Investigating the effect of e-service quality on customer loyalty and perceived value

Seyede Maria Abbasi[1]

[1]PhD student in Business Management, Department of Management, Islamic University of Tabriz, Iran.

Abstract

The purpose of this study is to investigate the impact of e-service quality on customer loyalty and perceived value. The research method is descriptive and applied. The statistical population of this study includes all customers of hotels in Sari who use the electronic services of these hotels. The sampling method is improbably performed by hand. According to the unlimited statistical population, the number of samples is 384. The required data were confirmed by a questionnaire tool that content validity and convergence and its reliability was confirmed by Cronbach's alpha. In this study, statistical analysis and structural equation modeling using PLS software, all research hypotheses were accepted.

Keywords: e-service quality, customer loyalty, perceived value.

Introduction

Customer loyalty in today's competitive and complex market is the main factor in gaining a competitive advantage of any organization; So retaining existing customers is much cheaper than attracting new customers. Attracting customers on the Internet is very costly, and if customers are not loyal and their purchases are not frequent and frequent,

profitability will be out of reach. In fact, competitors are only a few clicks away from customers [4]. Hence, customer loyalty has become a very complex process for managers. Increasing loyalty leads to predicting revenue streams from customers as well as a gradual increase in revenue [15]. Kuo (2008) says that with a 5 percent increase in loyal customers, 25 to 95 percent increase in the profitability of various industries. Increasing loyalty will lead to predicting revenue streams from customers as well as a gradual increase in revenue [14]. Organizations lose a large number of their customers every year due to lack of attention to them. One of the most effective and common strategies is to strive for quality, flawless and easy service. High quality and continuous customer service creates a competitive advantage for the company [6]. Quality of service is one of the effective factors to achieve the strategic benefits of the organization, such as retaining customers or increasing efficiency and achieving operating profit [19].

According to Santos (2003), the quality of e-services can be defined as the overall consumer assessment and judgment of the superiority and quality of e-services offered in the virtual market. This definition is consistent with the definition of service quality, and in fact is considered to provide a superior consumer experience in all aspects of service delivery through the organization's website [5, 17]. Today, online store managers consider paying attention to customer demands as their most important plan and goal in order to achieve long-term relationships with their customers. One of the important ways to achieve this goal is to pay attention to the quality of services in products and services provided to customers. Most of the studies have studied the effect of service quality on customer satisfaction and loyalty in offline space [7].

Customer loyalty

Customer loyalty is defined as an overall commitment of a buyer or a deep commitment to a product, service, brand or organization. There are four attributes for loyalty that are (Gerifin, 1997):

1) Sustainable pattern for repurchase activities.

2) Purchase a variety of products and services from the institution.

3) Promote the institution voluntarily.

4) Resistance to all advertising activities of alternative institutions.

There are four aspects to customer loyalty [1]:

1) Intention to repurchase customers.

2) The tendency to suggest the institution or brand of others.

3) Tolerate price changes.

4) The customer intends to buy other products from the institution.

Customer loyalty is the foundation of competitive advantage and has a strong impact on company performance and is evident in a variety of behaviors, the most common of which are encouraging the service provider and recommending the service provider to other customers. Many researchers consider customer loyalty as a two-dimensional structure that includes attitudinal and behavioral dimensions. It expanded the approach of researchers who consider loyalty to consist of attitudinal and behavioral dimensions. In his view, loyalty, in addition to the attitudinal and behavioral dimensions, also includes the cognitive dimension. The loyalty attitude dimension includes characteristics such as: Oral marketing, Protest behavior and Purchase intentions [18].

In addition to these three dimensions, loyalty must include factors such as commitment and trust. Even in most studies, these two concepts are considered as preconditions of loyalty and its components [18]. According to the behavior-based approach, loyalty is a behavioral response based on prejudice and is considered as a function of a psychological process by which the decision maker chooses one of several alternatives that exist simultaneously [2]. The attitude approach suggests that attitude should be used in conjunction with behavior to define loyalty. Attitude scales are used as a more valuable tool than behavioral scales to identify factors affecting customer loyalty and, as a result, have a greater advantage over behavioral scales [8].

A hybrid approach is a hybrid of behavior. According to this approach, brand loyalty is "a form of repetition of buying behavior that reflects a conscious decision to continue buying from the same brand. For brand loyalty to exist, there must be a pattern of repetition with a positive attitude This approach includes not only past purchasing behaviors and customer preferences, but also customer attitudes and value systems. As a result, according to this approach, which is currently accepted, the customer is aware of loyalty when repeating the consumption of the product or service while having a positive attitude towards the product or service or the company providing it. This trend suggests that gaining new customers is costlier than retaining existing ones, as it is difficult to identify new customers' expectations and behaviors, and this requires additional costs [2].

Factors of attention to the issue of loyalty are summarized in the following cases:

1. Customer loyalty is the key to business success, and the concept of a loyal customer is to increase the profitability of the business by creating more value for the customer.

2. Most of the old business organizations have not considered the new methods of customer relations and have lost most of their customers. Research shows that a five percent increase in customer retention doubles profitability.

3. A loyal and satisfied customer is very valuable as a great marketer and sales source [9].

Loyalty is described as "the unspecified number of repetitions of a purchase from a supplier in a determined period" [12]. Many researchers consider customer loyalty as a two-dimensional structure that includes attitudinal and behavioral dimensions [18]. The cognitive dimension of loyalty includes characteristics such as: prioritizing the service provider, based on the belief that the service provider offers the best offers and that these offers are tailored to the needs of the customer. In addition to these three dimensions, loyalty must include factors such as commitment and trust. Even in most studies, these two concepts have been considered as preconditions for loyalty and its components [18]. According to the behavior-based approach, loyalty is a behavioral reaction based on prejudice and is considered as a function of a psychological process by which the decision maker chooses one of several alternatives that exist simultaneously [2].

A hybrid approach is a combination of attitude and behavior. According to this approach, brand loyalty is a form of repetition of buying behavior that reflects a conscious decision to continue buying from the same brand. For brand loyalty to exist, there must be a pattern of repeat purchases with a positive attitude toward the brand. This trend shows that gaining new customers is much more expensive than retaining existing ones, as it is difficult to identify new customers' expectations and behaviors, and this requires additional costs [2].

Service delivery

The quality of services has been defined based on different theoretical assumptions. The definition of the quality of perceived services can be expressed as follows: "The quality of perceived services is the degree and degree of discrepancy between perceptions and expectations of consumers" [13]. In simpler terms, Yang and Wang (2004) define service quality as a consumer evaluation of the performance of services received and comparing it with their expectations [20]. Yu and Park define service quality as the organization's ability to meet customer needs according to their level of expectations [12]. Perhaps the pioneers of studies on service quality are Parasuraman et al. Preliminary results of their research include ten dimensions of service quality; Provides physical dimensions and appearance, reliability, responsibility, competence, humility, credibility, accessibility, communication, assurance and understanding and attention to the customer. The profound, meticulous, and empirical approach of Parasuraman et al. In 1988 led to a 22-item questionnaire that assesses service quality based on physical appearance, reliability, responsibility, warranty, and empathy [22]. Quality of service in different contexts can have different meanings. Bittner and Hubert (1994) and Kohlberg (2010) say that satisfaction is a quick response to consumption, while service quality is the general perception of customer judgment about service delivery [11].

Perceived value

The root of perceived value is in the theory of equality, which considers the output / input ratio of the consumer to the output / input ratio of the service provider. The concept of equality refers to the customer evaluating what is fair, correct or deserving of the perceived cost of service. Perceived costs include monetary payments and non-monetary

sacrifices such as time spent, energy consumption and stress experienced by consumers. Instead, the perceived value of the customer comes from evaluating the rewards and sacrifices associated with the service. If customers perceive that their output-to-input ratio is comparable to the company's output-to-input ratio, they feel they have been treated fairly, and customers often measure a company's output-to-input ratio by comparing the services of the company's competitors [21].

Perceived value is the evaluation of customers by the value created by the supplier, given the balance between all the relevant benefits and costs in a particular consumption situation. Product value is created for the consumer when the benefits he receives from the product outweigh the long-term costs expected. Defines perceived value as follows: "Perceived value is the consumer's overall assessment of the suitability of a product according to its perceptions of receipts and payments. Functional motivations related to tangible needs such as comfort, quality and price, and non-functional motivations related to intangible desires such as the need for fame and social and emotional needs for interaction [7]. Perceived value is a criterion for comparing the quality of services in two contrasting aspects, one of which indicates that high price creates high quality and the other indicates that high quality leads to high price. Perceived value acts as a key driver for delivering the right products and services to real customers on time and right. Perceived value also provides organizations with a chance at price relative value [11].

Chen and Hu, (2010) have defined two symbolic and functional dimensions for value. Functional value is defined as an overall assessment of value including quality attributes, traditional values for money, and convenience. Symbolic value is defined as an overview of the perception of empirical value in social, emotional, aesthetic, and celebrity terms. Kuo and Deng (2009) defines perceived value from the perspectives of finance, quality, profit, and social psychology. The financial perspective shows that value is created when less money is paid. According to the quality perspective, value is the difference between the money paid for a particular product and the quality of the product. This means that when you pay less for a high quality product, a positive perceived value is created. From the perspective of perceived value-added value, customers' overall assessment of the usefulness of perceived benefits and perceived sacrifice. In other words, consumers may

cognitively organize their understanding of what they receive and what they have to lose in order to obtain a good or service [9].

Hosseini et al. (2014) in a study entitled "Study of Factors Affecting Customer Loyalty in Email Services: A Survey of Service Quality, Satisfaction and Electronic Trust", they concluded that service quality, satisfaction and electronic trust had the most positive effect on customer loyalty, respectively [10]. Ahmadi and Asgari (2015) have studied the relationship between service quality, satisfaction, trust and loyalty that the results show the positive effect of service quality and satisfaction on customer loyalty [3]. In his research, Ishaq (2012) examines the relationship between service quality, perceived value and company image on loyalty and concludes that service quality and perceived value have a direct and positive effect on customer loyalty [12].

Research method

This research is an applied research in terms of purpose; In terms of method, it is in the category of descriptive-survey research. The statistical population of this research includes all customers of hotels in Sari city who use the electronic services of this hotel. The size of the statistical population of the research, considering that the number of statistical population is unlimited, Morgan table has been used to determine the number of samples, which is based on this formula and at a 95% confidence level, the sample number is 384 people. The instrument used in this research includes a researcher-made questionnaire. The conceptual model of the research is as follows:
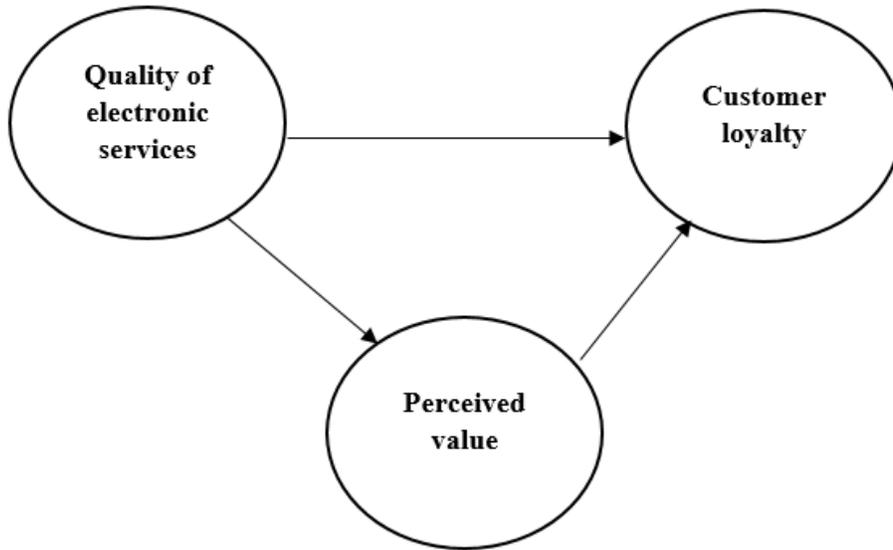
Figure 1- Conceptual model [16]

Research hypotheses

The quality of electronic services has a significant effect on customer loyalty.

The quality of electronic services has a significant effect on perceived value.

Perceived value has a significant effect on customer loyalty.

Research Findings

First, the accuracy of the information entered into the software was checked for accuracy in recording the data. The method of data analysis in this study is structural equations based on partial least squares and PLS software is used, in which the data distribution is assumed to be unknown, so there is no need to assume that the variables are normal. In Table No. 1, the factor loads of convergent research and validity variables can be seen.

Table 1- Factor loads of observed variables

	First time	**AVE**	**Composite**	**Alpha**

					reliability	coefficient
Variable	Items	Factor load	Statistics-t			
Quality of services	AQ1	0.88	16.537	0.581	0.847	0.799
	AQ2	0.84	21.82			
	AQ3	0.79	12.468			
	AQ4	0.74	13.096			
Perceived value	BQ1	0.893	27.88	0.878	0.917	0.862
	BQ2	0.927	58.85			
	BQ3	0.840	20.61			
Loyalty	CQ1	0.796	20.27	0.67	0.835	0.89
	CQ2	0.786	14.49			
	CQ3	0.780	9.141			
	CQ4	0.683	7.44			

According to the above table, factor loads greater than 4.0 have a good validity. Also, the average variance extracted between the structures should be greater than 5.0. As can be seen in table 1, all factor loads in the table are at least 4.0. Therefore, the validity of the data convergence in this section is fully confirmed. Also, the value of t-statistic mentioned in the left column indicates whether this variable is an impact variable for its corresponding structure. If the values of these variables are greater than or equal to 96.1, it indicates that the variable at the 95% confidence level is suitable for the structure and otherwise the variable is not effective. As can be seen, all variables have values greater than 96.1, which indicates that they affect the corresponding structure which indicates their effect on the corresponding structure. If the value of AVE is greater than or equal to 5.0, it indicates that at least 50% of the variance is expressed by explanatory variables. As can be seen in table (1), the mean variance extracted for all variables is higher than 5.0 and is in the appropriate range. Therefore, the convergence validity of the structures is also confirmed

in this section. Also, the combined reliability and Cronbach's alpha coefficient obtained for all structures show that the internal consistency of the structural measurement models is optimal. Conceptual research model test: In this research, to analyze the research conceptual model, the structural equation modeling approach using Smart PLS software has been used. To analyze the significance of the model relations, value-t significance coefficients are used. This value is given for each of the structural and measurement relations in figures (2) and (3).
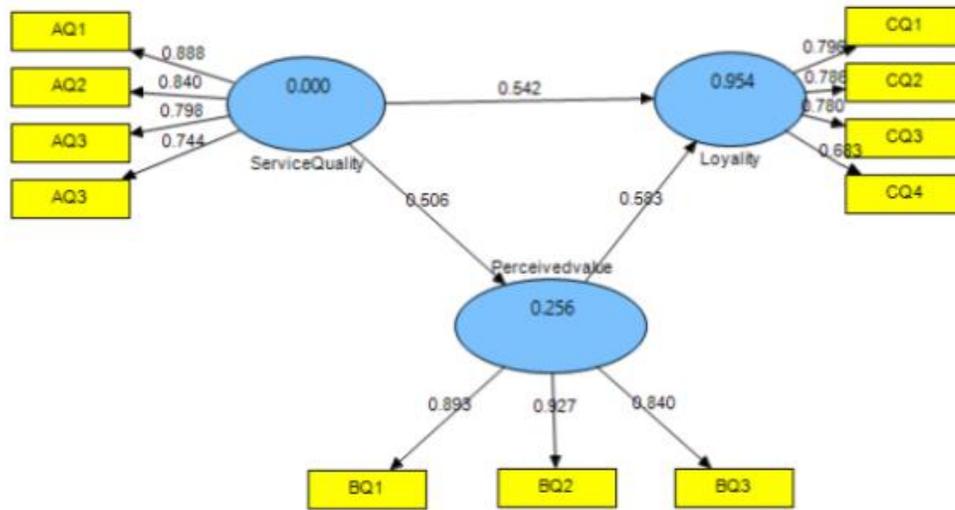

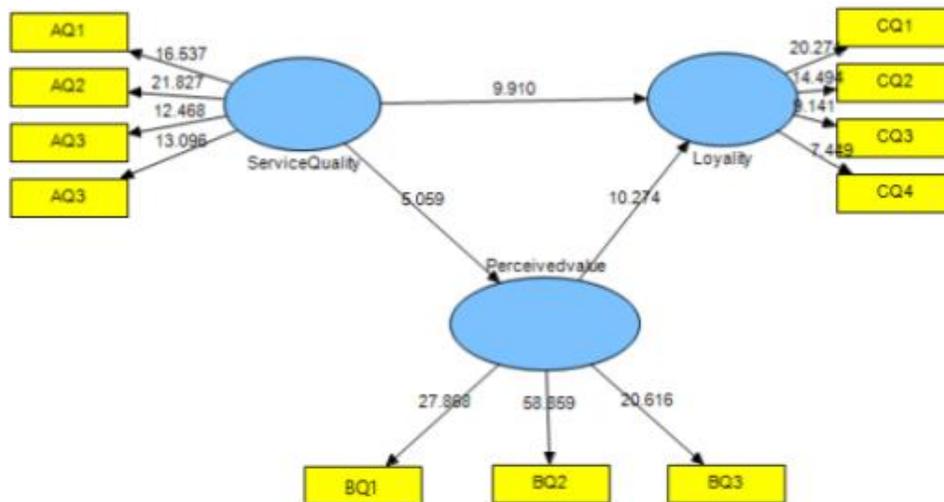Figure 2- Partial least squares model in standard coefficient mode

Figure 3- Partial least squares model in the case of significant coefficients

According to Figures (2) and (3), the blue circles indicate the main variables of the research and the rectangles indicate the indicators for measuring the variables, or in other words, the questionnaire questions. These figures indicate that, in the case of significant coefficients to confirm and reject the hypotheses, or in other words, the amount of T-value statistics, and in the form of standard coefficients of the numbers presented, the path coefficient or the intensity of the effect is indicated. In the numbers reported for T-value, these numbers, if they are higher than the absolute value of 96.1, indicate the confirmation of the above hypothesis, and if they are lower than the absolute value of 96.1, they indicate that the hypothesis is not confirmed. The intensity of the effect in this numerical relationship is between zero and one, which the closer it is to one, indicates the greater the effect of the independent variable on the dependent variable.

Test of research hypotheses

The research hypotheses have been tested by path coefficients and t-statistics. If the value of t-statistic for the path is greater than 96.1, it can be concluded that this path is significant and the hypothesis is confirmed at the error level of 05.0. Table 2 shows the results of the t-test.

Table 2- Results of t-Test, Test of research hypotheses

Hypotheses	Variable		Path coefficient β	Statistics-t	Result
	Independent	Dependent			
1	Quality of services	Loyalty	0.506	9.91	Confirm

| 2 | Quality of services | Perceived value | 0.542 | 5.052 | Confirm |
| 3 | Perceived value | Loyalty | 0.583 | 10.271 | Confirm |

1- According to the above table, since the measure of t-value statistic in this regard is equal to 91.9, which is higher than the absolute value of 96.1, which indicates the confirmation of the above hypothesis. According to table 2, the intensity of the variable in this regard is equal to 506.0, which indicates a positive and significant effect of service quality on customer loyalty.

2- According to table 2, since the measure of t-value statistics in this regard is equal to 052.5, which is higher than the absolute value of 96.1, which indicates the confirmation of the above hypothesis. According to Table 2, the intensity of the effect of the variable in this regard is equal to 542.0, which indicates a positive and significant effect of service quality on perceived value.

3- According to table 2, since the measure of t-value statistic in this regard is equal to 271.10, which is higher than the absolute value of 96.1, which indicates the confirmation of the above hypothesis. According to table 2, the intensity of the effect of the variable in this regard is equal to 583.0, which indicates a positive and significant effect of perceived value on customer loyalty.

Fitting model

To indicate the reliability of the structural model, two indicators R^2 and Q^2 have been used, which can be seen in Table 3.

Table 3 - Structural model fitting

Variable	$Q^2 > 0.15$	$R^2 > 0.19$
Perceived value	0.323	0.954
Loyalty	0.201	0.256

Models based on partial least squares use the GOF index, which must be greater than 3.0. This index is calculated according to the formula for the current model as Formula 1 and indicates the suitability of the overall model.

$$GOF = \sqrt{Communalities \times \overline{R^2}}$$

Which GOF value is equal 573.0.

Conclusion

In the present study, the aim was to investigate the effect of e-service quality on customer loyalty by considering the perceived value. The method of this research is descriptive survey and 384 internet customers of hotels in Sari city were selected to distribute the questionnaires and then to answer the research hypotheses, PLS software and partial least squares method were used and analyzed and the results It shows that the quality of e-services has a significant effect on perceived value and customer loyalty, and also perceived value has a significant effect on customer loyalty. Considering that all three hypotheses are significant and according to the contextual analysis, the dermal value plays a minor mediating role. The findings of the present study are consistent with the previous findings of Hosseini et al. (2014), Ishaq (2012), and Ahmadi and Asgari (2015).

Therefore, it is suggested that hotels providing electronic services pay attention to it. The importance of how to provide electronic services such as: quality of website design, reliability of hotel services and website, proper response and attention to privacy in providing electronic services are the most important provision of electronic services. Therefore, in order to provide appropriate services to customers, it is recommended to use

safer websites for communication with customers in order to provide electronic services. As a result, hotels that consider word of mouth more important, it is better to increase customer trust to achieve the desired result.

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