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Using E-S-QUAL to Measure Internet Service Quality of E-Banking Web Sites in Greece

DIMITRIS PASCHALOUDIS, Ph.D
Rector, Technological Educational Institute of Central Macedonia, Greece
Postal Address: **Terma Magnesias, 62124, Serres, Greece**
Author's Personal/Organizational Website: **www.teiser.gr**
Email: **dim@teiser.gr**

Prof. Dimitris Paschaloudis is the Rector in Technological Educational Institute of Central Macedonia in Serres, Greece. He is also the Director of Master Program in Hospitality and Tourism and MBA in Church Administration of Technological Educational Institute of Central Macedonia. His areas of interest are Marketing, E-services and Entrepreneurship. He has published papers in various international journals and presented papers in many national and international conferences. He has been involved in teaching at graduate, post graduate and doctoral level.

MARIA TSOURELA, MBA
Research Associate, Business and Economy Faculty, School of Business Administration, Technological Educational Institute of Central Macedonia, Greece
Postal Address: **Terma Magnesias, 62124, Serres, Greece**
Author's Personal/Organizational Website: **www.teiser.gr**
Email: **mt@teiser.gr**

Maria Tsourela is a Doctoral Research Scholar in Macedonia University, Greece and works as a Research Assistant to the Faculty of Business and Economy in the School of Business Administration, Technological Educational Institute of Central Macedonia in Serres, Greece. Her current research interests are the impact of the Internet on business and Enterprise Systems, Internet value-added services and consumer usage behavior of net services. She has published papers in various international journals and presented papers in many national and international conferences. She has been involved in teaching at graduate and post graduate level.

Abstract

The way services are delivered to people has changed diffusion of information and communication technologies. The banking industry has fully adopted and developed the applications and practices of ICTs, in order to provide more qualitative and usable online services. It would greatly enhance the credibility of banks to understand service quality issues within this new delivery channel. This paper investigates bank websites' service quality through the use of E-S-QUAL and E-RecS-QUAL scales. These two scales, while created just for measuring e-services quality, were adopted and adjusted for our research to explore the dimensions that influence customers' overall e-service quality perceptions of bank websites. 487 valid answers were collected, from a volume of 800 structured questionnaire that were handed out to registered users of e-banking systems in Greece. At first, it is presented how all dimensions of both scales are operationilized. A Factor and Correlation analysis followed by a Multiple Regression analysisi have been applied on the seven dimension of E-S-QUAL and e-RecS-QUAL scales. The results suggest the existence of a strong and positive correlation between them and the overall perception of banking websites. The dimension that yielded the highest impact was "Contact" followed by "Responsiveness". Moreover, such a research can help identify websites' strengths and weaknesses and suggest ideas for improvement.

Keywords: **banking; information and communication technology (ICT); websites; e-service quality; Greece**

INTRODUCTION

The use of the Internet is becoming ever more widespread during the last two decades. This is because, on one hand, the number of products and services provided through this technological mean is growing and on the other, people are getting more and more used to interacting with it. The number of businesses operating over the internet, implementing their transactions through e-commerce, has been steadily increasing (Liang and Lai, 2002), while it is evident that the revenues from online shopping of goods and services are constantly growing (Rohm and Swaminathan, 2004).

Nowadays, it is very easy for a company to cross borders, through its online presence, and compete internationally. In this globalized context, with few deregulating procedures left and very high levels of competition, organizations are constantly trying to decrease costs and increase productivity. This can be accomplished by investments in information and communication technologies (Fredriksson, 2003).

The way services are delivered to people has changed due to the advances of information and communication technologies. Time and convenience are two of the most important driving forces that lead to a more wide use of e-services in peoples' every day activities.

Banking, along with other industries, has fully adopted and developed the applications and practices of information technology, in order to provide more qualitative and usable online services. The popularity of banking services delivered over the Internet (e-banking services) is increasing in recent years (Fredriksson, 2003).

Today customers demand the highest quality with the lowest cost, making financial organizations to create a more customer-focused infrastructure (Gonzales et al. 2004). For banks, to make profit, they should not only try to attract new customers but they should also try to avoid losing the existing (Reichheld and Schefter, 2000). According to Mols (2000), the introduction of e-banking services may crucially change the way banks build and maintain their customer relationships.

It would greatly enhance the credibility of banks to understand service quality issues within this new delivery channel. This paper investigates the service quality of bank web sites. Other aspects of perceived service quality, such as fun or pleasure, do not fall within the conceptual domain of service quality for banks, because they are considered distinct benefits that may not be relevant to all customers. Only the site's service quality will be investigated, while benefits gained from a site in conjunction to the site's service quality can be a potential area for future investigation.

Customers' e-service quality perception of bank websites will be measured through the use of E-S-QUAL and e-RecS-QUAL scales suggested by Parasuraman et al. (2005). According to Parashuraman et al. (2005) trends in the dimensional- and attribute-level ratings from such tracking studies will help identify web sites' strengths and weaknesses and suggest ideas for improvement. At first our sample is described, then is it shown how each dimension of a banks' website service quality is operationilized and finally the statistical analysis, by using SPSS (PASW) version 18, is performed.

The paper is organized as follows. An introduction about e-banking services is presented in Section 1. Section 2 highlights e-services quality measurement concepts and metrics, in general, and then in the banking industry, together with the analysis of E-S-QUAL and e-RecS-QUAL scales. Section 3 describes the Research hypothesis, model and methodology. Data analysis and results evaluation are analyzed in Section 4. Finally the fifth and last section, discuss the findings and their managerial implications.

E-BANKING SERVICES

Once, e-banking services were only about checking the accounts while today they include a wide range of services. The development of technology allows banks to offer not only "branch-based" services over the Internet, but also new added-value services which are available only online, such as electronic commerce, real-time brokerage, financial information menus, e-mail alerts and third party services (tax payment, portals or management of electricity bills), (Centeno, 2004).

In Greece, based on the published ratings of the Union of Greek Banks, during 2012 more than 2.761.654 individuals and legal persons were registered users of e-banking services. The annual growth rate reaches 15% (versus the 12% annual growth in 2011). This is a corollary of the advantages that the customer gains from using these services.

Customers, through e-banking, can make their transactions at any time and place, in parallel with personalizing services according to their needs.

The arithmetic of familiarization of Greek citizens with these new possibilities is important, but by no means has it reflected a society that has fully realized the importance of the evolutions that can make their lives easier. It is obvious that in other European countries the penetration rate of e-banking services reaches 50% (the percentage for the north – European countries reaches 70%-80%). In Greece almost only 12% of internet users use e-banking services. Greece follows international developments in a slow pace, an indication that the development margins of these services are very high. This big challenge for banks drives them to constantly want to upgrade e-banking services, always targeting the customer.

The gradual and stable increase in the number of e-banking users is a result of the benefits and privileges that customers enjoy when they discover the world of banking technology. Some of the main benefits that customers gain are access to their bank portfolios 24/7/365, transactions implementation without the presence of the customer in a bank branch, ability to personalize services according to one's needs and finally, there is measurable profit, while most of the banking products through alternative channels are either not additionally charged with commissions or charged with smaller ones in comparison with the ones that will be charged if the customer visits a bank branch.

Banks, also acquire important benefits from the adoption of e-banking transactions. The most important is that customer service costs are minimized. Banks can now offer value adding services for the customer, while systematically working for the enforcement of their products attractiveness and the creation of stable cooperation relationships with their customers. Customers that utilize alternative channels are the most satisfied ones and this satisfaction can be translated in more products, bigger use of products as well as higher customer loyalty.

Whether the customers that uses e-banking services is satisfied or not is a measurable and constantly monitored procedure, since it constitutes the strongest criterion for the bank concerning the evaluation of its whole model. In fact, customers help the bank, grounded the assistance provided by the technological infrastructure, to adjust, enrich and upgrade services delivered in accordance to the easiness, flexibility, speed and lower cost of services.

E-SERVICES QUALITY MEASUREMENT

E-service quality is defined as overall customer assessment and judgment of e-service delivery in the virtual marketplace (Santos, 2003). Businesses that have been experienced and successful in offering e-services are starting to apprehend that besides website presence and low price, the important success or failure factors also include the electronic service quality (Yang, 2001; Zeithaml, 2002). The underlying reason of the importance of e-service quality is the fact that customer can easier and more accurate evaluate internet based services than traditional ones (Santos, 2003). Thus, customers of online services expect equal or higher levels of service quality than the customers of traditional services (Santos, 2003).

There are directions towards the research of the dimensions of service quality. First, there is the Nordic School of thought, incorporating process and outcome quality dimensions (Gronroos, 1984; Lehtinen and Lehtinen, 1991) and the North American School of thought incorporating SERVQUAL (Parasuraman et al., 1985; Parasuraman et al., 1991). A customer-oriented quality strategy is critical to service businesses as it drives customers' behavioural intentions (Gilmore, 1997), with for instance high-perceived service quality leading to repeat patronage and customer loyalty (Zeithaml et al. 1996; Van Riel et al., 2003). Substandard service quality leads to negative word-of-mouth, which may result in a loss of sales and profits for the service organization, with customers migrating to competitors (Ghobadian et al., 1994; Zeithaml et al., 1996; Yang, 2003).

Delivering high quality services is of great importance for most businesses. The problem lays on the procedure of measuring quality, on the factors that most influence quality and generally on the definition of e-services. Some models are the most worthy of note for our research. Parasuraman et al. (1985) have developed the SERVQUAL model to measure service quality reliability, responsiveness, assurance, empathy, and tangibles. Electronic service quality dimensions, in contrast, are different from the traditional service quality in terms of human and technology interaction, web site design and interface (Rotchanakitumnuai, 2008). Rowley (2006) states that the in current literature, studies rely on the dimensions and measurement of methods of e-service quality, while there is not yet a widely accepted description of e-service.

"E-service" has recently become a popular research topic, with the growth of e-commerce (Sylvie and Ina, 2010). E-service quality can be described as overall customer evaluations and judgments regarding the excellence and the quality of e-service delivery in the virtual marketplace (Santos, 2003). According to Parasuraman et al. (2005), e-service quality is defined broadly to encompass all phases of a customer's interactions with a web site (the extent to which a web site facilitates efficient and effective shopping, purchasing, and delivery).

Parasuraman et al. (2005) described e-service quality in terms of the effectiveness and efficiency of online browse, online purchase, and delivery of goods and services. At the beginning, quality of e-services was described by Zeithaml et al. (2000) as "the extent to which a web site facilitates efficient and effective shopping, purchasing and delivery". Almost always, e-service quality is investigated through the identification of the dimensions from either the customer's perspective or the provider's perspective (Heim and Field, 2007).

Dimensions of e-service quality are dispersed. A review of the existing literature reveals several dimensions that can be considered appropriate for different research contexts. A measurement instrument for e-service quality is E-S-QUAL, proposed by Parasuraman et al. (2005), comprising of efficiency, fulfilment, system availability, privacy, responsiveness, compensation and contact. E-S-QUAL has been considered as an extension SERVQUAL (Parasuraman et al., 1988), an instrument which played a pivotal role in measuring conventional service quality (Ladhari, 2009). Barnes and Vidgen (2001) identify as dimensions of online service quality usability, information quality and service interaction.

Lee and Lin (2005), by modifying SERVQUAL scale, proposed web site design, reliability, responsiveness and trust to be the drivers leading to higher e-service quality. Madu and Madu (2002) identified 15 dimensions namely, performance, features, structure, aesthetics, reliability, storage capacity, serviceability, security and system integrity, trust, responsiveness, product/service differentiation and customization, Web store policies, reputation, assurance, and empathy.

Wolfinbarger and Gilly (2002) proposed an e-service quality scale entitled COMQ and afterwards renamed into eTailQ. This scale is consisted of website design, reliability, security and customer service (Wolfinbarger and Gilly, 2003). Yoo and Donthu (2001), proposed another e-service quality scale, SITEQUAL, by highlighting both system and service attributes, comprising of ease of use, aesthetic design, processing speed, and interactive responsiveness. Also, Zeithaml (2002), proposed a list of eleven dimensions for the measurement of e-service quality containing access, ease of navigation, efficiency, flexibility, reliability, personalization, security/privacy, responsiveness, assurance/trust, site aesthetics, and price knowledge.

Measuring service quality in e-banking

The increased importance of information and communication technology for the delivery of financial services, has led to the growing interest of researchers and managers in e-banking quality issues (Jayawardhena, 2004). The use of new technological applications such as “intelligent agents” allow customers to compare products and services online and ultimately avail of the most awarding financial packages (Jayawardhena and Foley, 2000).

There are many researches that have studied quality of banking websites. For example, Jun and Cai (2001), proposed the following quality categories: customer service quality, online systems quality and banking service products quality. Also, Jayawardhena (2004) used the SERVQUAL instrument to study service quality of e-banking and proposed five quality dimensions namely, access, website interface, trust, attention and credibility. It must be noted that despite the existing literature around the measurement of service quality for e-banking, there is not a universally widely used model adopted.

e-S-QUAL and e-RecS-QUAL

E-S-Qual is similar to SERVQUAL scale, created just for measuring e-services quality. The model was introduced in 2000 and tested and revised in 2002 by Parasuraman, Zeithaml and Malhotra. At first, a qualitative study took place with six focus groups of six to seven participants in each group (Zeithaml et al., 2000). Then, they claim that "the responses of focus-group participants to e-service quality (e-SQ) dimensions were remarkably consistent across the groups, experience levels, and e-service businesses discussed. The focus groups revealed that consumers use basically similar dimensions in evaluating e-SQ regardless of the type of product or service being evaluated on the Internet" (Zeithaml et al., 2000). The dimensions found were Reliability, Responsiveness, Access, Flexibility, Ease of Navigation, Efficiency, Assurance/Trust, Security/Privacy, Price Knowledge, Site Aesthetics, Customization/Personalization. The collection of Web site attributes pertaining to these 11 dimensions served as the e-SQ domain from which items were drawn for the e-SQ scale.

Further analyses was conducted to the items to develop an e-core service quality scale (E-S-QUAL). This process resulted in the final E-S-QUAL Scale, consisting of 22 items on four dimensions, which were labelled and defined as follows:
Efficiency: The ease and speed of accessing and using the site.
Fulfilment: The extent to which the site's promises about order delivery and item availability are fulfilled.
System availability: The correct technical functioning of the site.
Privacy: The degree to which the site is safe and protects customer information.

Afterwards some items that had been set aside earlier, were analyzed for constructing a scale for measuring the quality of recovery service provided by Web sites. Following the same process used in developing E-S-QUAL, an e-recovery service quality scale (E-RecSQUAL) was created consisting of 11 items on three dimensions:
Responsiveness: Effective handling of problems and returns through the site.
Compensation: The degree to which the site compensates customers for problems.
Contact: The availability of assistance through telephone or online representatives.

So, E-S-QUAL and e-RecS-QUAL scales suggested by Parasuraman et al. (2005) consist of the following seven dimensions:
Efficiency (accessing and using the site easily and quickly).
Fulfilment (keeping promises about order delivery and item availability).
System availability (correct technical functioning of the site).
Privacy (site is safe, customer information is protected).
Responsiveness (effective handling of problems).
Compensation (site compensates customers for problems).
Contact (assistance through telephone or online representatives).

The first four dimensions were said to constitute "core" quality (e-S-QUAL scale), whereas the last three were said to constitute "recovery" quality (e-RecS-QUAL scale).
The purpose of E-S-QUAL (and E-RecS-QUAL) is solely to measure the service quality of Web sites. Other experiential aspects such as fun or pleasure do not fall within the conceptual domain of service quality because such hedonic aspects are distinct benefits that may not be relevant in all contexts or to all customers, (Parashuraman et al., 2005). Online businesses can apply both scales to reveal customers' overall e-SQ perceptions. According to Parashuraman et al. (2005) trends in the dimensional- and attribute-level ratings from such tracking studies will help identify web sites' strengths and weaknesses and suggest ideas for improvement.

RESEARCH HYPOTHESIS AND MODEL

Chang *et al.* (2009), in their attempt to create a model that shows the links between e-service quality, customer satisfaction, and customer loyalty, found that e-service quality positively affects customer satisfaction. Chen and Hitt (2002), found that specific quality factors of e-service quality reduce customer switching and attrition. Wenying and Sun (2010), while investigating e-service quality, e-customer satisfaction, perceived value and loyalty showed that e-service quality positively influences customer satisfaction, perceived value and e-loyalty.

The research of Sun *et al.* (2009) revealed that dimensions of e-service quality affect customer satisfaction and perceived value. In the banking industry, Al-Hawari and Ward (2006), evidenced the positive effects of e-service quality on customers' satisfaction. Yen and Lu (2008) as well as, Kassim and Abdullah (2010), proved that the dimensions of e-service quality directly influence customer satisfaction.

Relying on all the above researches, we suggest that e-service quality dimensions directly relates to customer's overall perception of e-service quality. In specific it is hypothesized that:

H1: Efficiency positively influences customer's overall perception of e-service quality
H2: System availability positively influences customer's overall perception of e-service quality
H3: Fulfillment positively influences customer's overall perception of e-service quality
H4: Privacy positively influences customer's overall perception of e-service quality
H5: Responsiveness positively influences customer's overall perception of e-service quality
H6: Compensation positively influences customer's overall perception of e-service quality
H7: Contact positively influences customer's overall perception of e-service quality

In this research the E-S-QUAL and E-RecS-QUAL scales developed by Parasuraman *et al.* in 2002, are used. All the dimensions included in the underlying study have been described and used based on the researches of Parasuraman, Zeithaml and Malhotra from both, 2000 and 2002. The conceptual model is illustrated in Figure 1. At the end, the results are discussed along with the theoretical and managerial implications of the findings.

E-S-QUAL and E-RecS-QUAL scales were chosen because the purpose of this research is to study the dimensions that influence customers' overall e-service quality perceptions of bank websites. As suggested by Parashuraman *et al.* (2005), E-S-QUAL and E-RecS-QUAL scales demonstrate good psychometric properties and must be used only to measure the service quality of Web sites. Fun or pleasure do not constitute parts of our research because they may not be created to all customers.

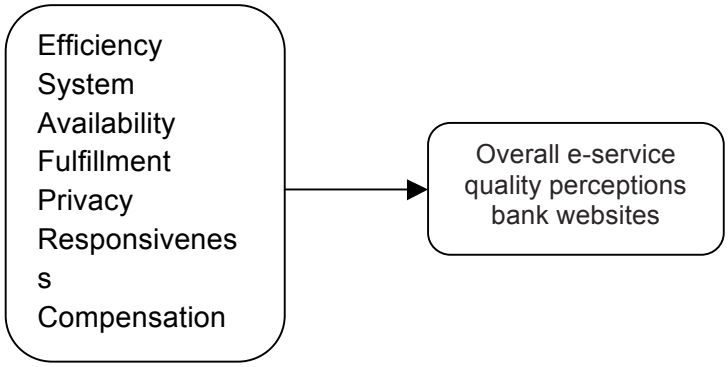

Figure 1: Conceptual model

RESEARCH METHODOLOGY

Instrument

The research was conducted using a structured questionnaire adopted by Parashuraman *et al.* (2005), including the dimensions of E-S Qual and E-recS-Qual. At first the sample is described, then is it shown how each dimension is operationilized and finally the statistical analysis is presented. The questionnaire comprised of three sections:

Customer demographics: The questions of this section were related to gender, age and education.

E-S-QUAL scale: Respondents rated the Web site's performance on each scale item using a 5-point scale (1 = strongly disagree, 5 = strongly agree). The items below are grouped by dimension for expositional convenience namely, Efficiency - eight items, System availability - four items, Fulfillment - seven items and Privacy - three items.

E-RecS-QUAL scale: Respondents rated the Web site's performance on each scale item using a 5-point scale (1 = strongly disagree, 5 = strongly agree). The items below are grouped by dimension for expositional convenience namely, Responsiveness - five items, Compensation - three items and Contact - three items.

Sampling

The sample of the survey was people living in Greece that are registered users on a banks' e-banking system for at least one year. In that way, it was ensured that all respondents had sufficient experience in online banking. The resulting sample comprised of 487 valid questionnaires out of 800 people that were asked to participate in the survey, with a response rate of 60.9%.. As mentioned above, only a small percentage of people living in Greece are currently active users of e-banking services thereupon, given the relatively slow penetration rate of e-banking in Greece the size of the sample is regarded satisfactory.

DATA ANALYSIS AND RESULTS

In Table 1 the summary of the sample's demographics are shown. 58.7% of our respondents were male and 41.3 were female. More than 65% of the sample are up to 40 years old and more than 55% holds a Bachelor degree. In general, the majority of respondents are male, relatively young and highly educated. This profile is close to the Greek internet profile, according to the surveys concerning the use of internet in Greece (Observatory for the Greek Information Society, 2011). Therefore, our sample is considered representative for generalization into the Greek society.

Table 1: Sample characteristics

Variable		Frequency	%
Gender	Male	286	58.7
	Female	201	41.3

Age	20 to 30 years	171	35.1
	31 to 40 years	154	31.6
	41 to 50 years	97	19.9
	Over 50 years	65	13.4
Education	High school	46	9.4
	Diploma	87	17.9
	Bachelor	279	57.3
	Postgraduate	75	15.4

Factor analysis

A principal component factor analysis was carried out for the validation of the dimensions connected with overall e-service quality perceptions of bank websites. The summary of the factor analysis results is shown in Table 2. The reported reliability coefficient for all items adopted to investigate each dimensions are 0.73 for Efficiency, 0.76 for System availability, 0.83 for Fulfillment, 0.79 for Privacy, 0.74 for Responsiveness, 0.71 for Compensation, 0.72 for Contact and 0.87 for overall e-service quality perceptions. From the results of the factor analysis, it is obvious, that there are eight significant dimensions, all of them scoring eigenvalues greater than 1 (Kaizer 1960, Kaizer, 1974).

Table 2: Factor analysis of the study variables

Construct and item	Mean	Factor Loading	Eigenvalue	% of Variance	Reliability
Efficiency (EFF)			1.953	34.345	0.73
EFF1	3.52	0.58			
EFF2	3.36	0.59			
EFF3	3.41	0.60			
EFF4	3.58	0.65			
EFF5	3.48	0.69			
EFF6	3.59	0.70			
EFF7	3.35	0.71			
EFF8	3.43	0.73			
System availability (SYS)			2.321	33.247	0.76
SYS1	3.57	0.70			
SYS2	3.69	0.61			
SYS3	4.02	0.59			
SYS4	3.56	0.68			
Fulfillment (FUL)			2.232	39.246	0.83
FUL1	3.62	0.78			
FUL2	3.89	0.71			
FUL3	3.68	0.63			
FUL4	3.72	0.68			
FUL5	3.86	0.69			
FUL6	3.75	0.72			

Construct and item	Mean	Factor Loading	Eigenvalue	% of Variance	Reliability
FUL7	3.71	0.74			
Privacy (PRI)			2.135	35.357	0.79
P1	4.23	0.59			
P2	4.12	0.62			
P3	3.87	0.74			
Responsiveness (RES)			1.789	41.648	0.74
RES1	3.86	0.59			
RES2	3.67	0.63			
RES3	3.52	0.69			
RES4	3.78	0.79			
RES5	3.69	0.67			
Compensation (COM)			1.912	52.348	0.71
COM1	4.21	0.82			
COM2	4.26	0.78			
COM3	3.98	0.71			
Contact (CON)			2.058	51.985	0.72
CON1	4.16	0.92			
CON2	4.08	0.87			
CON3	4.26	0.81			
Overall e-service quality perceptions (ESQP)			1.822	44.217	0.87
ESQP1	3.78	0.62			
ESQP2	3.71	0.69			

The Bartlett sphericity testing on the degree of correlation between the variables and the appropriateness of the sample, according to Kaiser–Meyer–Olkin (KMO), verified the appropriateness of the sample for all scales (Norusis, 1990). The KMO indicator was calculated to assess sample size adequacy. The minimum acceptable level is 0.5 and Bartlett's test of sphericity is significant at $p<0.001$ for all scales with valid N=487. Sufficient intercorrelations resulted and Bartlett's Test of Spehericity was also found to be significant, as shown in Table 3.

Table 3. Kaiser-Meyer-Olkin and the Bartlett's Test of Sphericity

Variables	Kaiser-Meyer-Olkin Values	Bartlett's Test of Sphericity	
		Approx.Chi-Square	Sig.
Efficiency	0.672	290.247	0.000
System availability	0.735	342.486	0.000
Fulfillment	0.787	232.543	0.000
Privacy	0.674	230.781	0.000
Responsiveness	0.626	210.964	0.000
Compensation	0.722	238.547	0.000

Contact	0.728	247.649	0.000
Overall e-service quality perceptions	0.701	217.642	0.000

Correlation analysis

A correlation matrix to the dimensions was carried out in order to quantify the extent to which our dimensions "go together." When high values of one dimension are associated with high values of another dimension, a positive correlation exists. When high values of a dimension are associated with low values of another dimensions, a negative correlation exists. Correlation = +1 means variables are perfectly positively correlated (they go up and down in perfect synchronization), =-1 means perfect negative correlation (one goes up and the other goes down), values close to 0 mean either no relation or the relation isn't linear. Our results indicate that the highest coefficient of correlation is between Responsiveness and Overall e-service quality perceptions (r=0.514, n=487, p≤0.01). The weakest correlation was between System availability and Compensation (r=0.267, n=487, p≤0.01).

Table 4: Summary of Means, standard deviations and correlations.

Variables	EFF	SYS	FUL	PRI	RES	COM	CON	OESQP
Efficiency	1	.354(**)	.445(**)	.478(**)	.457(**)	.283(**)	.362(**)	.378(**)
System availability		1	.437(**)	.498(**)	.401(**)	.267(**)	.413(**)	.432(**)
Fulfillment			1	.352(**)	.312(**)	.397(**)	.309(**)	.327(**)
Privacy				1	.294(**)	.382(**)	.376(**)	.369(**)
Responsi-veness					1	.397(**)	.471(**)	.516(**)
Compen-sation						1	.509(**)	.465(**)
Contact							1	.412(**)
Overall e-service quality perceptions								1

SPSS (PASW) version 18 was used to complete the statistical analysis of our research. Multiple regression analysis was used to predict the value of a dimension based on the value of two or more other dimensions and to explain the significance of the independent and dependent variables. The alpha level, which is typically 0.05 is compared to the p-value and if smaller then it will be concluded that the independent dimensions reliably predict the dependent variable. If the p-value were greater than 0.05 then the group of independent dimensions would not have show a statistically significant relationship with the dependent dimension, or that the group of independent dimensions do not reliably predict the dependent dimension.

Multiple regression analysis

In this research, the seven dimensions of overall e-service perceived quality of e-banking websites are being studied. Multiple regression analysis is carried out to test this relationship. Table 5 shows the multiple linear regression estimates including the intercept and the significance levels.

We forced all dimensions into the multiple linear regression to find the Beta weights and collinearity. Beta expresses the relative importance of each independent variables in standardized terms. The variance explained in the dependent variable by the e-service quality dimensions is 34.3%, which is significant (F = 39.571). All of the dimensions are significant predictors of overall e-service quality perceptions of bank websites. Contact (β= 0.312) has the higher impact and Responsiveness (β=0.278) follows. This table also checks for multicollinearity in our regression model. Tolerance should be > 0.1 (or VIF < 10) for all variables, which they are.

Table 5. Regression Summary. (N= 487)

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
	B	Std. error	ß			Tolerance	VIF
(Constant)	0.915	0.134		5.558	0.000		
Efficiency	0.175	0.039	0.173	3.752	0.007	0.785	1.291
System availability	0.169	0.051	0.171	3.732	0.001	0.762	1.264
Fulfillment	0.125	0.046	0.097	2.642	0.008	0.773	1.258
Privacy	0.102	0.041	0.185	3.875	0.000	0.769	1.251
Responsiveness	0.198	0.040	0.278	4.125	0.000	0.797	1.262
Compensation	0.148	0.047	0.126	2.241	0.007	0.854	1.167
Contact	0.201	0.037	0.312	6.297	0.000	0.757	1.235
Notes: R^2 = 0.343 ; Adj. R^2 =0.337 ; Sig. F = 0.000 ; F-value = 39.571 ; dependent variable, p < 0.01							

CONCLUSION

The number of services now provided through the internet, in all industries, has motivated researchers to either develop or use existing measures to investigate the quality of technology based services. As mentioned in this researcher there are various instruments that measure e-service quality from several point of views. Some try to measure the actual quality provided by the e-service, others the perceived quality by customers and last the quality of the means through these service are provided.

The aim of this research falls in the third category of measurements because it was to measure the quality websites that provide e-services in the banking industry. Part of the research of Parasuraman *et al.* (2005) was used, in order to examine the applicability of E-S-QUAL and E-RecS-QUAL scales on e-banking sites in Greece and investigate their effects on customer perceived overall quality.

The inter-correlations among four E-S-Qual and three E-RecS-Qual dimensions indicated a strong and positive correlations with overall perception of banking websites. This strong relation shows reliability and validity of both scales. To determine the extent to which each E-S-QUAL and E-RecS-Qual dimension contributes to this impact, we conducted multiple regression analyses. Scale items of each dimension were summed and used to represent that dimension.

Concerning the relative importance of the dimensions of the two scales, Contact was evidenced as the highest ranked one and Responsiveness was rated as the second most significant one. The fact that Contact, which relates to the availability of assistance through telephone or online representative, taking into account the relatively low penetration rate of e-services and the small number of years that e-banking services are being used in Greece, proved as the most significant dimensions is justified. When people are not used on dealing with computers and technology exclusively, to complete a job, they feel more safe and sometimes they are even motivated to do so when they know that at any time they can reach a representative of the organization to help and guide them .

The second most important dimension was Responsiveness, which is the effective handling of problems and returns through the site. Once again it is proved that the relatively low experience of Greek users on e-banking, constituting them uninformed concerning technology based services, makes them more worried about what will happen if a problem occurs, probably because they feel that can do nothing about it or even that they may lose money, in the case of bank services, and less concerned for example about Efficiency, which is the ease and speed of accessing and using the site.

Our results are in contrast with the results of some other researches, such as Mahmood *et al.* (2012), that proved, concerning the perceived value of a baking website, Fulfillment and Compensation as the most important dimensions in China. Also, in the same research it is proved that e-banking users of the Kingdom of Saudi Arabia are mostly concerned about Efficiency and Responsiveness. The customers of this part of the world prefer to have efficient systems, which should be available without any interruption all the time.

It can be concluded that life style and cultural setup of countries greatly affect the perception of online services. Provision of a high level of website e-service quality is a goal that every bank must try to achieve. This research reveals the immaturity of Greek society, that has not fully realized the importance of the evolutions that can make one's life easier. The gradual and stable increase in the number of e-banking users is a result of the benefits and privileges that customers enjoy when they discover the world of banking technology. It would greatly enhance the credibility of banks to understand service quality issues within the new delivery channel.

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