



Delibration on service quality evaluation of internet banking by using ES-Qual, a Case study in an Iranian Bank

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Abstract

Nowadays, Due to the increasing development of Internet and communication services, Manufacturers and suppliers have been found the special importance of the Internet and use it to offer its services. In this study, using the model ES-Qual (E-SQ), internet banking service quality in an Iranian bank in four dimensions "Efficiency (Eff), system availability (Sys), Fulfillment (Ful), privacy (Pri)" is discussed. In the event of difficulties in internet banking transactions in order to solve the problems and doing it timely, appropriate and suitable for protection of people privacy, some Criterias are considered in this model called "Responsivness (Res), Compensation (Com), contact (Con)".

In this study, the kind of research is applied research and research methods are descriptive and inferential (correlation), The population in This research is bank customers in Tehran, which use of internet banking. Gathering information from books and magazines and the analysis of data, the questionnaire and interview preparation and descriptive and inferential statistics (correlation analysis) were used.

Questionnaire survey, distribute randomly between internet banking customers electronically and manually distributed, to analyze data and software regression Lisrel, in both descriptive and inferential statistics were used.

Keywords: Internet banking services, quality of service, ES-QUAL, Internet.

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1. Introduction

In today's competitive global marketplace, the high quality is a prerequisite for success. In the other hand, the amount of goods and services increased customer awareness and increase the number of competitors, does not welcome any kind of goods or services [4]. The organizations' Success key can be found in providing superior customer service and the quality of their services.

Internet service quality impact on many important aspects of electronic commerce, including the level of consumer confidence in online retail, site quality, customer insights to the site, the customer's perspective towards online purchases, the perceived product or services value, inclinate for more paying, online user satisfaction, loyalty, and prefer to recommend the site to others and sites dealing between sets.

With the advent of technology and modern technologies in any stage of life, to provide optimum service life and the use of time and energy, using tools such as the Internet, which is very simple and inexpensive, available to everyone, and seems to be necessary obvious. Nowadays various websites in order to provide banking services, communications, markets and even universities to provide a service to our users. In lately years, competition have been Increased among banks due to growing in banking services supplying and private banks stablishing. In these circumstances, banks should be on the look out for to strengthen its competitive position in market place.

Some of pathways of flourish in competitive area are paying attention to services, quality of services and delivery ways to customers. Banks which making more value for their customers would be have more customers Satisfaction than others. On the other hand, because of increasing customers' awareness about offered services at rival banksthey would be entrust resources to the bank which have provided better quality services.

This means that today quality of service, known as the most important factor in the banking industry [5].

According to what was said above, it would be wisly if banks seek some tools to measure the quality of offered service to improve services due to their results. It would be making strong appearance in competitive distinction in the market.

Banking and financial services firms, electronic banking divided into three categories: Internet Banking, Intranet Banking, mobile Banking Intranet.

In general, Transmissioning to electronic banking increases the amount and variety of distribution channels and the ease of access to its services [2].

By Entering to the field of electronic commerce and the importance of quality Internet services that impact on many important aspects of electronic commerce [1], Parasuraman et al Presented ES- Qual model which was revised Servqual model. This model consists of 11 dimensions: "reliability, responsiveness, system availability, flexibility, ease of navigation, efficiency, reliability, privacy, information about price, graphic of online site, producte Customizing". After occuring a providing process for this tools ES-QUAL-Parasuraman's improved in to a core service quality which includes 4 main dimensions: "Efficiency, Fulfillment, System availability, Privacy". Because the ES-Qual model has a measurment tools for compensation and service quality improvement which has three dimensions:" Responsiveness, Compensation, Contact "

Using this model, we can answer many questions about the quality electronic banking services in Iran and using the results to improve and develop solutions in the field of services offered In this paper, we designed a questionnaire to assess quality of online banking is based es-qual model, The correlation between measures of the quality of the model ES-Qual, to check the status of internet banking service quality in an Iranian private banks using the ES-Qual concerns.

Due to competitive reasons and to maintain the confidentiality of information does not mention the name of the bank.

By this research way we will cover answering to 2 question :

- 1- The Correlation between E-SQ Criteria
- 2- Check the status of Bank internet banking service quality using ES-Qual in a case study by E-SQ Customized Questionary.

2. Background

2.1. E-banking

Electronic banking means banks use the Internet to provide banking services to clients and customers using the Internet to organize, control and perform transactions on your bank accounts defined [3].

E-service quality can influence the possibilities of a website for the purchase and delivery of goods declared that this definition makes clear, The concept of e-service quality before buying phase containing (ease of use, product information, product ordering information and to protect the personal information entered for purchase) to the next phase of purchase (shipping and delivery, customer support, and policy implementation Returns the direction of the object if needed) will continue [1].

Concept of online shopping , in many ways ,is very different from traditional retail concepts, Which can be easily and efficiently, safety and confidentiality, no need to call a face, a common product quality electronic services can be summarized and classified.

Measure the quality of Internet services such as E-Sequal various models of service quality framework, Which is experimentally collected and integrated online customer relationship management and human capital strategies for designing and creating effective business.

And the Web-Qual is a unique tool for assessing the quality of information that an Internet business is information-intensive environments.

Web-Qual instruments constantly under review in the context of the Internet business. Model ES-QUAL Zythaml (2000 and 2002) and Parasuraman (2005) [1], based on prior research in the field of service quality in distribution channels traditionally performed by the scale of the service quality of e-E-S-Qual based on seven dimensions that Zythaml previously proposed has developed and expanded. The Zythaml between quality of service and service quality comparable done electronically. Electronic service quality criteria included 11 dimension in the next years later Parasuraman reduced them to seven dimensions. The seven criteria are divided into two separate criteria: The main aspects, the compensation aspects.

ES-Qual actually measure up to the original size (efficiency, availability, and confidentiality of the system realization) is used. The second criterion of the quality of compensatory mail (E-RecS-QUAL) includes: Response, Compensation and contacts [1]. The standard surface dimensions of electronic service quality offered.

2.3. Project Deployment background

The first survey was conducted in the field of quality electronic services by Gunaris Vedimitriadis took place in 2003. This research, for electronic services, based on SERVQUAL model, proposed three dimensions of service quality. (Amir 1388) attention to the customer and benefits of risk-reducing, benefits of information, facilitating transactions which these three things are included 14 other components.

Another research by Bayer et al [6] Quality banking index has been proposed in various dimensions as follows:

Ease and convenience, interactivity, providing information, support, attention to customers, access, personal being, forums, complaints management, choice, terms of basic services, payment transactions.

But according to research done in this field, Young model (2001) has more similarities with the SERVQUAL model in their study to compare the quality of traditional and electronic banking services, And at the end, proposed internet banking service quality dimensions in 5 formats: Care / Help, Reliability, Ease of Use, Security, Product / Service Portfol

3. Methodology- Conceptual Framework

3.1. Samples

Type of research is applicable and research method is descriptive and analytical articles on data collection, research and scientific resources related to using the Internet as Science Direct and scientific digital library search engine Scopus used. Data processing is field kind and the actual amounts collected from the owners of Internet users who are allowed to use credit cards password Pasargad Bank's Internet banking site. And Statistical society are account holders and holders of credit cards with online codes that are allowed to use the internet banking service of Pasargad Bank. In this study, to estimate the sample size formula is used Cochran. it is, therefore, considered to be $p=0/5$ and $d=0/065$, sample size is 227, and confidence coefficient is 0/95. In this study, the lack of cooperation of bank branches to distribute questionnaires and lack of appropriate tools for distributed, 300 questionnaires were distributed, That the 201 questionnaires that were completed and healthy, Due to the fragmentation and lack of access to customer data collection tool was a questionnaire that included 2 category of question as follows:

First category: information about customers, including: gender, age, education, region, income, knowledge of the computer, the Internet Knowledge, visit the site

the second category includes measures of service quality measurements using the ES-Qual third category contains the metrics to measure the quality of service in the event of a problem or an error in the transaction of the request.

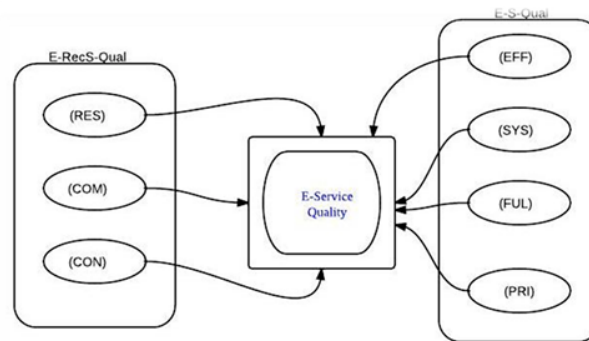
Some questions were replaced because of survey requirement to tracking some scales in detail. Questionary has 30 questions based on Standard model questionnaire. (Eff1, Eff2, ... Eff9) measure Efficiency scale and Eff9 was added to Standard questionnaire " Site's design is attractive", (Sys10, Sys11, Sys12, Sys13) Measure System Availability scale, (Ful14, Ful15, Ful16, Ful17) measure Fulfillment Scale. In this stage question of standard model " This site makes items available for delivery within a suitable time frame." replaced by " registered information in Internet bank is accurate" and question of "It sends out the items ordered" reconstructed to " any account transaction is informed to customer immediatley." Scale of Privacy is measured by (Pri18, Pri19, Pri20, Pri21) and "I feel confident and relax of my banking transactions on bank website." Was added to list. Second part of questionnaire was designed to measure E-RecQual scales which consist of (Res22, Res23, Res24, Res25) for Responsivness, (Com26, Com27) for Compensation and (Con28, Con29, Con30) for Contact scale. In this part of the list, " All asked questions va any banking contact channels are replied immediatley." and " CRM banking services are available via Contact channels such as Email, phone, Sms,..." are reconstructed.

3.2. Procedures & Measures

All research is based on the theoretical framework as variables associated with the investigation and that there is a logical relationship between the study variables.

"Independent variables" in model ES-Qual are the four dimensions of the "Efficiency", "Fulfill", "Privacy" and " System availability", and improve the quality of and compensation (E-RecS-Qual), "the independent variables" are "Responsiveness", " Compensation "and" Contact".

"Dependent variable" is "the quality of services provided by the Pasargad Bank" this study was to evaluate the correlation between the model ES-Qual service quality criteria and then to assess the service quality of internet banking with Pasargad bank ES-Qual model.



4. Analysis

4.1. Kolmogorov-Smirnov - Test

For first step normalization of measured scales should be cleared. The assumption of normality of the data would be confirmed if level of significance result of test is more than error value (kolmogorov-smirnov - test)

($\alpha > 0.05$). According Table1 all scales significance level is in range and all data is normal.

Table 1. Kolmogorov- Smirnov Test

($\alpha > 0.05$)	α	Scale
	0.754	Efficiency
	0.059	System Availability
	0.051	Fulfillment
	0.057	Privacy
	0.247	Responsivness
	0.053	Compensation
	0.054	Contact

For correlation checking between the quality criteria of the model ES-Qual which could be concluded a strong correlation between all parameters of the model in this study.

Table 2. shows the correlation matrix between scales in E-SQ

Pri	Ful	Sys	Eff	Variable
			1.00	Eff
		1.00	0.992*	Sys
			*	
	1.00	0.909**	0.935*	Ful

1.00	0.871**	0.847**	0.869*	pri
			*	
			**p<0.01	*p<0.05

Target is determining the validity or reliability of the measurements. In discussing the validity or reliability of the issue is whether the indicators or scales measure waht should be realized, or not [7]. All coefficients in 99% confidence level are significant with an (**) marked. Due to correlation matrix between scales could be concluted Existing a stornng relationships between measured model scales. The target is specifying relationships between Implicit and explicit variables in model.

in order to analyze the internal structure of the questionnaire and discover the constituent elements of any structure or latent variables, confirmatory factor analysis is used.

Scale	Q	Factor Matrix	T-Statics
Efficiency	EFF1	0.88	15.90
	EFF2	0.95	17.97
	EFF3	0.92	17.15
	EFF4	0.91	16.81
	EFF5	0.90	16.30
	EFF6	0.93	17.43
	EFF7	0.95	18.22
	EFF8	0.87	15.55
	EFF9	0.80	13.64
	EFF10	0.84	15.94
System	Sys11	0.92	16.46
Availability	Sys12	0.90	15.83
	Sys13	0.83	14.09
	Sys14	0.94	17.56
	Sys15	0.97	17.74
	Fulfillment	Ful16	0.87
	Ful17	0.88	15.74
	Ful18	0.91	16.70
	Privacy	Pri19	0.93
	Pri20	0.88	15.69
	Pri21	0.87	15.43
	Fitting Index	RMR	0.05
RMSEA		0.06	
AGFI		0.92	
GFI		0.96	
CFI		0.99	
NFI		0.98	
IFI		0.99	

Table 2 shows the results of the confirmatory factor analysis variables E-S-QUAL

Factor analysis indicated in Table 2 detect T-statics (>1/96) and Factor Matrix (>0/4) are accepted for all the variables E-S-QUAL in study and app

Table 3. shows the correlation matrix between variables E-REC-Qual

Con	Com	Res	Scales
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		1.00	Res
	1.00	0.831**	Com
1.00	0.785**	0.762**	Con
		**p<0.01	*p<0.05

Table 3. indicates Correlation coefficients between variables E-REC-QUAL matrix. All coefficients are significant at the 99% confidence level with an (**) marked. Given the correlation matrix between variables can be concluded that there is a strong correlation between all parameters of the model in this study.

Table 4. Shows the results of the confirmatory factor analysis variables E-REC-QUAL

T-Statics	Factor Matrix	Question #	
14.49	0.85	Res19	
13.17	0.80	Res20	
15.32	0.88	Res21	Res
13.95	0.83	Res22	
15.22	0.89	Com23	Com
15.81		Com24	
12.71	0.79	Con25	
15.29	0.91	Con26	Con
13.20	0.81	Con27	
	0.046	RMR	
	0.103	RMSEA	
	0.92	AGFI	
	0.98	GFI	
	0.99	CFI	Fitting Index
	0.99	NFI	
	0.99	IFI	

Factor analysis indicated in Table 2 show that all the variables E-REC-QUAL study of values T (> 1/96) and loadings (> 0/4) are accepted and the variables are good indicators.

Second part of study focused on checking the Check the status of Bank internet banking service quality using ES-Qual. In this part 2 issues are defined and checked by tests.

H0: The mean scores given to the quality of service in the Bank is greater than or equal to 3.

H1: The mean scores given to the quality of service in the Bank is less than 3.

$$H_0 : \mu \geq 3$$

$$H_1 : \mu < 3$$

Table 5. Shows the results of single sample T test variable quality of service

Sig	Degree of Freedom	t -Statics	Mean	Subject
.000	200	-4.991	2.4642	Service Quality based on E-s-Qual

.000	200	-10.313	2.0448	Service Quality based on E-Rec-Qual
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T-statistics based on the number -4/991 and sig equal to 0/000, since the sig is less than 5%, then the assumption is not rejected and the claim that the average scores given to the variable quality of service on ES-QUAL in Selected bank is less than3, can not be ruled out.

T-statistics based on the number -10/313 and sig is equal to 0/000, sig, since less than 5%, then the assumption is not rejected and the claim that the average scores given to the variable quality of service on ES-QUAL in the Pasargard banks is less than3, can not be ruled out.

5. Study Limitation

Although Survey had been selected as research method because of research limitation in finance and human resource, dependent scale could be determined by more reliability. It has been opportunity for further research by making focus group in various levels of customers Further more researcher can focus on defining more social criteria and checking their effects on each model's dimensions.

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