfaction, commitment, and tendency to recommend to others (Sivaraks et al., 2011).

3.3.1 Trust

Dwyer et al. define trust as the assurance of one of the parties to the relationship about the reliability of the statements and commitments of the other party. In addition, customers' assurance about observing moral principles in banking procedures causes that customers come to the belief that bank operations are trustable and the bank will not resort to opportunist behaviors (Seyed javadin et al., 2011).

3.3.2 Satisfaction

Customer's satisfaction is his feeling or attitude towards a product or service after using it (Javanmard & Hosseini, 2013). In fact, satisfaction is judgment about meeting expectations and is a state of being pleasant (Keramati & Nikzad shahrivar, 2010).

4.3.3 Commitment

Commitment means that one of the parties to the relationship feels that he has an incentive to pose a commercial relationship with the other party (Iranzade et al., 2009). Actually, commitment is the long-term tendency of a commercial partner to retain a continuous and valuable relationship with others. According to Berry and Parasuraman (1991), in service marketing area relationships are made based on the mutual commitment (Tatkeh & xie, 2009).

4.3.4 Tendency to Recommend to Others

A kind of informal relationship through which customers transfer information to other customers about characteristics of, using, or buying a specific product or service. If satisfied customers recommend a company to their friends, family, and co-workers can produce a virus like effect. (Finn et al., 2009)

5- Research Purposes and Hypotheses

5.1 Purpose of the Study

The purpose of the present study was investigating the effect of implementing electronic customer relationship management (e-CRM) systems on the quality of bank-customer relationship considering customers of private banks in Rasht.

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5.2 Research Hypotheses

Based on the theoretical framework and aforementioned research questions and hypotheses, the following hypotheses were formulated:

H1: Implementation of the e-CRM has a positive significant relationship with customer-based service attributes.

H1a: Implementation of the e-CRM has a positive significant relationship with the information attained by the customers.

H1b: Implementation of the e-CRM has a positive significant relationship with the customer's convenience.

H2: Implementation of the e-CRM has a positive significant relationship with quality and outcomes of bank-customer relationship.

H2a: Implementation of the e-CRM has a positive significant relationship with the customer's trust.

H2b: Implementation of the e-CRM has a positive significant relationship with the customer's satisfaction.

H2c: Implementation of the e-CRM has a positive significant relationship with the customer's commitment.

H2d: Implementation of the e-CRM has a positive significant relationship with the customer's tendency to recommend to others.

H3: Implementation of the e-CRM has an indirect effect on quality and outcomes of relations through customer-based service attributes.

6- Theoretical Framework

Conceptual model of this research, based on the theoretical and empirical background, was adopted from Sivaraks et al.'s (2011) conceptual model in banking industry and was tested and analyzed.
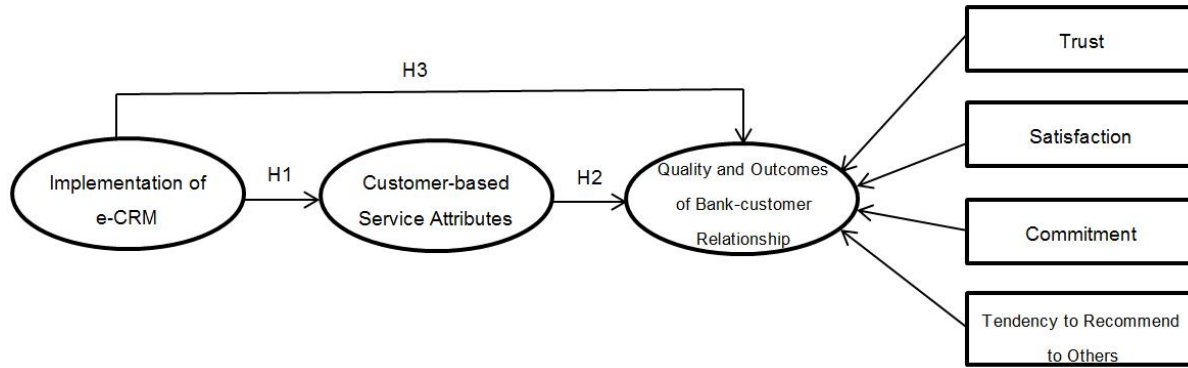
Adopted from Sivaraks et al. (2011)

In this model the following question was attempted to be answered:

Is there any relationship between implementation of the e-CRM and the quality of customer-bank relationship in private banks?

7- Design

This study was a descriptive correlational research. The required data were collected through a questionnaire that its validity has been examined beforehand. As the research data were of ordinal type and had a normal distribution, Pearson's correlation analyses was run to examine the relationships between variables and to investigate the research hypotheses. The collected data were analyzed with SPSS and LISREL softwares through appropriate analyses.

8- Population, Sampling, and Data Collection

The population of the present research was customers of private banks in Rasht. The sampling design of the study was convenience non-probability and the sample size was determined as 384 through using Morgan Table.

9- Measuring Variables and Validity of Measurement

To measure the variables of the study, a 5-point Likert-scale questionnaire was used. Prior to the study, the questionnaire was piloted with 30 participants and its Cronbach's alpha index was calculated the results of which are presented in Table 1. The content validity of the questionnaire was examined based on the research literature and using the field experts' opinions and prior distribution of the questionnaire to some of the participants.

Table 1

Cronbach's Alpha for Items Related to Each Variable

No.	Variable	Cronbach's α
1	e-CRM	0.714
2	customer-based service attributes	0.905
3	quality and outcomes of the relationship	0.926

10- Descriptive Results

Having investigated the role of gender in the research variables, it was found that male customers had a higher tendency to use electronic services of the banks. Among these customers, the number of the marrieds was two times more than the singles, they mostly were BA holders and they income range was between 10 and 20 million Rials. In addition, most of the participants focused on the banks that they were interacting with them for more than two years. Based on the participants' answers, ATM and POS were mostly used and OTP was the rarely used electronic services. Moreover, the maximum participants were the customers of Bank Mellat and the minimum of them were the customers of Tourism Bank.

11- Inferential Results

As the research data were normally distributed and were of ordinal type, Pearson's correlation analyses were used to investigate the relationships between variables and to examine the research hypotheses.

11.1 First Hypothesis

Implementation of the e-CRM has a positive significant relationship with customer-based service attributes.

*First Sub-hypothesis***:** Implementation of the e-CRM has a positive significant relationship with information received by the customer.

*Second Sub-hypothesis***:** Implementation of the e-CRM has a positive significant relationship with customer's convenience.

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Table 2

Correlation Coefficients between Implementation of the e-CRM and Customer-Based Service Attributes and Its Dimensions

Relationship between	customer-based service attributes	information received by the customer	customer's convenience
Implementation of the e-CRM	0.29	0.33	0.31

In addition, data analysis revealed that the observed p-value was lower than 0.05. Therefore, there were relationships between variables and above-mentioned three hypotheses were confirmed. A review of the literature revealed that the findings of the present study were in line with the results of some other studies a brief review of which are presented in Table 3.

Table 3

Previous Studies in Line with the First Hypothesis

Researcher and Year	Research Findings
Mekammol et al. (2013)	There is a significant positive relationship between e-CRM interactions through website and sale facility, website characteristics, contact interactions of the website.
Delafrooz & Yaghoubi (2013)	Implementation of the e-CRM has a significant effect on customer-based service attributes in Bank Saderat
Sivaraks et al. (2011)	There is a positive significant relationship between implementation of the e-CRM and customer-based service attributes in Thailand.
Mir Fakhroddini et al. (1388)	Higher levels of implementing the e-CRM lead to the improvement of customer orientation.

11.2 Second Hypothesis

Implementation of the e-CRM has a positive significant relationship with quality and outcomes of bank-customer relationship.

*First Sub-hypothesis***:** Implementation of the e-CRM has a positive significant relationship with the customer's trust.

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***Second Sub-hypothesis*:** Implementation of the e-CRM has a positive significant relationship with the customer's satisfaction.

***Third Sub-hypothesis*:** Implementation of the e-CRM has a positive significant relationship with the customer's commitment.

***Fourth Sub-hypothesis*:** Implementation of the e-CRM has a positive significant relationship with the customer's tendency to recommend to others.

Table 4

Correlation Coefficients between Implementation of the e-CRM and Quality and Outcomes of Bank-customer Relationship and Its Dimensions

Relationship between	quality and outcomes of bank-customer relationship	trust	satisfaction	commitment	tendency to recommend to others
Implementation of the e-CRM	0.42	0.41	0.37	0.24	0.30

Moreover, data analysis indicated that the observed p-value was lower than 0.05. Hence, there were relationships between variables and above-mentioned four hypotheses were approved.

A brief review of the studies the findings of which were in line with the results of the present study is reported in Table 5.

Table 5

Previous Studies in Line with the Second Hypothesis

| Researcher and Year	Research Findings
Chang et al. (2014)	If relational information processes of CRM have been implemented in the best way, customer-based relational operations such as satisfaction, commitment, and oral positive relations can be improved.
Delafrouz & Yaghoubi (2013)	There is a positive significant relationship between implementation of e-CRM and quality and outcomes of customer-bank relationship among customers of Bank Saderat.
Sivaraks et al. (2011)	There is a positive significant relationship between implementation of e-CRM and quality and outcomes of customer-bank relationship among customers of Thiland Banks.
Mir Fakhroddini et al. (1388)	Higher levels of the implementation of e-CRM increase customer satisfaction.
Seyyedi et al. (1388)	Customer's satisfaction has a direct relationship with the operation of customer's behavior-based CRM.

11.3 Third Hypothesis

Implementation of the e-CRM has an indirect effect on quality and outcomes of relations through customer-based service attributes.

In order to investigate the effect of mediator variable of customer-based service attributes and to determine if this variable has a mediator role in the relationship between implementation of the e-CRM and quality and outcomes of bank-customer relationship, structural equation modeling analysis was used.

In this section, the conceptual model of the study in the form of standard estimation was explored and its path coefficients were determined. Figure 1 illustrates the research model in the form of standard estimation:

Figure 1

*Research conceptual model in the form of standard estimation and path coefficients*
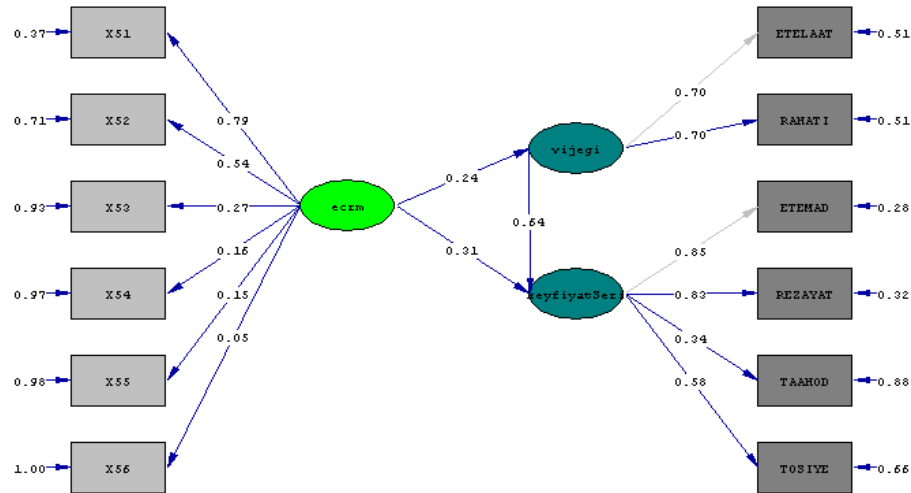
Chi-Square=201.72, df=51, P-value=0.00000, RMSEA=0.088

Afterwards, the relationships between independent and dependent variables were examined through their significance levels. If the significance levels were higher than +1.96 or lower than -1.96, the hypothesis would be confirmed and otherwise it would be rejected.

Figure 2

Research conceptual model in the form of significance levels
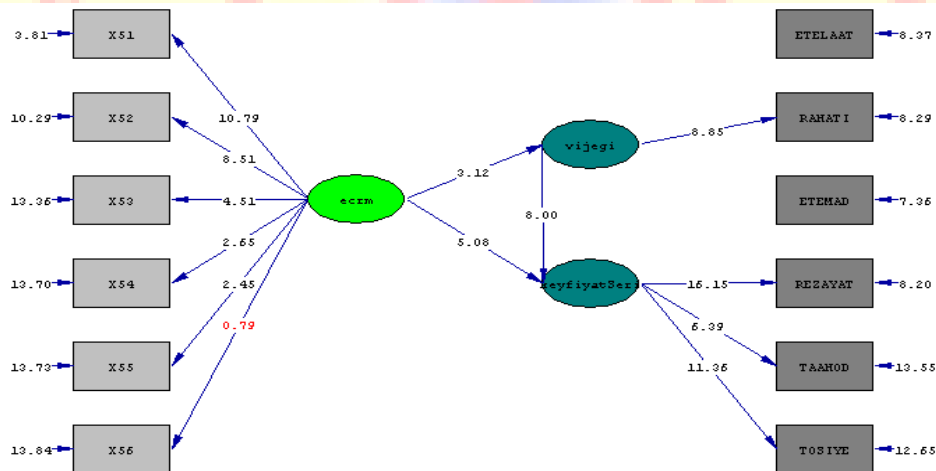
Chi-Square=201.72, df=51, P-value=0.00000, RMSEA=0.088

According to Figure 2 and as all of the variables had a significant relationships with each other, to explore the effect of mediator variable, at first direct path coefficient and then indirect path coefficient were calculated as presented in Table 6.

Table 6

Third Hypothesis Analysis: Investigation of the Mediator Role of Customer-based Service Attributes

Effect Type	From	To	Path Coefficient	Overall Effect	Hypothesis Result
Indirect	e-CRM	Customer-based Service Attributes	0.24	0.24*0.54=0.13	Rejection of the mediator role
	Customer-based Service Attributes	Quality and Outcomes of Bank-customer Relationship	0.54		
Direct	e-CRM	Quality and Outcomes of Bank-customer Relationship	0.31	0.31	

As it is observed in Table 6, the effects of e-CRM and quality and outcomes of bank-customer relationship on each other through the mediator variable of customer-based service attributes is 0.13 and as this amount is lower than the direct effect of these variables on each other (0.31), the mediator role of the customer-based service attributes in the relationship between e-CRM and quality and outcomes of bank-customer relationship was not accepted and the third hypothesis was rejected. Previous studies in line with the third hypothesis of the present study are listed in Table 7.

Table 7

Previous Studies in Line with the Third Hypothesis

Researcher and Year	Research Findings
Alalak (2013)	There is a positive significant relationship between customer-orientation, relationship-orientation, and service provider attributes and the quality of the relationship.
Segaro (2013)	Individual's perception of the quality of the service has a positive and direct effect on customer's satisfaction.
Delafrouz & Yaghoubi (2013)	There is a positive significant relationship between customer-based service attributes and overall outcome and quality of customer-bank relationship.
Park et al. (2012)	In using electronic services by the customers, trust is a strong regulator to create trust in the relationship. In addition, service attributes and quality are regulators to form the customer's trust.
Sayafrizal et al. (2012)	Customer-orientation and relationships have positive significant effects on quality of the relationship with customer in banking.
Okas & Carlson (2011)	When electronic retail website presents an innovative capability, users perception of this new experience affects his perception of the overall quality of the electronic service, higher levels of trust, his loyalty, and his positive oral relationships.
Wee Mingo et al. (2011)	Service attributes affect satisfaction and trust of the customer and trust and satisfaction affect the customer's commitment. As service attributes affect satisfaction and trust of the customer, they also affect the quality of the relationship.
Woon (2010)	The key factors determining the satisfaction and loyalty of the young customers of restaurants are service quality and price. When the food is served out of the restaurant and service is not delivered there, satisfaction and loyalty of the customer is low.
Sivaraks et al. (2011)	There is a positive significant relationship between customer-based service attributes and quality and outcomes of bank-customer

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	relationship in Thailand banks.
Kamalian et al. (1388)	Users of e-CRM system can enjoy better and commodious services and this will increase their satisfaction.

12- Management Suggestions

1. The results indicated that implementation of e-CRM increases the customer's trust and its effect on the other dimensions is lower than this. In order to increase the customers' commitment, managers should deliver services in acceptable method, in each time of the day, and within the shortest time. Moreover, to increase the customers' satisfaction, they should recognize their continuously changing needs before other competitors and attempt to satisfy their needs. The customer's satisfaction will lead to his tendency to recommend to others.

2. The managers should attempt to increase the quality of the information received by the customers. They could make a survey to know the customers' needs and then conform received information and customers' needs, that is, personalize e-CRM. It means that they can make a comprehensive profile for each customer and upon his entrance to e-CRM system he can receive the required services.

3. Electronic services should be planned in such a way that using them does not require any specific expert knowledge and all members of the society regardless of their knowledge and study level can make use of them. In addition, access to them should not require so many instruments. These services should satisfy the customers' information needs and include reliable and up-to-date information.

4. The present study explores the private banks. As the branches of private banks are less than the branches of governmental bank, each one of the electronic services should be planned in such a way that the customers be able to do any financial transaction in every time and place.

13- The Limitations of the Study and Suggestions for Further Research

1. In the present study, to measure the 'customer-based service attributes' variable just 'convenience' and 'information' dimensions were considered. But, reviewing the

literatures delineates that 'relationships' is another dimension of this variable. Therefore, in future studies this dimension can be considered.

2. In this study, to measure the 'quality and outcomes of the relationships' variable 'trust', 'satisfaction', 'commitment', and 'tendency to recommend to others' dimensions were taken into account. In the future researches, 'retention' and 'loyalty' dimensions can be studied.

3. In this research, data collection was confined to a questionnaire and to eliminate any misunderstanding, a pilot study was conducted. But, unfortunately, exploration of the participants' ideas revealed some contradictions in their answers the reason for which may be incomplete understanding of the questions or insufficient attention of the participants to the questions while filling the questionnaire. Therefore, in future studies, other data collection methods such as interview can be used.

4. Because of time limitations, this study examined the effect of the implementation of e-CRM only in the private banks. Hence, future studies may replicate the present study on governmental banks and finance and credit institutes.

5. Because of time limitations, the sampling design of the present study was convenience non-probability. In future studies participants may be chosen through probability designs such as cluster or stratified random sampling.

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