The Relationship between E-Service Quality and E-Customer Satisfaction: An Empirical Study in Egyptian Banks

Hany Aly Shared[1]

1 Business Department, College of Science and Humanities, Shaqra University, KSA

Correspondence: Hany Aly Shared, Business Department, College of Science and Humanities, Shaqra University, KSA. E-mail: hshared@su.edu.sa; hshared@gmail.com

Abstract

E-Service has become of great importance to both companies and researchers alike during the last decade. So, E-Service helping the banks in building a good relation-ship with their customers. However, The main aims of this study are to investigate. Does E-Service Quality affect E-Customer Satisfaction in Egyptian Banks? the study collected 140 surveys from respondents who use online service in different branches banks located in Cairo City in Egypt. Factor analysis has shown a significant impact between e-service quality and e-customer satisfaction. The regression analysis showed a significant correlation between all the variables of the e-service quality and e-customer satisfaction except Empathy.

Keywords: E-service quality, E-customer satisfaction, Egypt, bank

1. Introduction

The technological changes have led to great competitive challenges due to the globalization of banking activity, which requires banks to adapt to these challenges, to keep abreast of technological developments and develop the banking services provided to increase the competitiveness of banks. Moghavvemi et al. (2018) believe that banking services are similar at the level of different banks and the quality of service can create a competitive advantage. This is in line with what Pasha et al. (2018) said that the quality of service has a significant impact on customer satisfaction and loyalty to the bank. E-services Banking has become part of the new technological era, because the provision of E-services Banking is of great benefit to the customer, such as Reduction in cost, time and implementation of many personal services to customers (Miah, 2013).

Egyptian banks operate 8 hours a day for 5 days per week to receive and serve customers. Due to the low number of branches and the accumulation of customers during this period, customers are required to wait for long periods of time to implement the services through the branches. This makes customers unhappy with the time taken to the banking services in Egyptian Banks. Therefore, electronic services are the best solution for banks to improve and build good relationships with customers (DeYoung et al., 2007; Ribbink et al., 2004; Rod & Ashill, 2010; Rod et al., 2009).

The quality of e-service is a key factor for banks' success in achieving competitive advantage.

Parasuraman et al., 1985; Parasuraman et al., 1988, indicate that the quality of e-services is the assessment of customer for services provided through the Internet (Bauer et al., 2006; Liao et al., 2011; Parasuraman et al., 2005; Santos, 2003; Zeithaml et al., 2000). Parasuraman et al. (2005) have defined the dimensions of E-S-Qual as Responsiveness, Reliability, Empathy, Assurance, Fulfilment, and Efficiency (Parasuraman et al., 2005).

The aim of e-services is to provide banking services 24 hours a day, seven days a week, in a manner that suits the circumstances of all customers. The aim of this re-search is to find out the impact of the quality of e-services on e-customer satisfaction in Egyptian banks, using the E-S-Qual model.

2. Literature Review

2.1 E-Service Quality

Parasuraman et al. (1985; 1988) were created The first formal service quality mode. The number of 22 items on the SERVQUAL scale has been determined through many academic and experimental research (Parasuraman et al., 1985; Parasuraman et al., 1988).

During this period, many researchers used this model extensively to measure the quality of services, through five dimensions of quality: tangibles (employees appearance and equipment), reliability (for the performance of work promised, The service is about reliable and accurate), responsiveness (Customer service on time), assurance (employees' ability to inspire confidence and trust), and empathy (Pay attention to each client personally), (Parasuraman et al., 1985; Parasuraman et al., 1988). Many researchers have used the SERVQUAL model to measure e-service by rewording its items. The dimensions of the SERVQUAL model need to be developed to be used in e-service; there are three aspects different between the e-service and service:

1- There are no vendors in e-service, and no meeting between the sales staff and customers as in the traditional service.

2- In e-service, The service operations are performed in the virtual environment.

3. In the electronic service, purchases can be made by the customer without the use of a sales staff, for example, e-banking services enable the customer to buy and transfer from his accounts online.

By looking at the differences between e-service and traditional service, the researchers found the SERVQUAL scale is not convenient for applying to e-service quality, there is to need more E-service studies, for measuring E-service quality.

The e-service quality indicates that the e-services quality is the assessment of customer for services provided through the Internet (Parasuraman et al., 2005; Bauer et al., 2006; Zeithaml et al., 2000; Santos, 2003; Liao et al., 2011). Ghosh et al. (2004) were conceived that e-service quality is the rule for interactive information service. for this purpose, Roland and Freeman (2010) indicate that the e-service quality concepts must be developed to international business, The e-service quality must be verified at the level of all transactions, in order to improve the quality of services provided to customers.

There are still many researchers investigating quality dimensions in different sectors and countries (Angur et al., 1999; Karatepe et al., 2005; Arasli et al., 2005; Collier and Bienstock, 2006; Guo et al., 2008; Aagja & Grarg, 2010; Gounaris et al., 2010; Ladhari et al., 2011; Akram & Sultan, 2014; Raza et al., 2015; George & Kumar, 2014). For example, Yoo and Donthu (2001) was developed SiteQual to investigate the quality of services for e-commerce sites. This model was divided into two factors, vendor-related and the site quality. The researchers wanted to focus on site quality, and removed the other factor. The model has included four Dimensions of service quality: Aesthetic Design, ease of use, security & Processing Speed.

Loiocono et al. (2002) were developed WebQUAL to measure the quality of a retail Web site. They Used 12 characteristics of a Web site, intending to buy from a site and the reason to revisit a site again. The model has included five Dimensions for quality: (usefulness, ease of use, entertainment, customer service, and complementary relationship).

E-S-Qual was Derived from the study by (Parasuraman et al., 2005) this model measure the customers' opinion on effective and efficient shopping, purchasing and delivery websites, this model was included Seven Dimensions for quality (Fulfilment, Efficiency, Reliability, Privacy, Responsiveness, Contact & Compensation), This study is based on a Parasuraman et al.(2005) model.

2.2 Dimensions of E-Service Quality

Many of the literature dealt with the concept and dimensions of the e-services quality. According to (Zeithaml et al., 2000; Yang et al., 2004; Zeithaml et al., 2002; Parasuraman et al., 2005; Kim et al., 2006; Yang & Fang, 2004; Sohn & Tadisina, 2008), E-service quality included seven dimensions (Privacy , Reliability, Fulfilment , Responsiveness, Assurance , Empathy , Efficiency). These dimensions affect customer satisfaction and loyalty. Zeithaml et al., And Parasuraman et al., Based their E-S-QUAL standard on traditional service quality, based on seven dimensions (reliability, efficiency, fulfilment, responsiveness, contact, compensation and privacy), (Parasuraman et al., 2005; Zeithaml, 2000; Zeithaml et al., 2000; Zeithaml, 2002; Zeithaml et al., 2002).

This research included five dimensions of e-service quality (Reliability, Responsiveness, Privacy, Fulfilment, and Empathy), based on E-SERVQUAL scale.

2.2.1 Reliability

Some experimental research pointed out, that reliability is an important dimension to measurement e-service quality and SERVQUAL scale. Reliability affects customer trust, where customers trust that the organization will implement what it promises in a virtual business environment (Parasuraman et al., 2005; Zeithaml et al., 2002). The concept of reliability in e-service quality was investigated and discussed by Madu (2002), Zeithaml et al. (2001), Jun (2002), and Wolfinbarger and Gilly (2002). In this research, reliability refers to the banks'

commitment to providing e-service banking with high quality and accuracy, and keeping service promise, (Hu et al., 2012; Parasuraman et al., 2005). The dimension of reliability can make customers realize the credibility and consistency of e-service banking. Charles et al. (2016), Hussien et al. (2013) Reliability has been affecting the e-service quality provided at banks' websites. Some experimental research on e-service quality has concentrated on its relationship between Reliability and satisfaction (Muslim, 2015; Charles et al., 2016; Raza et al., 2015).

2.2.2 Responsiveness

The Responsiveness is defined as the speed of the service provider in responding to customer demands appropriately in a virtual business environment (Hu et al., 2012; Zeithaml et al., 2002; Charles et al., 2016). This has been argued by (Sohn & Tadisina, 2008) as important in an online environment. Responsiveness provides customer support when he faced problems or inquiries, at the appropriate speed and accuracy, affecting the degree of customer satisfaction with the service provided.

2.2.3 Privacy

Privacy refers to ensuring the confidentiality of customers accounts, and transactions data in banks such as account balances and transfers (Parasuraman et al., 2005; Zeithaml et al., 2002). Privacy is one of the most important dimensions that deter-mine the extent of customer acceptance to deal with e-banking services (Charles et al., 2016). The process of selling customer data to other business entities is one of the most important factors determining the level of trust and privacy available to banks. The online customers cannot investigate the physical facilities or communicate with bank employees (Reichheld & Schefter, 2000), So Banks seek to build trust with customers to increase their satisfaction with banking services. The privacy dimension help customer to believe that the bank's website provides privacy and security of its personal information and banking transactions then he will increase the electronic dealings Zeithaml et al. (2000).

2.2.4 Fulfilment

The availability of correct information to the customer about the services is important to complete the purchase, and increase customer trust) Hongxiu et al., 2009). Many researchers have used the fulfilment dimensions to measure the e-service quality in their research (Hussien et al., 2013; Sindhu et al., 2015; Burçin, 2013).

2.2.5 Empathy

Customer empathy refers to all aspects of attention and customer care to customers and reflects the desire of each client to obtain special treatment from the service providers. In the virtual e-service no direct human interaction, but e-services need some human functions to serve e-customers, such as e-mail, online customer service. Giving special attention to customers shows empathy with customers. Many researchers have used Empathy dimensions in their research (Hussien et al., 2013; Sindhu et al., 2015).

2.3 E-customer Satisfaction

All organizations aim to achieve customer satisfaction as it affects their success Fauz et al. (2018). And the main objective of all institutions, including service companies, is to attract and retain customers by maintaining their satisfaction Reza et al. (2018). Oliver (1980) identified customer satisfaction as all practices that ensure customer satisfaction with the product/service provided. If the product specification is applied to the client's expectations, he will be satisfied with the service, or if it is expected to obtain more benefit than the product/service, he will be dissatisfied (Fullerton & Taylor, 2015; Sharifi & Esfidani, 2014; Rust & Zahorik, 1993; Oliver, 1993).

There is no agreement between those interested in marketing science on specific criteria to measure customer satisfaction, whether cumulative or transactions. The cumulative satisfaction was explained by many researchers is being by measuring their satisfaction with the products over a period of time (Zeithaml et al., 1993; Parasuraman et al., 1994) , Transactions with a product or service are defined in a single transaction. Researchers began to focus on consumer satisfaction with e-services in the late 1990s (Kuo & Wu, 2012; McHaney & Cronan, 1998). The e-services quality effects customer satisfaction, and loyalty (Kuo & Wu, 2012). e-banking services have become a key factor in achieving customer satisfaction. Therefore, banks offer their services to customers through many media to meet customer needs (Mattila, 2001). So, delivering the service to the customer through the website driving the customer to be satisfied.

2.4 E-Banking Service in Egypt

Egyptian banking sector consists of 38 banks in June 2017 after the merger and liquidation of several banks, Egyptian banks are beginning to pay attention to electronic services and Many banks have started to offer electronic banking services to their customers through but do not give them sufficient attention to the quality of services provided their websites.

Although banks are starting to offer e-banking service to their customers, there are still some drawbacks to the dominance of e-banking on the industry.

Egyptian banking suffers from many restrictions that limit its development in the provision of e-services. The poor quality of e-banking services was one of the main weaknesses of e-banking services; these make customers refuse from using them. Although the banks are provided E-banking services, they are not reliable and not is the performance satisfactory for the customers. This may be why bank customers rarely use e-banking services in Egypt (Abd El-Aziz, 2009).

The technological changes have led to great competitive challenges due to the globalization of banking activity. which requires banks to adapt to these challenges, to keep abreast of technological developments and develop the banking services quality provided to increase the competitiveness for the banks in Egypt. E-Services Banking has become part of the new technological arena, because the provision of E-Services banking is of great benefit to the customer in Egypt, such as Reduction in cost, simplification of Personal transactions, and minimize the time.

3. Research framework, Hypothesis, Questionnaire development, and Sampling

3.1 Research Framework

Based on the previously discussed culled from literature, this study presents a research framework linking E-service quality with e-customer satisfaction as depicted in Figure 1. In this framework, E-service quality consists of five dimensions (reliability, fulfilment, responsiveness, empathy, and privacy), (Zeithaml, 2000; Zeithaml, 2002; Zeithaml et al., 2000; Zeithaml et al., 2002; Parasuraman et al., 2005), That effect on E-customer satisfaction.
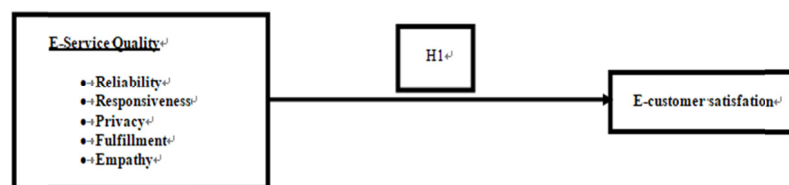

Figure 1. Framework of E-service quality

3.2 Hypothesis

There is not much research on the impact of the quality of e-services on e-customers satisfaction in banks in Egypt, we propose the following hypothesis:

H1. E-service quality in E-Banking has a positive effect on E-customer satisfaction.

H1.1 Reliability has a positive effect on E-customer satisfaction.

H1.2 Responsiveness has a positive effect on E-customer satisfaction.

H1.3 Privacy has a positive effect on E-customer satisfaction.

H1.4 Fulfilment has a positive effect on E-customer satisfaction.

H1.5 Empathy has a positive effect on E-customer satisfaction.

3.3 Questionnaire Development and Sampling

In this study, the questionnaire list was designed to survey the users of e-banking services and to identify their satisfaction with the quality of service on the websites. Through previous studies, the dimensions that impact on the quality of e-service has been determined to improve customer satisfaction.

The questionnaire was conducted in Cairo between May 2018 and October 2018, The sample was randomly selected. 300 questionnaires were distributed, of which 140 were validated. A questionnaire was distributed in Arabic through interviews. A questionnaire list contains 36 variables arranged in four sections according to the following:

(1) General questions (Q1-4).

(2) E-service quality (Q5-28).

(3) Customer Satisfaction (Q29-32).

(4) Personal details (Q33-36).

4. Analysis and Results

To examine the satisfaction of the customer in e-services banking proposed by several banks in Egypt we use various procedures in this section.

4.1 Reliability Analysis

In order to determine the reliability of the variables under study, we used the Cronbach alpha reliability test that expresses the reliability of multiple element scales. However, this measure is employed for various Likert-type elements that are gathered in order to make summated scale (following Leech et al. 2005, p. 67, the value of Cronbach's alpha should exceed 0.5). In this analysis, the questionnaire contains 28 questions. Table I presents the results of the reliability test.

The estimates values of Cronbach's alpha for all the variables and for the overall questionnaire are in good range. In fact, the estimated value of this coefficient for the overall questionnaire is 0.872 suggesting that our variables and the instrument are 87.2% reliable. In addition, our results based on the reliability tests confirm that for any further question the data and the instrument are reliable.

Table 1. Results of reliability analysis

Variables	Items	Cronbach's alpha
Reliability	5	0.825
Responsiveness	5	0.652
Privacy	5	0.823
Fulfillment	4	0.756
Empathy	5	0.623
E-customer satisfaction	4	0.945
Overall	28	0.872

4.2 Kaiser–Meyer–Olkin and Bartlett's Tests of Sampling Adequacy

To check the sufficiency of our sample we employ the Kaiser–Meyer–Olkin (KMO) and Bartlett's tests. The KMO test is a measure that can be used to examine whether each factor has suitable items for producing a proper group. However, the estimated value of the KMO test should be greater than 0.5. Insufficiency in factors can exist for values of KMO test less than 0.5 (Leech et al. 2005, P. 82). Bartlett's test is utilized to determine whether the correlation matrix across factors has significantly different properties than an identity matrix. The probability value of Bartlett's test is compared to 0.05 level. So, values less than 0.05 indicating the existence of different properties of the correlation matrix versus the identity matrix. We display the results of KMO and Bartlett's tests in Table 2.

As shown by the results of KMO test the items within each factor are sufficient and demonstrate an adequate item for making groups. The estimated values are greater than 0.89. The significance value of Bartlett's test is 0.000 which is less than 0.05. This result suggests an adequacy correlation between variables, which confirms a factor analysis.

Table 2. Results of KMO and Bartlett's tests

KMO measure of sampling adequacy	0.885
Barllett's test of sphericity	5.612
Approximate chi-square	0.154
Degree of freedom	140
Probability	0.000

4.3 Total Variance Explained

In this subsection, we use the total variance explained method that explains how the variance may be divided via the potential variables. The Eigenvalue criterion which measures the variance explained is used to show the

usefulness of a factor. However, the calculated values should be more than 1.0. Values less than 1.0 indicate that a factor explains less information than individual item would have described. We report in Table III the results of total variance explained.

From the results of the total variance explained presented in Table 3 one may note that the cumulative variance explained by the factors is about 78٪. This result indicates that a very good percentage of the variance may be elucidated by the considering factors.

Table 3. Results of variance explained

Items	RE (%)	RP (%)	PV (%)	FL (%)	EP (%)	CS (%)
Variance explained by each factor in percentage	23	18	15	12	5	5
Cumulative variance explained in percentage	23	41	56	68	73	78

Note. Extraction method: principal components analysis.

4.4 Factor Analysis

Factor analysis is investigated in this subsection in order to understand the outcomes of our analysis. Our variables related to e-banking service and e-customer satisfaction are grouped into six interfering groupings of items. The items are generally distributed from the one with the highest factor weight or loading for that factor to the one having the lowest loading on that first factor, within each factor. The loadings of the factor range between 0 and 1. If the loading of a factor is negative, the question should be interpreted in the opposite direction from the actual way it is written for that factor. The results of factor analysis are presented in Table 4.

We should examine the items that have high weights from each factor in order to check whether they theoretically fit together.

Table 4. Results of principal components analysis

Items	RE	RP	PV	FL	EP	CS
Reliability 1	0.856					
Reliability 2	0.912					
Reliability 3	0.887					
Reliability 4	0.904					
Reliability 5	0.787					
Responsiveness 1 Responsiveness 2 Responsiveness 3 Responsiveness 4 Responsiveness 5		0.846				
		0.799				
		0.687				
		0.853				
		0.843				
Privacy 1			0.876			
Privacy 2			0.932			
Privacy 3			0.889			
Privacy 4			0.914			
Privacy 5			0.853			
Fulfillment 1				0.678		
Fulfillment 2				0.698		
Fulfillment 3				0.736		
Fulfillment 4				8.12		

Empathy 1	0.556
Empathy 2	0.611
Empathy 3	0.785
Empathy 4	0.576
Empathy 5	0.612
Customer Satisfaction 1 Customer Satisfaction 2 Customer Satisfaction 3 Customer Satisfaction 4	0.965
	0.987
	0.954
	0.937

4.5 Spearmen Correlation Matrix

To determine the power and the direction of the linkage between factors the correlation coefficients of Spearman were applied. The estimated coefficients are shown as following (Table 5). The following results were obtained as shown in the following table.

Table 5. Spearman correlation matrix

Variables	RE	RP	PV	FL	EP	CS
Reliability	1					
Responsiveness	0.619	1				
Privacy	0.501	0.583	1			
Fulfillment	0.449	0.519	0.543	1		
Empathy	0.352	0.245	0.375	0.232	1	
e-Customer Satisfaction	0.449	0.439	0.549	0.359	0.121	1

The results of Spearman correlation matrix indicate a significant positive relationship between e-customer satisfaction (considered as the dependent variable) and the e-banking service defined by Reliability, Responsiveness, Privacy and Fulfilment (considered as the independent variables) at 1% significance level. The exception was shown only for Empathy variable which indicates no relationship to e-customer satisfaction.

4.6 Regression Analysis

This subsection illustrates the results of regression analysis, as presented in Table 6. We notice that all dimensions of e-service quality present a significant positive effect towards the e-customer satisfaction. We except only the Empathy variable. We also remark that Privacy has the highest coefficient (0.321) compared to all other dimensions. This result indicates that customer satisfaction is highly dependent on Privacy. Our results also show that the second most effective factor of customer satisfaction is the Reliability, as indicated by its correspondent coefficient 0.278. In addition to that, we show that Empathy variable presents the lowest effect on customer satisfaction. This result is in line with that of Hussien et al. (2013).

Table 6. Results of regression analysis

Variables	Coefficient	t-statistics	Probability	VIF
RE	0.278	2.567	0.038	2.941
RP	0.188	1.908	0.047	1.954
PV	0.321	2.986	0.001	1.021
FL	0.176	2.987	0.005	1.987
EP	0.003	0.03	0.987	1.020
Adjusted R2		0.335		
F-statistics (Probability)		20.178 (0.000)		

Note. VIF, variance in action factor.

5. Conclusion and Limitations

One of the important determinants of success in online banking is customer satisfaction. However, in order to deliver products and services to meeting customer needs banks to seek to utilize different media. So, exceeding the expectations of customer satisfaction is important for online banking, that way customers are more satisfied with their expectations.

This research firstly aims to investigate the relationship between dimensions of e-service quality (Reliability, Responsiveness, Privacy, Fulfilment, Empathy) and e-customer satisfaction in Egypt's banks. Secondly, our objective is to identify the factors that have a significant effect on the increase in customer satisfaction. To do that we adopt a survey research questionnaire of 28 items for collecting data from the users of banks in Cairo. Our sample consists of 140 respondents. The data were analyzed by some statistical methods, such as the Cronbach's alpha, Kaiser-Meyer-Olkin, Bartlett's test, and regression analysis. Our results show that e-service quality is prominent for e-customer satisfaction. We found that four factors of service quality have a significant impact on e-customer satisfaction, namely, Reliability, Responsiveness, Privacy, and Fulfilment. The fifth factor which is the Empathy presented an insignificant effect on e-customer satisfaction.

Our research recommends the following:

Banks in Egypt should endeavour to increase the e-service quality in order to develop customer satisfaction and loyalty, increasing retention rates and attract new customers.

Effective measures should be taken by Egyptian banks to further enhancing the integrity and security of online customer transactions and furnishing more safe services to customers.

Egyptian banks should care about the issues faced by customer's websites.

Overall, we conclude that Egyptian banks should concentrate on Reliability, Responsiveness, Privacy, and Fulfilment in order to reach good e-banking service quality.

This research presents two limitations. The first is that our research examines the dimensions of e-service quality (Reliability, Responsiveness, Privacy, Fulfilment, and Empathy) and ignore some other important dimensions, such as Usability, Incentive, Tangibility, Efficiency, and Assurance. The second is that our questionnaire was surveyed only in Cairo city in Egypt.

References

•Ladhar, R., Ladhari, I., & Morales, M. (2011). Bank service quality: comparing Canadian and Tunisian customer perceptions. *International Journal of Bank Marketing, 29*(3), 224-246. https://doi.org/10.1108/02652321111117502

Aagja, J. A., & Grarg, R. (2010). Measuring perceived service quality for public hospitals (PubHosQual) in the Indian context. *International Journal of Pharmaceutical and Healthcare Marketing, 4*(1), 60-83. https://doi.org/10.1108/17506121011036033

Abd El-Aziz, R. (2009). *ATM location and usage: social and technical perspectives.* PhD thesis, University of the West of England, Bristol.

Akram, M. A. J., & Sultan, P. (2014). Banking service quality in the Middle East-ern countries. *International*

Journal of Bank Marketing, 32(7), 688-700. https://doi.org/10.1108/ijbm-09-2013-0094

Angur, M. G., Nataraajan, R., & Jahera, J. S. Jr. (1999). Service quality in the banking industry: an assessment in a developing economy. International Journal of Bank Marketing, Vol. 17 No. 3, pp. 116-125. https://doi.org/10.1108/02652329910269211

Arasli, H., Mehtap-Smadi. S., & Katircioglu, S. T. (2005) Customer service quality in the Greek Cypriot banking industry. *Managing Service Quality, 15*(1), 41-56. https://doi.org/10.1108/09604520510575254

Ayazalar, R. A. et.al. (2014). Dynamic packaging application. *Procedia-Social and Behavioral Sciences*, *131*, 326-331. https://doi.org/10.1016/j.sbspro.2014.04.125

Bauer, H. H., Falk, T., & Hammerschmidt, M. (2006). eTrans Qual: a transaction process-based approach for capturing service quality in online shopping. *Journal of Business Research*, *59*(7), 866-875. https://doi.org/10.1016/j.jbusres.2006.01.021

Bukhari, S. M. F., Charles, A. G., & Jajmoon, D. B. (2013). The antecedents of Traveler's e-satisfaction and intention to buy airline tickets online. *Journal of Enterprise Information Management*, *26*(6), 624-641. https://doi.org/10.1108/jeim-07-2013-0040

Burçin, C. (2013). The Influence of E-Service Quality on Customer Per-ceived Value: A Study on Domestics Tourists in Turkey. *International Journal of Science and Research.*

Charles, K. A., Aderonke, A.O., Oyerinde J. A., & Ibukun, O. E. (2016) .E-banking users' behaviour: e-service quality, attitude, and customer satisfaction. *International Journal of Bank Marketing*, *34*(3), 347-367. https://doi.org/10.1108/ijbm-12-2014-0175

Chiang, H. S. et. al. (2015). User adopted travel planning system for personalized scheduled recommendation. *Information Fusion, 21*, 3-17. https://doi.org/10.1016/j.inffus.2013.05.011

Collier, J. E., & Bienstock, C. C. (2006). Measuring service quality in e-retailing. *Journal of Service Research*, *8*(3), 260-275. https://doi.org/10.1177/1094670505278867

DeYoung, R., Lang, W. W., & Nolle, D. L. (2007). How the internet affects output and performance at community banks. *Journal of Banking & Finance*, *31*(4), 1033-1060. https://doi.org/10.1016/j.jbankfin.2006.10.003

Elsharnouby, T., & Parsons, E. (2010). Consumer trust in consumer-service pro-vider relationships: an exploratory study of Egyptian banking. Proceedings of the Academy of Marketing Conference, Coventry.

Fauz, M. K., & Rosemaliza, A. (2018). Service quality and customer's satisfaction in Tanzania's Islamic banks: A case study at People's Bank of Zanzibar (PBZ). *Journal of Islamic Marketing*, *9*(4), 884-900. https://doi.org/10.1108/jima-09-2016-0068

Fullerton, G., & Taylor, S. (2015). Dissatisfaction and violation: two distinct consequences of the wait experience. *Journal of Service Theory and Practice, 25*(1), 31-50. https://doi.org/10.1108/jstp-10-2013-0237

George, A., & Kumar, G. G. (2014). Impact of service quality dimensions in internet banking on customer satisfaction. *Decision, 41*(1), 73-85. https://doi.org/10.1007/s40622-014-0028-2

Ghosh, S., Surjadjaja, H., & Antony, J. (2004). Optimisation of the determinants of e-service operations. *Business Process Management Journal, 10*(6), 616-635. https://doi.org/10.1108/14637150410567848

Gounaris, S., Dimitriadis, S., & Stathakopoulos, V. (2010). An examination of the effects of service quality and satisfaction on customers' behavioral intentions in e-shopping. *Journal of Services Marketing*, *24*(2), 142-156. https://doi.org/10.1108/08876041011031118

Guo, X., Duff, A., & Hair, M. (2008). Service quality measurement in the Chinese corporate banking market. *International Journal of Bank Marketing, 26*(5), 305-327. https://doi.org/10.1108/02652320810894389

Han, S., & Baek, S. (2004). Antecedents and consequences of service quality in online banking: An application of the SERVQUAL instrument. *Advances in Con-sumer Research*, *31*, 208-214.

Hu, Y., Wang, J., & Hung, L. (2011). Evaluating micro blogging e-service quality using ANP. *Journal of Multi-Criteria Decision Analysis, 19*(1-2), 89-111. https://doi.org/10.1002/mcda.491

Hussien, M. I., & Aziz, R. A. (2013). Investigating e-banking service quality in one of Egypt's banks: a stakeholder analysis. *The TQM Journal, 25*(5), 557-576. https://doi.org/10.1108/ TQM-11-2012-0086

Jayawardhena, C., & Foley, P. (2000).Change in banking sector – the case of internet banking in UK. *Internet Research, 10*(1), 19-30. https://doi.org/10.1108/10662240010312048

Karatepe, O. M., Yavas, U., & Babakus, E. (2005). Measuring service quality of banks: scale development and validation. *Journal of Retailing and Consumer Services, 12*(5), 373-383. https://doi.org/10.1016/j.jretconser.2005.01.001

Kuo, Y. F., & Wu, C. M. (2012). Satisfaction and post-purchase intentions with service recovery of online shopping websites: perspectives on perceived justice and emotions. *International Journal of Information Management*, *32*(2), 127-138. https://doi.org/10.1016/j.ijinfomgt.2011.09.001

Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). SPSS for intermediate statistics: use and interpretation. Lawrence Erlbaum Associates, Publishers, London. Retrieved from http://tip.iums.ac.ir/uploads/35_329_26_2.pdf

Li, H., & Suomi, R. (2009). A Proposed Scale for Measuring E-service Quality. *International Journal of u- and e-Service, Science and Technology, 2*(1).

Liao, C. H., Yen, H. R., & Li, E. Y. (2011). The effect of channel quality inconsistency on the association between e-service quality and customer relationships. *Internet Research, 21*(4), 458-478. https://doi.org/10.1108/10662241111158326

Magarimo. I. G. (2015). ABSTUR: An agent based Simulator for Tourist Urban Routes. *Expert System with Application*, *42*(12), 5287-5302. https://doi.org/10.1016/j.eswa.2015.02.023

Mattila, A. S. (2001). The effectiveness of service recovery in a multi-industry set-ting. *Journal of Services Marketing*, *15*(7), 583-596. ttps://doi.org/10.1108/08876040110407509

McHaney, R., & Cronan, T. P. (1998). Computer simulation success: on the use of the end-user computing satisfaction instrument: a comment. *Decision Sciences*, *29*(2), 525-536. https://doi.org/10.1111/j.1540-5915.1998.tb01589.x

Miah, Md. R. (2013). A Framework on Internet Banking Services for the Rationalized Generations. *Asian Business Review, 3*(6), 71-77.

Moghavvemi, S., Lee, S. T., & Lee, S. P. (2018). Perceived overall service quality and customer satisfaction: a comparative analysis between local and foreign banks in Malaysia. *International Journal of Bank Marketing*, *36*(5), 908-930. https://doi.org/10.1108/ijbm-06-2017-0114

Muslim, A. (2016). Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty. *International Journal of Bank Marketing, 34*(3), 280-306 https://doi.org/10.1108/ijbm-10-2014-0139

Oliver, R. L. (1993). A conceptual model of service quality and service satisfaction: compatible goals, different concepts. *Advances in Services Marketing and Management, 2*(4), 65-85.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *The Journal of Marketing, 49*(4), 41-50. https://doi.org/10.1177/002224298504900403

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual: a multiple-item scale for measuring consumer perception of service quality. *Journal of Retailing, 64*(1), 12-40. https://doi.org/10.1037/t09264-000

Parasuraman, A., Zeithaml, V. A., & Malhotra, A. M. (2005). ES-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7*(3), 213-233. https://doi.org/10.1177/1094670504271156

Pasha, M. A., & Razashah, M. (2018). Impact of service quality on customer satisfaction: An empirical study in selected public and private sector banks. *Journal of Arts, Science & Commerce, 4*(1), 64-73. https://doi.org/10.18843/rwjasc/v9i1/08

Pikkarainen, K., Pikkarainen, T., Karjaluoto, H., & Pahnila, S. (2006). The measurement of end- user computing satisfaction of online banking services: empirical evidence from Finland. *International Journal of Bank Marketing, 24*(3), 158-172. https://doi.org/10.1108/02652320610659012

Raza, S. A., Jawaid, S. T., Hassan, A., & Burton, B. (2015). Internet banking and customer satisfaction in Pakistan. *Qualitative Research in Financial Markets, 7*(1), 24-36. https://doi.org/10.1108/qrfm-09-2013-0027

Reichheld, F. F., &Schefter, P. (2000). E-loyalty: Your secret weapon on the web. *Harvard Business Review*, 105-113.

Reza, S., & Bita, Y. (2018). Bank service quality: A comparison of service quality between BSI branches in Isfahan and Dubai. *The TQM Journal.* https://doi.org/10.1108/TQM-04-2018-0052

Ribbink, D., Van Riel, A. C., Liljander, V., & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality, 14*(6), 446-456. https://doi.org/10.1108/09604520410569784

Rod, M., & Ashill, N. J. (2010). Management commitment to service quality and service recovery performance: a study of frontline employees in public and private hospitals. *International Journal of Pharmaceutical and Healthcare Marketing*, *4*(1), 84-103. https://doi.org/10.1108/17506121011036042

Rod, M., Ashill, N. J., Shao, J., & Carruthers, J. (2009). An examination of the relationship between service quality dimensions, overall internet banking service quality and customer satisfaction: A New Zealand study. *Marketing Intelligence & Planning, 27*(1), 103-126. https://doi.org/10.1108/02634500910928344

Rolland, S., & Freeman, I. (2010). A new measure of e-service quality in France. *International Journal of Retail & Distribution Management*, *38*(7), 497-517. https://doi.org/10.1108/09590551011052106

Rust, R. T., & Zahorik, A. J. (1993). Customer satisfaction, customer retention, and market share. *Journal of Retailing, 69*(2), 193-215. ttps://doi.org/10.1016/0022-4359(93)90003-2

Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality, 13*(3), pp. 233-246. https://doi.org/10.1108/09604520310476490

Sharifi, S. S., & Esfidani, M. R. (2014).The impacts of relationship marketing on cognitive dissonance, satisfaction, and loyalty: the mediating role of trust and cognitive dissonance. *International Journal of Retail & Distribution Management, 42*(6), 553-575. https://doi.org/10.1108/ijrdm-05-2013-0109

Sheng, T., & Liu, C. (2010). An empirical study on the effect of e-Service quality on online customer satisfaction and loyalty. *Nankai Business Review International*, *1*(3), 273-283. https://doi.org/10.1108/20408741011069205

Sindhu, R. B., &Suresh, S. (2015). Development of scale measure e-tourism service Quality in Kerala. International Conference on Business, Healthcare, Agriculture, Energy and Environment, Hotel Hilton Garden Inn, Los Angeles California, December 27-28.

Sohn, C., & Tadisina, S. K. (2008). Development of e-service quality measure for internet-based financial institutions. *Total Quality Management, 19*(9), 903-918. https://doi.org/10.1080/14783360802224412

Werthner, H., & Ricci, F. (2004). E-Commerce and Tourism. *Communications of the ACM,* 47(12), 101-105. https://doi.org/10.1145/1035134.1035141

Wolfinbarger, M. F., & Gilly, M. C. (2002). Measuring and predicting quality of the e-tailing experience. working paper, Marketing Science Institute, Cambridge, MA, pp. 1-51.

Yang, Z., & Fang, X. (2004). Online service quality dimensions and their relationships with satisfaction. *International Journal of Service Industry Management, 15*(3), 302-326. https://doi.org/10.1108/09564230410540953

Yang, Z., Jun, M., & Peterson, R. T. (2004. Measuring customer perceived online service quality scale development and managerial implications. *International Journal of Operations & Production Management*, *24*(11), 1149-1174. https://doi.org/10.1108/01443570410563278

Yoo, B., & Donthu, N. (2001). Developing a scale to measure the perceived quality of an internet shopping site (SITEQUAL). *Quarterly Journal of Electronic Commerce, 2*(1), 31-45. https://doi.org/10.1007/978-3-319-11885-7_129

Zeithaml, V. A. (2000). Service quality, profitability and the economic worth of customers: What we know and what we need to learn. *Journal of the Academy of Marketing Science, 28*(1), 67-85. https://doi.org/10.1177/0092070300281007

Zeithaml, V. A. (2002). Service excellence in electronic channels. *Managing Service Quality, 12*(3), 135-139. https://doi.org/10.1108/09604520210429187

Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2000). A conceptual frame-work for understanding e-service quality: Implications for future research and managerial practice. MSI Working Paper Series No. 00-115,

Cambridge, MA.

Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science, 30*(4), 362-375 .https://doi.org/10.1177/009207002236911