

# Evaluating the Effect of Establishment of Quality Management System on Customer Satisfaction Using SERVQUAL Technique

Kamaliyan, Amin Reza

Associate Professor of Management, University of Sistan and Baluchestan, Zahedan, Iran

Alizade Fatemeh

Department of Management University of Sistan and Baluchestan, Zahedan, Iran

Ahangari Shamsiyeh

Department of Management, University of Sistan and Baluchestan, Zahedan, Iran

Kahnouji Kobra

Social Determinants for Health Promotion Research center, Hormozgan University of

Medical Sciences, Bandar Abbas, Iran

Email: kahnouji56@gmail.com

To Link this Article: <http://dx.doi.org/10.6007/IJAREMS/v2-i6/429> DOI:10.6007/IJAREMS/v2-i6/429

Published Online: November, 2013

## Abstract

Quality is a familiar term on which many explanations exist. But the common aspect of all definitions contains "adopting the product/service with customer expectations and satisfactions. In the other words, quality is achieved when the product or service resolve the expectations of both internal and external customers. Quality is started from customer and any focus on product/service without noticing the customer's interest will not lead to quality. Therefore, the requirements of customers must be searched and products/services must be offered according to such requirements (Soudabe Saraei and AmirM.Amini: 2012). In fact, each organization is established in order to overcome some social requirements of people and can choose total quality management as the change strategy model. In this paper, the establishment of quality management system with customer satisfaction is evaluated. The level of customer satisfaction on quality after the establishment of system has been measured using Servqual Technique. According to nature of the subject, this paper is correlation-descriptive, and questionnaire has been used for collecting data. Pearson and Tau-Kendal tests were applied for data analysis via SPSS Software. The results show that there is a significant relation between quality dimension and customer satisfaction.

**Keywords:** Quality Management System, Customer Satisfaction, Quality

## Introduction

International competition in global markets especially in Europe which is based on high quality product, supplying after-sale services and finally achieving higher sale and more profit in today's producing and service enterprises, has lead to all factories and companies use the latest researches and articles of international standard organization and fulfill the internal and external customers' needs containing standard and guaranteed products/services. ISO is one of the most important standards in global markets. These standards, which have been created by International Standard Organization, have been accepted by most countries of the world and all companies and organizations seek for getting confirmation of the capability of their system and achieving a certificate based on ISO standards. This phenomenon has been started in recent years and companies have been able to gain ISO certificate and enhance their popularity in internal and external markets through proper planning and the efforts of managers and employees. In order to eliminate the limitations of single-product-exports (oil) and increase non-oil exports in Iran, a public cooperation in product/service section is needed. Improving the structure of industry and service section requires the establishment of modern management system based on Islamic system of our country and it is possible only through applying domestic exports.

Quality is one of the most important factors of customer satisfaction. This is always affected by intra-organizational factor and different variables. Ignoring such variable leads to decline customer-orientation and recognizing them helps enhancing the quality of products and services and finally customer satisfaction (Riahi, 2002: 5). Customer satisfaction is an important factor in competitiveness of a company and creating a total quality system indicates the ability of supplying the products and services which always provides customer satisfaction. In modern management, success depends on an administrative cycle in which the customer constitutes the two ends and finally in process of production, inputs and outputs lead to customer satisfaction and management applies this satisfaction to his system as feedback (Dewhurst, 1999: 265). Then, according to the above mentioned, some definitions of basic conceptions are required as following:

**Quality:** It usually provides an extreme nature of production or service to the mind which contain different dimensions such as accommodation, reliability, sustainability, aptitude and elegance. Therefore, it seems somewhat out of mind.

**Customer:** Customer is the one who defines his requirement, consumes products and services and is ready to pay for it only when he finds a value in it which justifies the payment (Mohammadi, 2007: 46). **Customer Satisfaction:** Based on psychology, Lingenfeld defines customer satisfaction as impressive which is created as the result of comparison between product qualifications and customer requirements and social expectations in relation with the product.

Based on the above mentioned, Rapp defines customer satisfaction as an individual view for customer which is derived from continuous comparisons between actual performance of organization and what customer expects.

Topfer has suggested an interesting point regarding customer satisfaction: It does not depend on the kind of business activity of the organization on the position of the organization in market, but it depends on the competency of organization in supplying the quality which customer expects.

Juran also defines customer satisfaction as a position in which customer feels that the qualities of the product adjust his expectations (Kavoosi & Saghayi, 2005: 389).

**Conceptual Framework of Research:**

There are different ways of measuring the quality of services: 1) CAF Model (Common Assessment Framework), 2) EFQM (European Foundation for Quality Management), 3) Servqual (Service Quality), 4) Chorter's Mark and 5) Leveling Model are some of them. In this research, servqual model has been used.

**Servqual Model:**

In the literature of service quality, the most common model of measuring the quality of services is SQ which was introduced by Parasuraman, Zethamel and Barry (Caruana, 2000). This research model was put in four service sections: Bank, Credit card companies, Share suppliers and repairing enterprises. Parasuraman et al. identified the conceptual model of analyzing the gap between service company and customer expectations through deep interviews with these companies and group interviews with customers. They also introduced 10 dimensions of service quality which include: tangible factors, reliability, responsibility, communication, credit, security/peace of mind, competency, politeness and modesty, customer understanding and availability (Parasuraman et al, 1985; Crunin & Tylor, 1992; Doublkar et al., 2000).

After more researches on servqual model and some evaluations and sieving the criteria, they summarized these dimensions in: tangible issues, reliability, trust/certify unanimity and responsibility (Zethamel et al., 1985). Therefore, they applied these dimensions as a base for creating a tool for measuring the service quality. This scale has 5 dimensions and 22 indexes which is applied to measure the expectation and perceptions of customers about dimensions of service quality (Zethamel & Biner, 1996). Evaluation of service quality in servqual model is based on customers' actual perception of quality of provided services in compare with optimal position of their viewpoint. Parasuraman believes that service quality includes customer expectations before purchase, perceived quality of buying process and perceived quality of the result. He introduced service quality as the gap between customer expectations of service and his perceptions of received services. Servqual model is one of models which measure service quality through analyzing the gap between customer's expectation and perception. This is also known as Gap Analysis Model that is very important and applicable in evaluating service quality (Brooks, 1999). Hence, the above mentioned model has been used in this research.

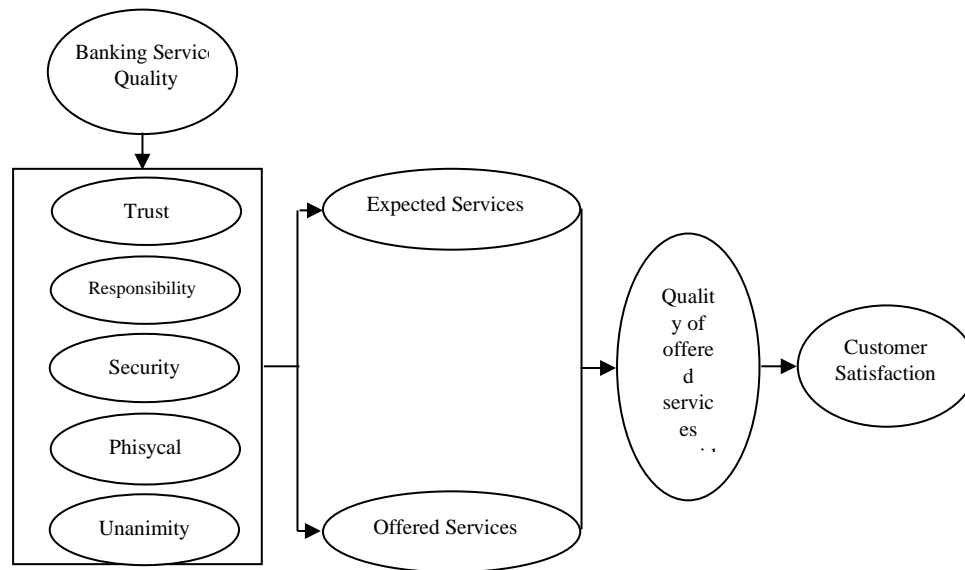


Figure 1 shows the conceptual frame of this study.

### Main Hypothesis:

There is a significant relation between quality management system and customer satisfaction.

### Secondary Hypotheses:

- There is a significant relation between trust dimension of quality management system and customer satisfaction.
- There is a significant relation between responsibility dimension of quality management system and customer satisfaction.
- There is a significant relation between security dimension of quality management system and customer satisfaction.
- There is a significant relation between physical dimension of quality management system and customer satisfaction.
- There is a significant relation between unanimity dimension of quality management system and customer satisfaction.

### Methodology of Research:

According to importance of the subject and nature of the research, it is correlation-descriptive. The aim of using correlation coefficient is mathematically explaining the relationship between two or more variables. This method lets the researcher measure many variables and calculate their internal correlation simultaneously (Khaki, 2003). The population of research is constituted of the employees of governmental organizations. The sampling method is simple random sampling, and volume of sample is 196 people based on calculated statistical formula. A questionnaire based on servqual model was used for data collection and answering the research hypotheses. In order to confirm validity and reliability of the questionnaire, Chronbach's Alpha was applied and then, collected data were analyzed using Spearman and TauKendal tests through SPSS Software.

### Findings of Research:

#### 1) Gender Frequency Distribution

According to data analysis, 85% of the respondents were men and 15% were women. Since, the respondents have been chosen randomly, this statistics indicate that women do not notice service quality (Table 1).

#### 2) Age Frequency Distribution

According to data analysis, 4.6% of respondents were younger than 20, 26.5% were between 21-30 years old, 30.1% were between 31-40, 19.4% were between 41-50 and 19.4% were older than 51. Therefore, it could be said that most respondents were 31-40 years old (Table 2).

#### 3) Frequency Distribution of Respondents Regarding Educational Level

According to data analysis, 11.2% of respondents were fewer than diploma, 35.2% had diploma, 23.5% had associate degree and 30.1% had bachelor's degree (Table 3).

#### 4) Job Frequency Distribution

According to data analysis, 38.3% of respondents had governmental jobs, 50.0% had non-governmental jobs and 11.7% were retired. It indicated that people with governmental jobs had most frequency.

### First Hypothesis:

H0:  $P=0$  There is no significant relationship between establishment of quality management system of trust dimension and customer satisfaction.

H1:  $P \neq 0$  There is a significant relationship between establishment of quality management system of trust dimension and customer satisfaction.

As correlation coefficient of Taukendal and Spearman is 0.513 and 0.602 respectively and both significance is 0.00, then H0 is rejected in 5% level.

| Quality of Trust Dimension | Satisfaction Measure    |              |           |                         |              |           |
|----------------------------|-------------------------|--------------|-----------|-------------------------|--------------|-----------|
|                            | Kendal Correlation      |              |           | Spearman Correlation    |              |           |
|                            | Correlation Coefficient | Significance | Frequency | Correlation Coefficient | Significance | Frequency |
|                            | 0.513                   | 0.000        | 196       | 0.602                   | 0.000        | 196       |

### Second Hypothesis:

H0:  $P=0$  There is no significant relationship between establishment of quality management system of responsibility dimension and customer satisfaction.

H1:  $P \neq 0$  There is a significant relationship between establishment of quality management system of responsibility dimension and customer satisfaction.

As correlation coefficient of Taukendal and Spearman is 0.318 and 0.253 respectively and both significance is 0.00, then H0 is rejected in 5% level.

| Quality of Responsibility Dimension | Satisfaction Measure    |              |           |                         |              |           |
|-------------------------------------|-------------------------|--------------|-----------|-------------------------|--------------|-----------|
|                                     | Kendal Correlation      |              |           | Spearman Correlation    |              |           |
|                                     | Correlation Coefficient | Significance | Frequency | Correlation Coefficient | Significance | Frequency |
|                                     | 0.318                   | 0.000        | 196       | 0.253                   | 0.000        | 196       |

**Third Hypothesis:**

H0:  $P=0$  There is no significant relationship between establishment of quality management system of security dimension and customer satisfaction.

H1:  $P \neq 0$  There is a significant relationship between establishment of quality management system of security dimension and customer satisfaction.

As correlation coefficient of Taukendal and Spearman is 0.423 and 0.517 respectively and both significance is 0.00, then H0 is rejected in 5% level.

| Quality of Security Dimension | Satisfaction Measure    |              |           |                         |              |           |
|-------------------------------|-------------------------|--------------|-----------|-------------------------|--------------|-----------|
|                               | Kendal Correlation      |              |           | Spearman Correlation    |              |           |
|                               | Correlation Coefficient | Significance | Frequency | Correlation Coefficient | Significance | Frequency |
|                               | 0.423                   | 0.000        | 196       | 0.517                   | 0.000        | 196       |

**Fourth Hypothesis:**

H0:  $P=0$  There is no significant relationship between establishment of quality management system of physical dimension and customer satisfaction.

H1:  $P \neq 0$  There is a significant relationship between establishment of quality management system of physical dimension and customer satisfaction.

As correlation coefficient of Taukendal and Spearman is 0.513 and 0.602 respectively and both significance is 0.00, then H0 is rejected in 5% level.

| Quality of Physical Dimension | Satisfaction Measure    |              |           |                         |              |           |
|-------------------------------|-------------------------|--------------|-----------|-------------------------|--------------|-----------|
|                               | Kendal Correlation      |              |           | Spearman Correlation    |              |           |
|                               | Correlation Coefficient | Significance | Frequency | Correlation Coefficient | Significance | Frequency |
|                               | 0.391                   | 0.000        | 196       | 0.251                   | 0.000        | 196       |

**Fifth Hypothesis:**

H0:  $P=0$  There is no significant relationship between establishment of quality management system of unanimity dimension and customer satisfaction.

H1:  $P \neq 0$  There is a significant relationship between establishment of quality management system of unanimity dimension and customer satisfaction.

As correlation coefficient of Taukendal and Spearman is 0.513 and 0.602 respectively and both significance is 0.00, then H0 is rejected in 5% level.

| Quality of Unanimity Dimension | Satisfaction Measure    |              |           |                         |              |           |
|--------------------------------|-------------------------|--------------|-----------|-------------------------|--------------|-----------|
|                                | Kendal Correlation      |              |           | Spearman Correlation    |              |           |
|                                | Correlation Coefficient | Significance | Frequency | Correlation Coefficient | Significance | Frequency |
|                                | 0.261                   | 0.000        | 196       | 0.198                   | 0.000        | 196       |

**Multiple Linear Regressions:**

Supposed that  $R^2$  is common variance percent between the variables (trust, responsibility, security, physical and unanimity) and evidence criterion (customer satisfaction) in studied population, statistical hypotheses of the test are as following:

$$H_0: R^2=0 \quad H_1: R^2>0$$

In the table of regression variance analysis, according to the amounts of  $R^2$  and especially  $R^2_{adj}$  (adjusted  $R^2$ ), as P (calculated measure of test) is less than significance level  $\alpha=5$ , hence,  $H_0$  is rejected in this level, that is, linear regression model is significant and consequently, there is a significant linear relation between dimensions (trust, responsibility, security, physical and unanimity) and evidence criterion (customer satisfaction).

Regression Variance Analysis Table

| Change Source | Square Sum | DF  | R2    | R2adj | F      | P measure |
|---------------|------------|-----|-------|-------|--------|-----------|
| Regression    | 15262.58   | 5   | 0.208 | 0.193 | 14.428 | 0.000     |
| Error         | 58181.35   | 275 |       |       |        |           |
| Total         | 73443.93   | 280 |       |       |        |           |

**Conclusion:**

In changing environment of today, organizations have well found that attending quality of services offered to the customers is the secret of survival. So, they measure the quality level and customer satisfaction in order to warranty their survival and enhance the indexes of their effectiveness and efficiency. According to the importance of service quality and customer satisfaction, the effect of establishment of quality management system on customer satisfaction has been evaluated in this research using Servqual technique. The results show that there is a significant relation between dimensions of trust, responsibility, security, physical and unanimity.

It means that increasing the level of responsibility, security and unanimity will enhance customer satisfaction. Also, from dimensional level, customer satisfaction will increase with updating organizational facilities and coordinating the level of competencies and abilities of target population. Therefore, it is recommended that organizations study these dimensions continuously and formulate and perform solutions to overcome disorders and possible problems by identifying weak points.

It must be noted that, considering the importance of enhancing service quality and its undeniable effect on customer satisfaction, the necessity of committing fundamental and applied researches in academic environments is perceived more than before.

**References:**

- Alvani, M. & Riahi, B. (2003). "Courses for Establishing Total Quality Management in Public Sector": Iran Center of Industrial Education and Research.
- Alvani, M. & Riahi, B. (2003). "Measuring Service Quality in Public Sector": Iran Center of Industrial Education and Research.
- Kavoosi, M & Saghayi, A. (2005). "Measuring Methods of Customer Satisfaction": Sabzan.
- Khaki, Gh. (2003). "Research Methodology in Management": Islamic Azad University, Tehran.
- Parasuraman, Berry and Zeithaml May (1985), "Ten Lessons for Improving Service Quality", Marketing Science Institute, Report.
- Zeithaml, Valaria A and Bitner. Mary Jo (1996), Service Marketing, McGraw Hill, Singapore.

- Brooks. R. F, Linggs. I. N and Botschen. M. A (1999) International Marketing and Customer Driven Wave fronts, Service Industries Journal.
- Caruana. A, Ewing MT, Assessment of the three column format SERVQUAL and experimental approach, Journal of Business Research.
- Soudabe Saraei and AmirM.Amini. (2012) 'A study of service quality in rural ICT renters of Iran by SERVQUAL" Telecommunications Policy 36 (2012) 571–578