

Analyzing the Relationship between Costumers Perceived Quality, Satisfaction and Loyalty (Case Study: SA Iran Electro Optic Industries Company)

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Abstract

In this paper, the relationship between perceived quality and costumers loyalty and satisfaction of SA Iran Electro Optic Industries (SAPA) has been studied. This is a descriptive survey in which data has been collected among 358 company costumers by Non Probability Sampling method and analyzed using SPSS and LISREL. In order to analyze the data, Confirmatory Factor Analysis and Structural Function Model are used. The research shows that performance quality has positive relationship with loyalty and satisfaction and customer satisfaction positively and significantly is in relation with their loyalty.

Keywords: Loyalty, Performance Quality and Customer Satisfaction

Introduction

Nowadays, in global economy, costumers have a key role in organizations survival and no organization could be apathetic to its customers. In recent decades, the concept of performance quality has drawn managers, experts and researchers attention due to its significant impact on business performance, decreasing costs, customer satisfaction and costumers intentions and beneficiary. There is no doubt that the main code for industries and organizations survival and promotion is presenting a super performance (services or products) as well as electronic industries that have an important share of market. Regarding the increasing number of electronic components manufacturers which has made a competitive environment within the country, the most important factor is to pay a specific attention to performance quality promotion.

In fact, this is so important that how we can gain customer satisfaction by improving quality performance dimensions. The concept of customer satisfaction in firms is one of those subjects that has drawn many of researchers' attention. Further to researchers attempts in this filed, they are looking for learning new methods and models to gather useful information about customer satisfaction. Marketing researchers still are arguing about a right global definition of customer satisfaction, although some structures have been discovered. With improving organizations performance quality, organizations shall concentrate all their activities and capabilities on customer loyalty and satisfaction as this is one of the basic resources of return on investment. In fact, in highly competitive markets, the ability of building costumers loyalty is regarded as a key factor in achieving a competitive advantage.

Since loyal costumers are essential agents of organization success, building costumers loyalty is highly considered. Some loyalty advantages are: Organization beneficiary improvement, reducing marketing costs, increasing organization sales with low price-sensitivity. Loyal costumers provide WOM marketing for organization which probably may increase their reference to the organization. All managers are aware of importance of sustaining costumers. This has been proved that sustaining current costumers is four to six times cheaper than attracting new ones. Regarding all these mentioned facts and their importance in competitive markets, like electronic components market, this paper studies the relationship between perceived quality and costumers loyalty and satisfaction in SAPA. In today's society with the development of technology, telecom equipment manufacturers have also increased.

Meanwhile it is important to improve quality of products and services in order to increase satisfaction and sustain costumers in competitive market. Hence, regarding the importance of above mentioned, researcher has studied the relations between quality-satisfaction and satisfaction-loyalty. Based on this, this research can assist all managers, especially SAPA managers, to provide high quality services or equipment to increase costumers loyalty and satisfaction in telecom equipment competitive market. The main object of this research is to identify and formulate relationships between perceived quality and customer loyalty and satisfaction in SAPA for achieving better performance. The other objects that could provide improvement solutions such as check list and etc to are to be used by quality assurance and control units in order to provide high quality services and

equipment to customers and increasing their loyalty and satisfaction.

Literature Review:

Factors affecting the relationship between satisfaction and loyalty are:

1- Switching Costs:

Switching Costs is one the affecting factors in relationship between satisfaction and loyalty. Firms are not able to sustain their costumers (increase their loyalty) without increasing their satisfaction. Switching costs are the psychological and economical costs which costumers perceive while switching to a new brand.

Some of these costs are:

Benefits that can be gained in lasting relations with suppliers where such benefits could not be gained from new suppliers. For instance, old customers are awarded some special discounts. Psychological costs are comprised of perceived risk in the time of switching to new brand, appraisal and research cost before switching to new brand, filling new forms before changing the bank and etc. (Jones 2002) kenedi (2002) showed that switching barriers are key factor in sustaining customers. Even unsatisfied customers keep supporting their suppliers since a new purchase is easier. (Kohen 2006)

2- Demographic Factors:

Mital and Kamokara (2001) found that in the same level of satisfaction, there is a significant different in behavioral loyalty due to interviewee age, genre, location, education, financial situation and etc. This research offers that customers with different characteristics, have different threshold levels and different repurchase probability. This research describes the effect of demographic factors on relationship between satisfaction and loyalty. (Johnson 2005)

3- Overall Satisfaction

Before 1990, satisfaction criteria were concentrated on special products or services which were defined as appraisal judgment after special purchase decision. Recently, another concept has been emerged which is relevant to all previous customer experiences with firm's services and products. (Bodet 2008). Overall Satisfaction is the effect of distinct services or transactions which are provided by suppliers in more than one period of time (Shankar 2003). It seems customer overall satisfaction represents their desires and intentions more effectively.

4- Compatibility Effect:

Johnson researches in 2005 shows that relationship between satisfaction and loyalty is affected by two factors: a) Brand Quality b) Ease of judgment and comparison between different brands

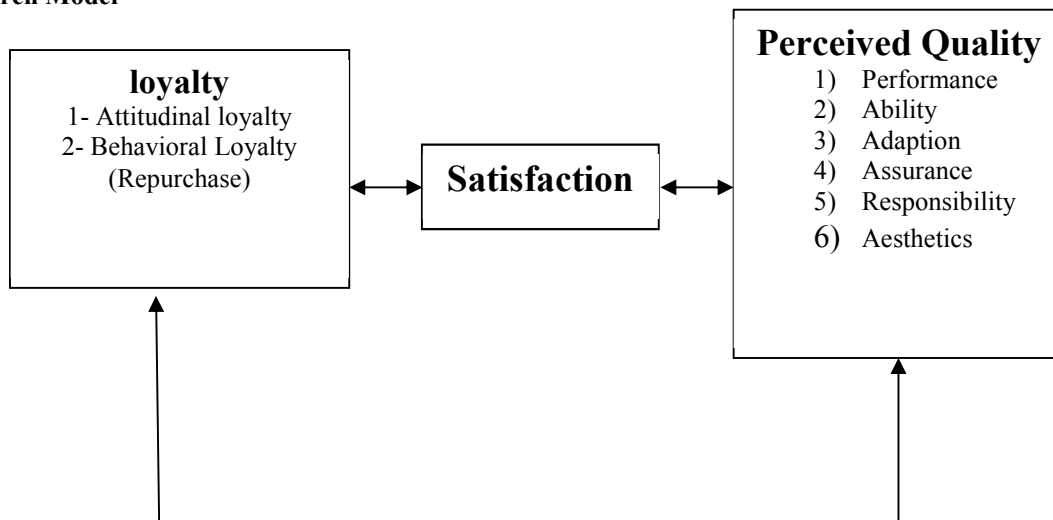
According to compatibility hypothesis, when information related to quality and price exist in an equal level, relationship between satisfaction and loyalty increases. This research shows that different characteristics in satisfaction and loyalty are the rational reason for negative relation between satisfaction and royalty. For instance, consider an insurance customer who is satisfied by high quality services and willing to decide whether continue his relationship with the company or not. This customer is not able to differ between different qualities due to lack of information. This will lower down the relation between satisfaction and loyalty. According to this thesis, when quality is important and it is easy to compare important qualities, most probably, it is used to evaluate satisfaction and loyalty. As a result, relationship between satisfaction and loyalty increases.

Accroding to Anderson & Solivan 1993, Taylor & Baker 1994, Chronin, Brady & Halt 2000 and Fornel & others 1996, it is assumed to be a positive relationship between customer satisfaction and loyalty repurchase which might be different for each product, industry and situation. Studies about relationship between quality, satisfaction and loyalty show that there is a positive relationship between this aspect but it is different based on product, industry and situation. A Mital and Kamakora study in 2001 shows that under certain circumstances, the orientation of the answers is so enormous and the estimated satisfaction is quietly disproportionate with the purchase behavior. By the way, the main idea behind satisfaction-loyalty researches is that satisfied customers are more loyal than unsatisfied customers.

Relationship between perceived quality and customer loyalty

Zeithamel (1996) stated that product or service with higher quality creates positive behavioral intentions of customers and increases the loyalty to the organization. Generally, the relationship between performance and customer loyalty is largely documented and in the meantime, researchers have recognized that staff customer-oriented behavior is critical. Performance quality is so effective on customer loyalty that a research by NOP based on Ventura order, carried out in 1997, on those customers who have had changed goods or sellers, showed that 97 percent of customers have changed the seller due to low quality services.

Research Model



Hypotheses

- H1: There is relationship between perceived quality and customer satisfaction.
- H2: There is relationship between customer satisfaction and customer loyalty.
- H3: There is a relationship between perceived quality and customer loyalty.
- H4: Customer satisfaction plays an intermediary role in the relationship between perceived quality and loyalty.

Research Methodology:

The data collection for this research is based on descriptive survey method. The survey method is chosen in order to Examine the relationship between variables where data has been collected from SAPA customers with coefficient related information.

This research is based on closed questionnaire with 31 questions. 5 questions are about customer satisfaction variable, 8 questions about loyalty and 18 question relevant to perceived performance quality variable.

Data analysis and hypothesis testing is performed using statistical techniques, especially multiple regression via SPSS and LISREL based on assumptions.

Table 1-1 Number of Questions for each variable

Source	Num. of Questions	Variable
The RELATIONSHIP AMONG PERCEIVED QUALITY, CONSUMER : SATISFACTION AND LOYALTY IN THE VIETNAMESE MARKET	5	Customer Satisfaction
Perceived quality, satisfaction and customer loyalty: an empirical study in the mobile phones sector in Brazil	8	Customer Loyalty
SERVQUAL questionnaire and a thesis entitled relationship between service quality and customer satisfaction and loyalty with the role in Rasht city Endowment and Charity Affairs	18	Perceived Quality

Sample

Statistical population for this research is SA IRAN electro Optic industries costumers and Cochran sampling formula is used for unlimited sample with ±5% error and 95% confidence in which sample size proportional to the population will be calculated using the following formula. In this research Simple Non-Probability Sampling is used.

$$n = \frac{Z^2 P(1-P)}{d^2}$$

d=0.05 , p =0/5 , 1-p=q =0/5 , Z=1/96

N=385

Validity and reliability

Validity of questionnaire which is used in this study has been confirmed through the content validity and construct validity. To assess the validity of the measurement tool, the questionnaire modeled based on different questionnaires listed in the table 1-3 and modified after consultation with expert instructors. Meanwhile in case of questionnaire validity, since the variable and their dimensions are clear and are not willing to identify any other dimensions, confirmatory factor analysis was used. In this study, Cronbach's alpha method is used to determine the reliability of the questionnaire. As demonstrated in variable reliability table based on pre-tests, all research structures have an appropriate reliability.

Table 2-1 : Variables Reliability based on Pre-Test

Num. of Samples	α	Num. of Questions	Variables	Item
30	0/862	5	Customer Satisfaction	1
30	0/873	8	Loyalty	2
30	0/948	18	Perceived Quality	3
30	0.894	31	Reliability of the questionnaire	

Data Analysis

Reviewing normal distribution of variables

Kolmogorov-Smirnov is one of the methods to review normal distribution of variables. The results are shown in below table.

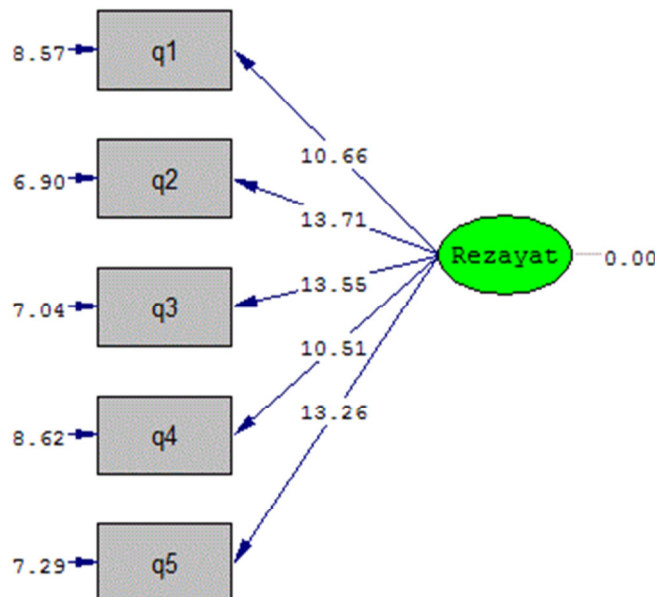
Table 3-1: Variables Normal Distribution

Kolmogorov-Smirnov	Significant amount	Variables
0.854	0.202	Customer Satisfaction
0.973	0.093	Loyalty
1.141	0.085	Perceived Quality

Where all data are higher than, 0.05, SPSS recognizes that the questionnaire is normal.

Customer satisfaction measurement model

In the following section, we have graphs that shows significantly the customer satisfaction measurement model. It is concluded from measurement equations related to the graph that T statistic results for customer satisfaction measurement model shows significant relation between items and latent variables.

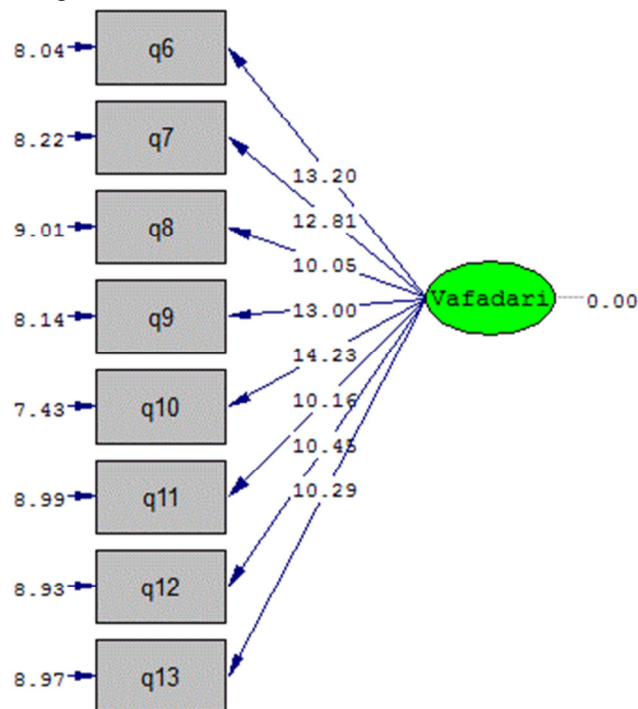


Chi-Square=18.04, df=9, P-value=0.00009, RMSEA=0.058

Figure 1-1: Customer Satisfaction Measurement Model Using Significant Factor Analysis

Loyalty Measurement Model

It is concluded from measurement equations related to the graph that T statistic results for customer loyalty measurement model shows significant relation between items and latent variables.

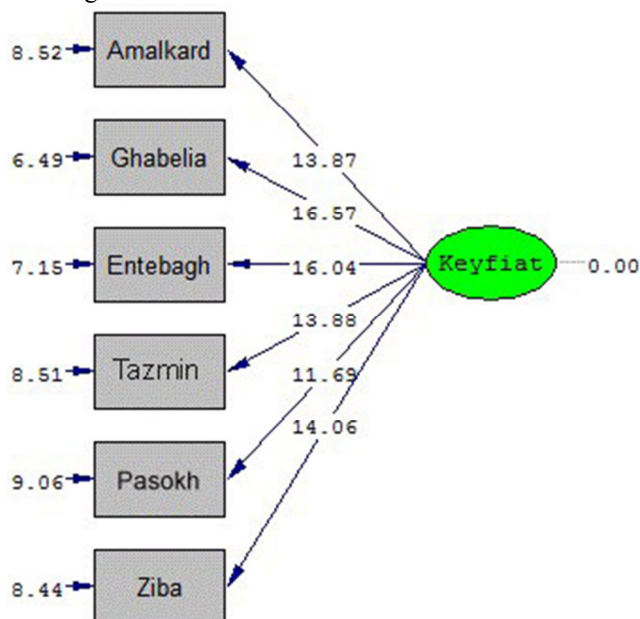


Chi-Square=43.87, df=20, P-value=0.00007, RMSEA=0.071

Figure 2-1: Customer Loyalty Measurement Model Using Significant Factor Analysis

Perceived Quality Measurement Model

It is concluded from measurement equations related to the graph that T statistic results for perceived quality measurement model shows significant relation between items and latent variables.

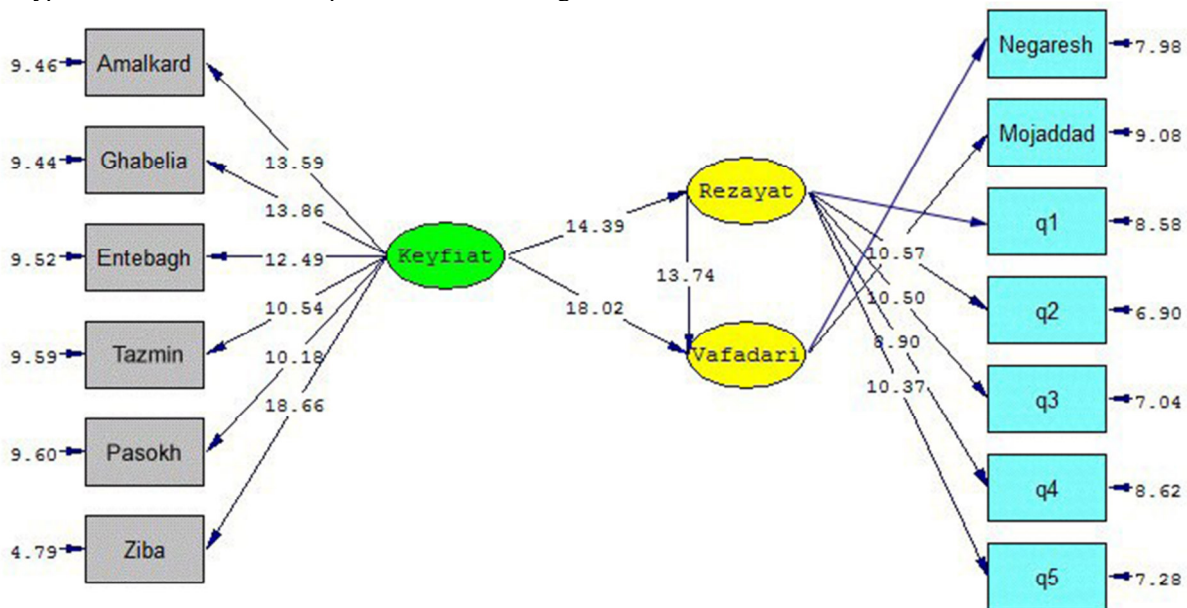


Chi-Square=11.49, df=9, P-value=0.00008, RMSEA=0.046

Figure 3-1: Perceived Quality Measurement Model Using Significant Factor Analysis

Hypotheses Test Using Linear Structured Relations

Hypotheses test results are depicted in the following table.



Chi-Square=130.20, df=62, P-value=0.00006, RMSEA=0.078

Figure 4-1: Main Hypotheses Measurement Model Using Significant Factor Analysis

Table 4-1: Research Conceptual Model Fit Indexes Analysis

X2/df	RMSEA	AGFI	GFI	CFI	NNFI	NFI
2.10	0.078	0.83	0.89	0.94	0.94	0.93
3 >	0/08 >	0/8 <	0/9 <	0/9 <	0/9 <	0/9 <

Test Results

Table 5-1: The results of hypotheses

Result	T	Research Main Hypotheses
Confirmed	14/39	There is a significant relationship between perceived quality and customer satisfaction. 1. وجود دارد.
Confirmed	13/74	There is a significant relationship between customer satisfaction and customer loyalty. 2.
Confirmed	18/02	There is a relationship between perceived quality and customer loyalty. 3.
Confirmed	و 14/39 13/74	There is significant relationship between customer satisfaction as an intermediate variable and perceived quality and loyalty.

In the first hypothesis it was claimed that there is a significant relationship between perceived quality and customer satisfaction which statistical analysis for these items shows that this hypothesis is accepted (where T-value=14.39).

In the second hypothesis it was claimed that there is a significant relationship between customer satisfaction and customer loyalty which statistical analysis for these items shows that this hypothesis is accepted (where T-value=13.74).

In the third hypothesis it was claimed that there is a significant relationship between perceived quality and customer loyalty which statistical analysis for these items shows that this hypothesis is accepted (where T-value=18.02).

In the fourth hypothesis it was claimed that there is a significant relationship between customer satisfaction as an intermediate variable and perceived quality and customer loyalty which statistical analysis for these items shows that this hypothesis is accepted (where T-value=14.39 & 13.74).

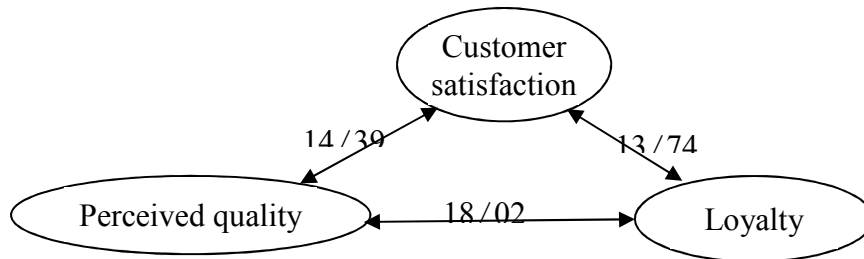


Figure 5-1: Tested Research Model

Results:

In this section, after describing the results of hypothesis tests, they are compared to similar research results in this filed.

H1:

There is a significant relationship between perceived quality and customer satisfaction.

The first Hypothesis test research represents that the relationship between perceived quality and customer satisfaction with significant coefficient of 14.39 and confidence level of 99.9% is significant. This result is the same as previous researchs like Lin & Lo (2000) and Saad & Bali (2005).

H2:

There is a significant relationship between customer satisfaction and customer loyalty.

The second hypothesis test research represents that the relationship between customer satisfaction and customer loyalty with significant coefficient of 13.74 and confidence level of 99.9% is significant. This result is the same as previous researches like Doraj & others (2002) and Chio and others (2005).

H3:

There is a relationship between perceived quality and customer loyalty.

The third hypothesis test research represents that the relationship between perceived quality and customer loyalty with significant coefficient of 18.02 and confidence level of 99.9% is significant. This result is the same as previous researches like De lone & Mack lean (2003) and Chen and Yen (2004).

H4:

There is significant relationship between customer satisfaction as an intermediate variable and perceived quality and loyalty.

Where both relationships between perceived quality and customer satisfaction (with significant coefficient of 14.39) and relationship between customer satisfaction and customer loyalty (with significant coefficient of 13.74) are significant, hence this hypothesis is confirmed.

Research Practical Suggestions

Based on obtained result, research recommendations are presented in two applicable sections and future researches. This section tries by using SPSS and LISREL output examine research variables in SAPA and according to research hypothesis, represent suggestions to the firm. Thus, on the basis of hypothesizes and final operational models of research and regarding the fact that there is significant relationship between customer satisfaction as an intermediate variable and customer perceived quality and loyalty, the suggestions are as follows:

Suggestions related to H1

Since there is a significant relationship between perceived quality and customer satisfaction, it is necessary to regard perceived quality as a valuable force for gaining customer satisfaction. Actually, accepting the point that products quality can make a positive effect on customers, may result in following suggestions:

- Purchasing equipment with new technology in order to promote services and products quality
- Signing cooperation contracts with big manufacturers of firm's product to transfer technology.

Suggestions related to H2

Since there is significant relationship between customer satisfaction and customer loyalty, some suggestions are:

- Speed up providing services which helps increasing customer satisfaction
- Training staff via courses, seminars and etc for improving relationship with customers and increasing their satisfaction and loyalty as well.

Suggestions related to H3

Since there is significant relationship between perceived quality and customer loyalty, it can be mentioned that one of fundamental mechanisms of increasing customers loyalty is perceived quality. Thus, suggestions are again:

- Purchasing equipment with new technology in order to promote services and products quality
- Signing cooperation contracts with big manufacturers of firm's product to transfer technology.

Suggestions related to H4

Since the relationships between perceived quality and customers' satisfaction and also customers' satisfaction and customers loyalty is significant, it is concluded that customers satisfaction plays an intermediate role. In fact, SAPA authorities can increase the effect of perceived quality on customers' loyalty by promoting customers satisfaction. Thus, regarding these point, the suggestions are:

- Funding constructive relations with customers by development and improving customers' satisfaction measurement system along with welcoming their feedbacks especially negative ones (to help recognizing weakness points)
- Expanding the knowledge to understand daily issues and having proper evaluation of firm position in market regarding second to second changing technologies in the market.
- Implementing logical decisions regarding their effects on other and participating all firm levels in making decisions and using helpful ideas to improve customers' satisfaction and their loyalty as well.