

# Assessing the Quality of Applied Services in Mobile Customer Relationship Management: Case Study of Banking Informatics Corporations in Iran

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## Abstract

Today's organizations need to promote profitability, reduce costs, increase market share, increase customers' satisfaction and other cases that cause to increase validity and create value and meet organizational strategy, while reducing risks and costs in order to gain values and innovation for the organization. In this research, we aim to measure customer's perspective from quality of provided services through mobile customer relation management. In this regards, we evaluate banking informatics corporations based on SERVQUAL model that use fivefold dimensions of quality of services. The goal of this research is to identify variables effective on customer relation management through mobile phone and its output variables and provide a model based on these variables. Hence, MCRM has been measured with effect of independent variables on outputs on study case of bank informatics organization (as a provider) and bank (as a customer). Questionnaires were used for data gathering from customers. The results showed that banks have found physical dimension and guarantee are closer to their expectations rather than other dimensions of quality, while dimension of accountability is far from their expectations. The correlation analysis between dimensions depicted that there was maximum correlation between dimensions of accountability and physical dimension, while there was minimum correlation between dimensions of empathy and capability of trusts. With respect to perceptions, there was maximum correlation between dimensions of guarantee and accountability, while minimum correlation was between accountability and trust capability.

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## Introduction

Present era is referred to era of quality and quality is discussed tantamount to the most important competitive merit of most of organizations whether productive and service. Today, quality is defined as customer's request and customers' expectations and perceptions are known as the most main determinant of quality (Jain et al., 2012). In fact, customer determines quality of goods and services, not producer of goods or provider of service and hence, quality should be observed from customer's view and he/she should be remarked in regard to quality. While bank services in the world has a quick growth and changes of globalization in bank services are increasing, developing countries such as Iran should prepare themselves for quick changes in relation to bank services. Today, service quality and customer's satisfaction are from strategic discussions for service organizations. Researches indicate that there is a relation between customer's satisfaction and quality of product, keeping customer and profitability (Dash et al., 2012). Also, rate of keeping customer determines portion of market and customer's satisfaction is also main factor in keeping them. So these institutes should pay enough attention to factors effective on their domestic and foreign customers' satisfaction. Since customer's satisfaction is primary result of service quality based on dimensions taken by (Parasuraman et al., 1985), so with awareness of service quality for customers, banks can while required programming to pay attention to these factors with aim to meet customers' satisfaction and finally, making loyalty in them in today's full-competitive world continue their activity successfully (Rust & Zahorik, 1993). On the other hand, awareness of situation of competitors and getting information in fields related to their customers will be solution to regulate more complete strategic programs in field of profitability and attraction of customers. On the other hand, concern of banks and attraction of customers' satisfaction and quality of providing products should be important for informatics organizations, too. In this paper, it takes important and necessity of research discussion at first that we take parts of definition of electronic customer relation management, tension between company of shareholders and making moiling channels and then, we take theoretical bases and background of research, methodology, analysis of data and finally, conclusion.

## Customer Relationship Management

In recent years, development of customer relation management has been noted by area of marketing and is taken into account as a valuable tool for customer relation management of organization. CRM is a process and integrated strategy that enables organization that identifies, chooses, and keeps customers and by making and keeping long term relations with customers, it is as profitability. It is a process and integrated strategy that enables organizations that identify, choose and keep customers and by

making and keeping long term relations with customers, they service them as profitable (Schierholz et al., 2007). Of the most important communicative channels with customers, phone channel is an effective tool to achieve to customer in all places and times. customer relation management through mobile phone (MCRM) is a one-way or interactive relation that is done in relation to sale, marketing and activities of service to customer through media of mobile phone and its goal is to make and keep relation between a company and its customer (Brahmbhatt & Panelia, 2008). In recent years, use of mobile phone in the world has had a quick growth. Easy use of it and also, possibility to use it in different times and places has distinguished this means from other communicative means. Mobile phone sets interactive two-ways communications with clear features and with high personal degree. Although use of mobile phone makes opportunities for customer relation management, it faces challenges, too; for example companies need to make a technological structure that enables them in customer relation management by means of mobile phone. Then, technological structure that uses CRM should be integrated with existing CRM system and also, future challenges are about this fact that customers should choose MCRM programs and provide their information for primary relation with companies to them.

### *Electronic Customer Relationship Management*

Electronic customer relation management is a marketing and sale strategy and integrated online services that play a role in identification, obtaining and keeping customers who are as the largest capital of company. Electronic customer relation management improves and increases relation between company with its customers by making and increasing relation with customer through a new technology. Software of electronic customer relationship management makes profiles and a log from any contact of organization with its customers. ECRM is a combination of hardware, software, managerial uses and commitments.

Present customers are more profitable than attraction of new customers. The best way to keep present customers as satisfied is to evaluate their conditions. Companies that have this technology can increase their capital from \$1 billion to \$ 130 billion. While interest getting from ECRM includes the following cases:

1. Increase of customer's loyalty
2. Effective marketing
3. Improvement of customer's services and support
4. More efficiency and reduction of costs

Decision making is about time and how to use solutions of mobile phone for customer relations management and in view of turning out complex communications world and in view of quick time table of promotion of devices of mobile phone and their applications and need to increase return and efficiency in solutions of developing organizations in three areas, organization, senior managers, business managers, managers and decision makers, IT managers and staff that either has its special features and even some times

contrasted goals and requirements (Lendel & Kubina, 2013). And so, movement to this direction needs to identify customers' needs and type of providing services from provider organizations. In fact, use of mobile phone causes to increase efficiency of organization staff and enforce them to move that beside it, there is quick development in promotion and solving systematic problems and better support of customers. Choice of mobile phone devices by staff causes to increase flexibility and makes staff's tendency to use these mobile phone devices for both personal and professional goals. Therefore, the following cases can be stated to use MCRM:

- Making stronger relations with customer
- Increase of performance of organization sale team
- Increase of productivity from organization services team
- Reduction of need for multiple contacts from several paths
- Reduction of administrative formalities (bureaucracy)
- Reduction of data errors and increase of availability of real time
- Providing exceptional services

## Research Background

Service is a type of product that has a remarkable portion in business and has had high qualitative and quantitative development of third millennium. Services and quality have been turned out into a key tool in achievement to competitive distinctness and spread of addressees' loyalty, i.e. customers that have been noted by researches of marketing and management accounting (Karunaratna, 2014). So, we seek a model to better understand and assess gap between customer's perceptions and expectations. In the following, we investigate some models that have been provided to assess service quality. For example, Servperf Model: To judge in relation to quality, it uses two main components (Fogarty et al., 2000; Adil et al., 2013; Yarimoghlu, 2014):

1. Assessment or effective component of real services of company (Performance)
2. Importance component (Important)

These both components are asked for either of services provided by organization and are used to get customer's total judgment. Strengths and weaknesses of company can be identified in relation to customers' satisfaction but from faults of this model, it is that measurement of rate of indices importance is not easy. Based on the following models, it is used to assess service quality:

- P-E gap model that is used to determine gap in quality of services.

- Conception assessment model that is known as Servperf and only assesses customer's conception from service quality.
- E–P gap model that measures customer's expectation and conception from service quality in comparison with each other.
- E & P model that interaction of expectations and conception is taken independently.

Finally, use of SERVQUAL model was chosen that specifications of this model are as follows:

SERVQUAL is derived from service quality. SERVQUAL is a multi-factorial scale that is used to measure customer's conception from service quality of a service or retailer organization (Asubonteng et al., 1996). SERVQUAL scale is from the most famous measurement methods of service quality that was made by (Parasuraman et al., 1985). Deep, precise and experiential attitude of them has led to design of SERVQUAL conceptual model that assesses service quality based on fivefold dimensions including, physical dimensions and appearances, trust capability, responsibility accepting, guarantee and empathy. Expectations have been identified as customers' wills and requests. A service has quality that can meet customers' needs and requests and adapts with customers' expectations levels, customer's expectations relate to what customers want it and what they feel, provider of services should supply it to them (Mahapatra & Khan, 2007). So, customer determines quality. Service quality is assessed than what customer expects it from his/her received service (Seth et al., 2005). SERVQUAL is calculated based on 10 axes of service quality that are: validity, accountability, competitiveness competence, access, respect, communications, validity, security, customer–basis and tangibles. In next studies, Parasuraman reduced above tenfold factor to five factors. These factors are as follows:

- Validity
- Guarantee
- Tangibles
- Empathy
- Accountability

SERVQUAL scale is discussed for two questions. One question that measures status quo and one question that investigates desired situation. Therefore, it is called gap analysis and with supposition of normality of data, couple t – test is used to analyze gathered data (Rathee et al., 2014). While in Servperf scale, only existing case is investigated and with supposition of normality of data, One–Sample T–Test is used to analyze gathered data.

### *SERVQUAL Dimensions and Factors*

- **Physical dimension:** Physical appearance includes equipment, staff, modernization and correct arrangement of equipment, quality of equipment and education tools.
- **Trust capability dimension:** Ability to do promised services as complete, with quality and in due date includes correct response to questions and showing interest to education of experts and masters, so that customers' expectations are met.
- **Accountability dimension:** Tendency of experts help to customer/learners in providing quick and accurate services includes speed of accountability, interest of staff to solve customers'/learners' problems, having required opportunity to respond to learners and provide feedback to customers/ learners.
- **Guarantee dimension:** It is ability of system and its validity in providing sure and suitable services, having staff with enough knowledge, familiarity with how to use new equipment and technologies that itself shows competence and ability of organization staff to induce sense of trust and confidence in customer.
- **Empathy dimension:** It is respect to personality of customers/ learners, personal attention to customers/ learners, knowing their important interests, use of understandable words for customers and attention to their morale, so that they sense, organization understands them and gives significance to them.

Wide researches in area of service quality have been mostly constructed in framework of SERVQUAL model that are shown in Table 1.

Table 1: Summary of measurement models of service quality

Model name	Writer / Writers	Year	Measurement of service quality through
Technical function quality model	Grönroos	1984	Technical and function quality
Gap model	Parasuraman et al.	1985	Tenfold dimensions of service quality
Model based on IT performance	Cronin and Taylor	1992	Based on 22 fold items, but only based on performance
PCP tie model	Berkley and Gupta	1994	None
Electronic service quality model	Santos	2003	Through activities and incubator dimensions of

Many studies have been constructed in field of assessment of service quality with SERVQUAL model in different service industries that some of them are indicated in Table 2.

Table 2: Summary of papers provided with SERVQUAL Model

Research	Writer/ writers	Year	Investigation and results
Employee Perceptions of Service Quality in the Namibian Hotel Industry: A SERVQUAL Approach	Musaba et al.	2014	Distance of score estimation showed that in five dimensions of cases, staff's perceptions from delivery of service quality in hotels were lower than expectations. The largest scores of distance by pointing out presence of service gap relate to just behavior and care of staff, employers. Staff is as a valuable source.
Consumer's expectations of services of mobile phone of CRM in customer relations management in field of banking in India	Sangle & Awasthi	2011	The goal of this research is that development of true understanding of customer's main concerns while using services of mobile phone banking and identification of factors can be effective in mobile customer relation management (MCRM) in bank services. Experiential paper has investigated basic factors by using heuristic factor analysis.
Provided service quality from news networks: SERVQUAL analysis in Pakistan	Mursaleen et al.	2014	The present study has been provided with aim of services quality by news networks of Pakistan through using SERVQUAL scale. In this research, it has stated SERVQUAL scale suitable to measure services quality of news channels in the developing country.

### Research Methodology

We use SERVQUAL model to measure the perceived service quality of mobile service in customer relationship management system of banking informatics corporations in Iran. The method is dealt with measuring of existing gap between customers' requests and services that they perceived. With respect to this gap, three scenario can occur:

First, customer's perceptions are higher than his/her expectations. In this case, quality is excellent. Second, customer's perceptions are in extent of his/her expectations. In this

case, quality is good. Third, customer's perceptions are lower than his/her expectations or his/her expectations are not met. In this case, quality is weak.

Questionnaires were used to gather information that includes two questionnaires regarding expectations and perceptions service quality and each includes five dimensions and 24 factors. 30 These questionnaires are randomly distributed between 30 IT experts and middle - level and high - level managers of organization customers.

### *Hypotheses of the research*

A main hypothesis of the research is as follows:

**H<sub>0</sub>**: Customers are satisfied from service quality provided by MCRM from organization.

Secondary hypotheses of the research are as follows:

**H<sub>1</sub>**: customers' expectations of tangible factors adapt with their perceptions of tangible factors.

**H<sub>2</sub>**: customers' expectations of trust capability adapt with their perceptions of trust capability.

**H<sub>3</sub>**: customers' expectations of confidence adapt with their perceptions of confidence.

**H<sub>4</sub>**: customers' expectations of accountability adapt with their perceptions of accountability.

**H<sub>5</sub>**: customers' expectations of empathy adapt with their perceptions of empathy.

### *Questionnaire*

Questionnaire has been composed of two main parts that include to assess specifications of statistical community and use of mobile phone in customer relations management in five dimensions of quality. In this research, to gather information from two tools of SERVQUAL that Parasuraman have designed them, it is in 5- items scale (1 = very bad, 2 = bad, 3 = medium, 4 = good, 5 = very good).

### **Data Analysis**

Data analysis is done in several stages. At first, to measure services quality, data of SERVQUAL questionnaires is investigated. For this work, gap between perceptions and expectation is measured in dimensions once and in either of factors and services quality once. By using its findings, fivefold dimensions of SERVQUAL and dimension of factors of either of dimensions are prioritized that of its result, this is deduced that from customers' view of education unit, which one of dimensions and factors has more significance to note and improve in future programs. In other stage, justifiability and durability of any one of above questionnaires are investigated by using data that do have questionnaires

and their responses required justifiability and durability? To determine durability of SERVQUAL model, Cronbach's  $\alpha$  has been used. Durability of dimensions of questionnaires of expectations and perceptions is visible in Table 3 and assessment of SERVQUAL dimensions is investigable from services quality in community studied in Table 4.

Table 3: Durability of dimensions of questionnaires of expectations and perceptions

Cronbach's $\alpha$		SERVQUAL dimensions
Questionnaire of perceptions	Questionnaire of expectations	
.757	.715	Physical
.749	.703	Trust capability
.753	.749	Accountability
.762	.733	Guarantee
.787	.749	Empathy
.933	.921	Total durability of questionnaire

Table 4: Assessment of SERVQUAL dimensions of services quality in studied community

Quality components	Average expectations	criterion deviation	Average perceptions	criterion deviation	Difference of both averages
physical	3.96	0.208	4.12	0.176	-0.16
Trust capability	3.65	0.270	4.03	0.194	-0.38
Accountability	3.60	0.245	4.15	0.17	-0.55
Guarantee	3.73	0.245	4.00	0.2	-0.27
Empathy	3.64	0.272	4.05	0.19	-0.41

Ranking SERVQUAL dimensions from view of measurement of quality from respondents' view is as follows:

1. Physical dimension (0.16): It means difference of both averages of expectations and perceptions is 0.16.
2. Guarantee dimension (0.27): It means difference of both averages of expectations and perceptions is 0.27.
3. Trust capability dimension (0.38): It means difference of both averages of expectations and perceptions is 0.38.
4. Empathy dimension (0.41): It means difference of both averages of expectations and perceptions is 0.41.

5. Accountability dimension (0.55): It means difference of both averages of expectations and perceptions is 0.55.

In short, it can be stated that customers or bank have found physical and guarantee dimensions more than other dimensions of quality closer to their expectations and found accountability dimension than other dimensions further then their expectations and informatics organizations in this dimension are weaker than all dimensions in quality and other dimensions are placed between these both dimensions, too. This note is necessary that intention of good quality in above is not ideal quality since intention of ideal quality in SERVQUAL model is to increase perceptions and receptions than expectations, but intention is not that services quality has not been in ideal or good extent, but intention is that among all dimensions, some have been closer to level of customers' expectations and some further to level of one's expectations. Of other analyses that were done in regard to findings, it is correlation between dimensions in both levels of expectations and perceptions that its result is provided in table 5 as follows:

Table 5: Correlation between dimensions of SERVQUAL in both levels of expectations and perceptions

Empathy dimension		Guarantee dimension		Accountability dimension		Trust capability dimension		physical dimension		Dimensions
Perceptions	Expectations	Perceptions	Expectations	Perceptions	Expectations	Perceptions	Expectations	Perceptions	Expectations	
0.847	0.814	0.830	0.828	0.835	0.874	0.886	0.854	1	1	physical
0.877	0.772	0.890	0.783	0.814	0.857	1	1	0.886	0.854	Trust capability
0.880	0.868	0.891	0.834	1	1	0.814	0.857	0.835	0.874	Accountability
0.821	0.878	1	1	0.891	0.834	0.890	0.783	0.830	0.828	Guarantee
1	1	0.821	0.878	0.880	0.868	0.877	0.772	0.847	0.814	Empathy

Prioritization of SERVQUAL dimensions from view of measurement of quality from respondents' view is as follows:

From data of above tables that is investigation of correlation between dimensions in questionnaires of expectations and perceptions and spearman's correlation has been used for it, it can be stated that n expectations, there is maximum correlation between dimensions of accountability and physical dimension and there is minimum correlation between dimensions of empathy and trust capability. In perceptions, there is maximum correlation between dimensions of guarantee and accountability and minimum correlation between accountability and trust capability.

## Conclusion

Above findings states that it is better that informatics organization to improve services quality in their future programming and by taking their customers' opinions. They should act as above prioritization and place their maximum capital to enable accountable people and experts to provide better services and with more ability in providing services and also, of other customers' requests that is stated in dimension of trust capability, is to do educational courses, provide more updating and prioritize customers' requests that they should put them in their first priority. Next priority is dimension of accountability that customers announce, they are willing that new and updating information is provided to them, they are responded suitably as soon as possible suitable feedback is provided to them, that these cases should be noted. Next priorities are physical and tangible dimensions and guarantee and empathy dimensions.

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