A Review of Service and E-Service Quality Measurements: Previous Literature and Extension

Emel Kursunluoglu Yarimoglu

Yasar University

Izmir, Turkey

emel.kursunluoglu@yasar.edu.tr

Abstract: *The purpose of this study is to show the requirement of industry-specific national service quality indices for measuring quality in both traditional and electronic services in various industries in a country. In this study, the literature about service and e-service quality measurements was reviewed, and a three-dimensional framework was developed. It was found out that the dimensions of each service quality measurement were all different from each other due to the different characteristics of the industries that each study has been conducted in. The study showed that there is a need for an industry-specific national service quality index and suggested that national customer satisfaction indices which have existed in the literature can be a model for industry-specific national service quality indices. An industry-specific national service quality index enables national companies to understand their unique industrial characteristics that needed to be improved continuously in order to increase service quality and gain competitive advantage. The index which was proposed to develop in the future was suggested for the first time in this study.*

Introduction

The techniques of measuring service quality have become a major area in the marketing literature during the past few decades since the increasing importance of service industry. The share of service industry in the economy has been increasing for years. The importance of services has been growing rapidly since the services account for more than 60 percent of GDP worldwide, almost all economies have a substantial service sector, and most new job is derived by services (Lovelock and Wirtz, 2011). Increasing competition in the service industry has led many companies to consider service quality as a strategic tool. As well as service quality, e-service quality has been becoming more important nowadays. Measuring e-service quality was highly developed after 2000s with the increasing usage amount of e-services. The researches about measuring and improving e-service quality have been continuing sharply.

Service quality affects customer satisfaction and loyalty which have strong influences on customer behavior. Since service quality is one of the antecedents of customer satisfaction (Parasuraman et al., 1988; Boulding et al., 1993; Cronin and Taylor, 1992; Athanassopoulos, 2000) and there are many relations among service quality, satisfaction, loyalty, perceived value, and behavioral intentions (Leonard and Sasser, 1982; Cronin and Taylor, 1992; Chang and Chen, 1998; Gummesson, 1998; Silvestro and Cross, 2000; Cabuk et al., 2013), the measurement of service quality has been a valuable concept that should be analyzed. E-service quality has also positive impacts on customer satisfaction (Chang and Wang, 2008; Barutcu, 2010; Liang, 2012). It was shown that e-service quality has a positive effect on satisfaction and satisfaction has a positive effect on loyalty (Chang et al., 2009). E-service quality has a significant and positive effect on perceived value; and perceived value increases the loyalty (Fuentes-Blasco et al., 2010; Pearson et al., 2012). Pearson et al. (2012) also showed that loyalty intentions can be affected by perceived e-service quality.

There have been many studies that developed scales and dimensions for measuring service and e-service quality in the literature. This paper reviewed the service and e-service quality measurements and showed the need of an industry-specific national service quality index for each various service industry in a country. The aim of the study is to show the requirement of developing industry-specific national service quality indices. In this study, firstly service and e-service quality scales and their dimensions were examined, criticisms about service and e-service quality scales were analyzed, and a three-dimensional framework was developed according to the

literature review. This framework showed that each service quality dimensions were all different from each other due to the different characteristics of the industries that each study has been conducted in. It was highly suggested that there is a need for an industry-specific national service quality index and customer satisfaction indices which have existed in the literature can be a model for industry-specific national service quality indices. National customer satisfaction indices from different countries were explained and Turkish Customer Satisfaction Index was focused on. In conclusion, it was highly recommended to develop an industry-specific national service quality index since it enables national companies to understand the unique industrial characteristics that needed to be improved continuously in order to increase service quality and gain competitive advantage.

Service Quality (SQ) Measurements

Service quality concept was defined by seven service attributes such as *security, consistency, attitude, completeness, condition, availability*, and *training of service providers* (Sasser et al., 1978). Lehtinen and Lehtinen (1982) defined three dimensions of service quality such as *physical quality, interactive quality*, and *corporate quality*. Physical quality refers to tangible appearance of the service; interactive quality relates to the interactions between customers and service personnel; corporate quality involves the image of service provider.

The first model for measuring service quality was developed by Grönroos in 1984 (Dotchin and Oakland, 1994; Seth et al., 2005; Bulbul and Demirer, 2008). He developed a service quality model and measured perceived service quality. *Technical quality, functional quality*, and *corporate image* were used in the model as the dimensions of service quality. Technical quality is about customer evaluations about the service delivered. Functional quality is seen to be more important dimension than technical quality. It refers how consumers take the service and it is the important variable for consumer perceptions and service differentiation. Technical quality is interested in what was delivered such as the knowledge about product and services whereas functional quality is interested in how the service was delivered such as the importance of the service personnel manners. Corporate image has a positive impact on customer perceptions.

Parasuraman et al. (1985) analyzed the dimensions of service quality and constituted a GAP model that provides an important framework for defining and measuring service quality (Saat, 1999). They conducted an exploratory investigation and

developed the GAP Service Quality Model. It shows the key insights gained through the executive interviews and focus group interviews about the service quality concept. The gaps revealed by the executive interviews are shown in the marketer side (GAP1, GAP2, GAP3, GAP4), and the GAP 5 which was formed by the focus group interviews is in the consumer side of the model. The GAP names were shown below (Parasuraman et al., 1985; Lovelock, 2011): The Knowledge Gap (GAP 1): Customer expectation-management perceptions gap; The Policy Gap (GAP 2): Management perception-service quality specifications gap; The Delivery Gap (GAP 3): Service quality specifications-service delivery gap; The Communications Gap (GAP 4): Service delivery-external communications gap; The Service Quality Gap (GAP 5): Expected service-perceived service gap. Lovelock (1994) added the sixth gap to the model as The Perceptions Gap between Service Delivery and Perceived Service.

After the gaps modeling, ten determinants of service quality that consumers used when interpreting the quality were described (Parasuraman et al., 1985) as follows: *Reliability* involves consistency of performance and dependability and provides right service in right time. *Responsiveness* includes the willingness or readiness of employees to provide service. *Competence* shows skill and knowledge the service personnel. *Access* means accessibility and ease of contact. *Courtesy* involves politeness and friendliness of service personnel. *Communication* keeps customer informed, for example explaining the service and its cost. *Credibility* contains trustworthiness and honesty. *Security* involves physical safety and financial security. *Understanding/Knowing the Customer* means learning the customer's specific requirements and providing them individualized service. *Tangibles* show the physical evidence of the service.

Service quality has been conceptualized with different numbers of dimensions and generally it has been explained with two or three dimensional models. Rust and Oliver (1994) proposed a three dimensional model which was not tested in a conceptual way. In this model service quality is a function of *service product*, *service delivery*, and *service environment*. Hedvall and Paltschik (1991) identified service quality dimensions as *willingness and ability to serve*, and *physical and psychological access*. Haywood-Farmer (1988) discussed a service quality model including three basic attributes such as *physical facilities, people behavior and conviviality,* and *professional judgment.* These attributes were related to Parasuraman et al.'s (1985) service quality determinants. Physical facilities are related to Tangibles; People Behaviour and Conviviality are related to Reliability, Responsiveness, Access,

Courtesy, Communications determinants; and Professional Judgment is related to Competence, Credibility, Security, Understanding the consumer determinants.

Parasuraman et al. (1988) developed SERVQUAL scale which is an advanced model for measuring service quality. In SERVQUAL model, there are five dimensions and 22 items presented in seven-point Likert scale. They measured service quality especially functional service quality via empirical studies in banking, credit card, repair and maintenance, and long-distance telephone services. The five dimensions of SERVQUAL are: *tangibles, reliability, responsiveness, assurance,* and *empathy.*

Service quality can be measured by a performance-based SERVPERF scale as well as the gap-based SERVQUAL scale (Cronin and Taylor, 1992). SERVPERF scale was developed from the same items in SERVQUAL but it has also the performance statements. Scale consists of items about *expectation* (22 items-same as SERVQUAL), *performance* (22 items-same as SERVQUAL), *importance* (22 items-same as SERVQUAL), *future purchase behavior* (1 item), *overall quality* (1 item), and *satisfaction* (1 item). This study has shown that service quality is measured as an attitude, the marketing literature supports the performance-based measures, and the SERVPERF explains more of the variation in service quality than SERVQUAL. SERVPERF which is a performance-only model for measuring service quality was developed via empirical studies in the sectors of banking, pest control, dry cleaning, and fast food. SERVQUAL had a good fit in banking and fast food sectors whereas SERVPERF had an excellent fit in all four industries.

Dabholkar et al. (1996) developed and empirically validated the multilevel model called Retail Service Quality Scale (RSQS) in order to measure retail service quality that consists of five dimensions such as *physical aspects, reliability, personal interaction, problem solving*, and *policy*. The scale has been viewing as a generalized scale to measure the service quality in retail stores such as department and specialty stores.

Philip and Hazlett (1997) proposed a hierarchical structure model called P-C-P for measuring service quality in service organizations. The model is based on *pivotal, core*, and *peripheral attributes*. Pivotal attributes which are the most important attributes that affect service quality are seen as end product or output whereas core and peripheral attributes are seen as inputs and processes. These attributes are shown in a triangle. Pivotal attributes are at the top, core attributes are at the second stage, and peripheral attributes are at the bottom side of the triangle. The degree of importance decreases from top to bottom of triangle.

Brady and Cronin (2001) developed a model for measuring service quality. According to this model; service quality is affected by personal interaction quality, physical service environment quality, and outcome quality. Attitude, behavior, expertise form interaction quality; ambient conditions, design, social factors constitute physical environment quality; and waiting time, tangibles, valence form outcome quality. Martinez Caro and Martinez Garcia (2007) used this model in their empirical research for measuring perceived service quality in urgent transport service industry. They claimed that Brady and Cronin (2001) developed this hierarchical conceptualized and multidimensional model by combining the Rust and Oliver model (1994) and Dabholkar et al.'s RSQS hierarchical model (1996).

E-Service Quality (e-SQ) Measurements

E-services are distinguished from traditional services in terms of their characteristics such as the cost structure of services, the high degree of outsourcing, the rapid development of new services, the availability of transparent service feedback, and the continuous improvement of services (Riedl et al., 2009). Because of these distinguished characteristics between services and e-services, measuring e-service quality is different from measuring traditional service quality. Before developing e-service quality scales, the research have concentrated on determining three points such as technical quality of websites, the factors that influence e-satisfaction, and service quality of websites (Akinci et al., 2009). Hence, the criteria that should be used for designing an effective website have been the focus points of researchers. Abels et al. (1999) determined the six criteria that website designers need to use for designing a successful website: *1) use* - easy to use, *2) content* - having useful information, *3) structure* - displaying of website, *4) linkage* - providing link to the information at the website and other websites, *5) search* - providing search button in website itself, *6) appearance* - being attractive.

Yoo and Donthu (2001) aimed to develop a psychometrically measure of service quality of online shopping websites and developed SITEQUAL. According to the model, there are four important factors that affect web site design such as *ease of use* - of website and ability for information search; *aesthetic design* - the creativity of website in terms of excellent multimedia and colour graphics; *processing speed* - online processing promptness and interactive responsiveness to consumers' requests; and *security* - of financial and personal information.

Loiacono et al. (2002) measured B2C website quality through WebQual™ in the websites that sell products such as CDs, books and services such as hotel reservations and airline reservations. It showed that buying and revisiting intentions of consumers and the value of website. The model has been seen as more suitable for website designers to design better websites for users rather than measuring service quality (Zeithaml et al., 2002). WebQual™ has 36 items and 12 constructs. These constructs are: *Informational fit-to-task*: finds the information that consumers want; *tailored communications*: consumer-website interaction; *trust*: improves security and privacy policies; *response time*: supports communication capacity; *ease of understanding*: designs the pages; *intuitive operations*: develop an intuitive navigation system; *visual appeal*: enhances colors, graphics, and text; *innovativeness*: finds creative approaches; *emotional appeal*: is used to gain online customer experience; *consistent image*: reflects the image of the company; *online completeness*: performs over the website; *relative advantage*: makes the website easier for interacting.

Barnes and Vidgen (2002) developed WebQual 4.0 to assess the perceived service quality of online bookstores such as Amazon, BOL, and IBS in UK and found 3 dimensions and 5 subdimensions for measuring e-service quality of websites. *Usability (Usability and Design as subdimensions)*: appearance, ease of use, ease of navigation; *Information Quality (Information as sub dimension)*: accuracy, format, and relevancy of information; *Service Interaction Quality*: *(Trust and Empathy as subdimensions)* transaction/information security, product delivery, personalization and communication with website.

Zeithaml et al. (2002) showed that a number of studies have examined some criteria that identified customers' evaluations about website quality. These are information availability and content; ease of use; privacy/security; graphic style; fulfillment/reliability; and other criteria such as access, responsiveness, personalization. They developed e-SERVQUAL in 2002 for measuring e-service quality. This model has been conceptualized in two parts: core e-service quality scale with four dimensions such as *efficiency, reliability, fulfillment*, *privacy*; and recovery e-service quality scale with three dimensions such as: *responsiveness, compensation, contact*.

Another scale for assessing service quality of e-tailers was developed as PIRQUAL - Perceived Internet Retail Quality Model (Francis and White, 2002). The scale consists of six dimensions such as *web store functionality, product attribute description, ownership conditions, delivery, customer service,* and *security*.

Wolfinbarger and Gilly (2002) suggested .comQ for the measurement of service quality delivery through websites. They found that *reliability/fulfillment* is the strongest factor that affecting customer satisfaction, *website functionality* is a strong factor that affecting loyalty, and *customer service* is a strong predictive of loyalty and customer satisfaction. They have developed this valid and reliable scale for the measurement of etailer quality named eTAilQ (Wolfinbarger and Gilly, 2003). Service quality of etailers was measured within four factors such as *website design, fulfillment/reliability, privacy/security, customer service*. These four factors are shown in Table 5 and can be defined as follows: *Website design* includes customer experience elements such as navigation, information search, order processing, and personalization. *Fulfillment/reliability* includes display and description of a product and right delivery of the product on time. *Privacy/security* includes information about customers and credit card payments are secure. *Customer service* includes being helpful and responsive towards customer requests.

Santos (2003) proposed e-service quality dimensions that can be classified in two ways as incubative dimensions and active dimensions. Incubative dimensions developed before website is launched are *ease of use, appearance, linkage, structure and layout*, and *content*. Active dimensions which can raise customer retention are developed after launching of a website. They are r*eliability, efficiency, support, communication, security*, and *incentive*.

Parasuraman et al. (2005) proposed E-S-QUAL and E-RecS-QUAL scales for measuring e-service quality. E-S-QUAL is a core service quality scale for measuring core service attributes of websites and E-RecS-Qual is an e-recovery service quality scale which measures the quality of recovery services provided by websites. These scales which adapt to psychometric properties are reliable and valid scales. The E-S-QUAL scale has 22 items and four dimensions such as *efficiency, fulfillment, system availability,* and *privacy*. E-RecS-QUAL contains 11 items in three dimensions: *responsiveness, compensation*, and *contact*. E-S-QUAL scale is a leading model for the measurement of e-service quality just as SERVQUAL in service quality.

Existing e-service quality scales were seen as goal oriented and utilitarian-based by Bauer et al. (2006). They suggested that utilitarian and hedonic e-service quality dimensions should be integrated; hence they developed eTransQual scale. It is a transaction process based approach to integrate utilitarian and hedonic elements in

measuring e-service quality. This scale has 25 items and five dimensions such as: *functionality/design, enjoyment, process, reliability*, and *responsiveness*.

E-service quality provided by online travel agencies were investigated by different researchers such as Park et al., 2007; Kaynama and Black, 2000; Shchiglik and Barnes, 2004; Chen and Kao, 2010. According to the study of Park et al. (2007), the dimensions of e-service quality are as follows: *ease of use* that includes functionality and accessibility of website and it is the most important item that affects willingness to buy over the internet, and it is followed by *information/content* that includes up-to-date and reliable information; *responsiveness* that includes solving customer problem quickly and on time; *fulfillment* that includes accuracy of billing, ordering, online transaction, and services promise*; security/privacy* that includes to keep customer personal information, credit card information, and shopping behavior data safe.

The studies explained about measuring e-service quality above were related to B2C companies. Since C2C auction websites have been becoming more important as e-commerce business type (Zhang, 2006), a service quality measurement was needed for C2C auction websites like eBay. Liu et al. (2010) developed a scale called OA-SQ (online auction service quality). It included 24 items and seven dimensions as: *efficiency, system availability, privacy/security, compensation, personalization, playfulness*, and *reputation.*

Three-Dimensional Framework on SQ and e-SQ Measurements

Parasuraman et al. (1988) claimed that SERVQUAL measures perceived service quality in a wide range of service industries. SERVQUAL also has been widely used in many service industries such as education (Atrek and Bayraktaroglu, 2012; Owlia and Aspinwall, 1996; Okumus and Duygun, 2008), communication via GSM operators (Hotamisli and Eleren, 2011), hotels (Akbaba, 2006; Yaprakli and Saglik, 2010), and transportation (Cati and Yildiz, 2005; Aydin and Yildirim, 2012). The applicability of SERVQUAL to the health care service industry was tested by Babakus and Mangold (1992). According to them; SERVQUAL is a reliable and valid scale for measuring functional service quality in hospitals, however hospital management need to measure both functional and technical quality for a long-term success.

On the contrary, Finn and Lamb (1991) did not support that SERVQUAL is valid for every service industry, thus they suggested that the validity of SERVQUAL in a variety of service industries should be examined industry by industry (Akbaba, 2006). SERVQUAL dimensions may not fit in every industry which needs its own quality dimensions. Ekiz and Bavik (2008) also showed that some researchers who conducted SERVQUAL in different industries confirmed the model (Gabbie and Neill, 1996; Bojanic and Rosen, 1994; Mehta and Durvasula, 1998; Lam and Zhang, 1998) whereas some others did not confirm the model (Carman, 1990; Babakus and Boller, 1992; Brown et al. 1993; Ryan and Cliff, 1996). Carman (1990) suggested that the requirement of the adaptations of items in SERVQUAL for each industry. Babakus and Boller (1992) emphasized the requirement of industry-specific measures of service quality. Brown et al. (1993) found some problems in SERVQUAL and suggested the requirement of a new method to have psychometric properties.

SERVPERF another most known and used scale was tested and found as appropriate for different sectors whereas there were some problems in SERVQUAL. Since the requirement of industry-specific service quality scale (Babakus and Boller, 1992), Karatepe et al. (2005) developed an industry-specific (banking) and a country-specific (Northern Cyprus) model called SQUAL consisting of dimensions as: *service environment, interaction quality, empathy*, and *reliability*. They measured service quality by using SERVPERF (perceptions-only approach). Besides this, Brady et al. (2002) also performed a replication and extension of SERVPERF, and they supported the results of Cronin and Taylor (1992) in different sectors such as spectator sports, entertainment, health care, long-distance carriers, and fast food. Also, they claimed that SERVPERF is the superior model among all service quality models.

As it was explained above, some industry based scales such as SQUAL were derived by SERVPERF since it was seen as more valid and reliable scale for different service industries. On the contrary, some of the industry-specific service quality scales were based on SERVQUAL dimensions such as RENTQUAL (Ekiz and Bavik, 2008) in car rental services, TISQ (Sangeetha, 2012) in retail banking, SQFS (Chang and Chelladurai, 2003) in fitness services, DINESERV (Stevens et al., 1995) in restaurants, SYSTRA-SQ (Aldlaigan and Buttle, 2002) in retail banking, MS-QUAL (Hosseini et al., 2013) in mobile telecommunication industry, ECOSERV (Khan and Su, 2003) in ecotourism, and INTSERVQUAL (Frost and Kumar, 2000). Even though these scale development studies were concentrated on the specific

industry, they are inadequate with regard to forming a general industry-specific national index that measures service quality.

For assessing quality of e-services, E-S-QUAL as a main scale for measuring e-service quality was adapted to different industries in many studies. It was used in the sectors such as online shopping (Rafiq et al., 2012; Ingle and Connoly, 2006; Meng and Mummalaneni, 2010; Türk et al., 2012), and online banking (Marimon et al., 2012; Akinci et al., 2010). Besides this, there were many researches in the literature about measuring e-service quality in different industries such as internet banking service quality (Jun and Cai, 2001; Yang et al., 2004; Ho and Lin, 2010; Jayawardhena, 2004; Siu and Mou, 2005; Zhu et al., 2002; Wu et al., 2012; Kayabasi et al., 2013); mobile service quality (Ozer et al., 2013; Kuo et al., 2009; Lu et al., 2009); online shopping (Ilter, 2009; Celik and Basaran, 2008; Li et al., 2012; Seethamraju, 2006). Assessing of online service quality was analyzed in different sectors with different scales; however there were no industry-specific national measurements.

After considering the criticisms in the literature about service quality measurements, a three-dimensional framework was developed and shown in Table 1 below. In the first part of this framework, the service quality measurements which contain the main scales such as SERVQUAL and SERVPERF were shown. In the second part, scale development studies deriving from the main service quality scales with the techniques of replication or adaptation were shown. Even though they focused on a specific industry more, they were inadequate of developing an index in national based. In the third part, e-service quality studies which show the general development of e-service quality measurements in different industries and countries were shown.

Table 1: Three-Dimensional Framework on SQ and E-SQ Measurements

SQ Studies	Industry-Country	Dimensions
Parasuraman et al., 1985 GAP Model	Banking, credit card, securities brokerage, repair and maintenance-USA	Reliability, Tangibles, Access, Responsiveness, Competence, Courtesy, Credibility, Security, Communication, Knowing Customers
Parasuraman et al., 1988 SERVQUAL	Banking, credit card, repair and maintenance, telephone-USA	Tangibles, Reliability, Empathy, Responsiveness, Assurance
Cronin and Taylor,	Banking, pest control, dry	Same as SERVQUAL but with

1992 SERVPERF	cleaning, fast food-USA	performance only statements
Dabholkar et al., 1996 RSQS	Department stores-USA	Physical aspects, Reliability, Personal interaction, Problem solving, Policy
Philip and Hazlett, 1997 PCP Model	Particular service organizations-UK	Pivotal, Core, Peripheral attributes
Brady and Cronin, 2001 Service Quality	Amusement parks, restaurants, health and automobile care facilities, hair salons, dry cleaning, jewelry repair, photograph-USA	Personal interaction, Service environment, Outcome
Scale Development Studies in SQ	**Industry-Country**	**Dimensions**
Stevens et al., 1995 DINESERV	Restaurants-USA	Reliability, Tangibles, Assurance, Responsiveness, Empathy
Frost and Kumar, 2000 INTSERVQUAL	Airline-Australia	Reliability, Tangibles, Assurance, Responsiveness, Empathy
Aldlaigan and Buttle, 2002 SYSTRA-SQ	Banking-UK	Service system quality, Behavioral service quality, Service transactional accuracy, Machine service quality
Khan and Su, 2003 ECOSERV	Ecotourism-USA	Eco tangibles, Assurance, Reliability, Responsiveness, Empathy, Tangibles
Chang and Chelladurai, 2003 SQFS	Fitness services-USA	Service climate, Management commitment, Programs, Interpersonal interactions, Task interactions, Physical environment, Other clients, Service failures and recovery, Perceived service quality
Karatepe et al., 2005 SQUAL	Banking-Northern Cyprus	Service environment, Interaction quality, Empathy, Reliability
Ekiz and Bavik, 2008 RENTQUAL	Car rental services-Northern Cyprus	Comfort, Delivery, Safety, Handing over, Ergonomics, Accessibility
Sangeetha, 2012 TISQ	Banking-Oman	ATM, Telephone banking, Internet banking, Call center services, Queue systems, Price, Core product

		Network quality, Value-added service, Pricing plans, Employee competency, Billing, Customer services, Service convenience
Hosseini et al., 2013 MS-QUAL	Mobile telecommunication-Iran	
e-SQ Studies	**Industry-Country**	**Dimensions**
Yoo and Donthu, 2001 SITEQUAL	Online shopping websites-USA	Ease of use, Aesthetic design, Processing speed, Security
Loiacono et al., 2002 WebQual™	CDs, books, hotel-airline reservations-USA	Informational fit-to-task, Tailored communications, Trust, Response time, Ease of understanding, Intuitive operations, Visual appeal, Innovativeness, Emotional appeal, Consistent image, Online completeness, Relative advantage
Barnes and Vidgen, 2002 WebQual4.0	Bookstores-UK	Usability, Information quality, Service interaction quality
Zeithaml et al., 2002 e-SERVQUAL	Online shopping websites-USA	Efficiency, Reliability, Fulfillment, Privacy, Responsiveness, Compensation, Contact
Francis and White, 2002 PIRQUAL	Online shopping websites-Australia	Web store functionality, Product attribute description, Ownership conditions, Delivery, Customer service, Security
Wolfinbarger and Gilly, 2003 eTAilQ	Books, CDs and videos-USA	Website design, Fulfillment, Privacy, Customer service
Santos, 2003 E-service quality	Online shopping websites-UK	Ease of use, Appearance, Linkage, Layout, Content, Reliability, Efficiency, Support, Incentive, Communication, Security
Parasuraman et al., 2005 E-S-QUAL	Apparel, books, CDs, computer software& hardware, drugs, electronics, flowers, groceries, toys-USA	Efficiency, Fulfillment, System availability, Privacy
Parasuraman et al., 2005 E-RecS-QUAL	Apparel, books, CDs, computer software& hardware, drugs, electronics,	Responsiveness, Compensation, Contact

	flowers, groceries, toys-USA	
Bauer et al., 2006 eTransQual	Online shopping websites-Germany	Functionality, Enjoyment, Process, Reliability, Responsiveness
Park et al., 2007 Website quality	Online travel agencies (OTA)-USA	Ease of use, Information, Security, Responsiveness, Fulfillment
Liu et al., 2010 OA-SQ	C2C auction websites-Taiwan	Efficiency, System availability, Security, Compensation, Reputation, Personalization, Playfulness.

Source: Author's own work

Following a review of service quality scales, the study proposed a three-dimensional framework. The dimensions of service quality measurements both in traditional and electronic environments can be varied in different industries. As it was shown in Table 1 above, the dimensions of all scales have been changed according to the various industries in which each study was conducted. It was required to add different dimensions to the scales to measure service quality in each industry. Since every service industry has unique characteristics and requires unique dimensions for measuring service quality, there is a requirement for the industry-specific national index in assessing of service and e-service quality in different industries in a country.

The discussion in this research is about the need for industry-specific national indices in measuring both traditional and electronic service quality in different industries and countries. The industry-specific national service quality indices can be developed such as the national customer satisfaction indices which were developed to measure customer satisfaction level in different countries. National customer satisfaction indices from the literature were shown below as a model example for developing the industry-specific national service quality index.

National Customer Satisfaction Indices: A Model Example for the Proposed Index

There has been a requirement for industry-specific national service quality indices due to the unique characteristics of various industries and the different cultural environment of countries. Since service quality is one of the components of customer satisfaction (Ghobadian et al., 1994; McDougall and Levesque, 2000; Demirci Orel et al., 2012; Chu et al., 2012), there are positive relations between service quality and customer satisfaction. Because of these relations, national customer satisfaction

indices which have existed in the literature can be a model for industry-specific national service quality indices. Many different countries have developed their national customer satisfaction indices which help the practitioners to be able to understand their positions in an industry in terms of customer satisfaction.

The most known and used national customer satisfaction indices are such as: the Swedish Customer Satisfaction Barometer-SSCB (Fornell, 1992; Anderson et al., 1994), the American Customer Satisfaction Index-ACSI (Fornell et al., 1996), and the European Customer Satisfaction Index-ECSI which was developed by the EOQ (European Organisation for Quality) and EFQM (European Foundation for Quality Management) and inspired by the SCSB and the ACSI (Kristensen et al., 1999; Sahin, 2009). Except these indices, there have been many other national customer satisfaction indices such as the German Customer Barometer (Meyer and Dornach, 1996), the Danish Customer Satisfaction Index (Martensen et al., 2000), the Norwegian Customer Satisfaction Barometer (Andreassen and Lindestad, 1998), the Pan-European Customer Satisfaction Index (Eklof and Westlund, 2002), the Jordanian Customer Satisfaction Index (Al-Nasser et al., 2011), the Mexican User Satisfaction Index (Calleros et al., 2012), the Chinese Customer Satisfaction Index (Huang et al.,2011), the Turkish Customer Satisfaction Index (Turkyilmaz and Ozkan,2007).

The American Customer Satisfaction Index was developed by Fornell et al. in 1996 and measures customer satisfaction level across the United States. The Turkish Customer Satisfaction Index (TCSI) was developed by KA Research Limited (KARL) in cooperation with Turkish Society for Quality under the license agreement with the American Customer Satisfaction Index (KA Research Limited, 2011; Turkyilmaz and Ozkan, 2007; Zaim et al. 2010). The TCSI measures customer satisfaction in various industries of Turkey.

Industrial Annual Measurement Plan is developed in order to measure customer satisfaction level of various companies from different industries in the four quarters of the year. The TCSI Industrial Annual Measurement Plan measures customer satisfaction levels of companies from these industries (Kalder, 2014): 1st quarter: LPG gas distributors, mobile phones, GSM operators, credit cards, fast food restaurants, telecommunication; 2nd quarter: packaged waters, small household appliances, fruit juices, petrol stations, airlines; 3rd quarter: margarine, liquid oil, milk and milk products, canned foods, cleaning products, ice cream, meat and poultry products, personal care; 4th quarter: television as electronic products, white

goods, personal automobiles, health and automobile insurance, food retailer chains, cargo companies, consumer banking. The sectoral based rankings according to the TCSI indices and the industries' most successful companies between the third quarter of 2013 and the second quarter of 2014 were shown in Table 2 below.

Table 2: TCSI Ratios According to the Industries and Leading Companies

2013 3rd Quarter		2013 4th Quarter	
Industry	Company	Industry	Company
Margarine:85	Unilever	Television:82	Samsung
Liquid Oil:83	Ana Gıda	White Goods:80	Arçelik
Milk Product:82	Pınar	Personal automobile:78	Volkswagen
Canned food:82	Tat	Insurance:76	Axa insurance
Cleaning Product:82	P&G	Food retailer chain:76	Bim
Ice cream:80	Algida	Cargo company:75	MNG cargo
Meat&poultry:78	Erpiliç	Consumer banking:71	Public: Ziraat
Personal care:78	Evyap		Private: İşBankası
2014 1st Quarter		2014 2nd Quarter	
Industry	Company	Industry	Company
LPG distributor:82	Aygaz	Packaged water:79	Erikli
Mobile phone:76	Iphone	Small home appliance:79	Beko
GSMoperator:73	Vodafone	Fruit juice:77	Pınar
Credit card:71	Maximum card	Petrol station:77	Opet
Fast food restaurant:71	Domino's Pizza	Airlines:72	Turkish Airlines
Telecommunication:70	Türk Telekom		

Source: compiled from TMME 2013 3rd Q, 2013 4th Q, 2014 1st Q, and 2014 2nd Q.

In the service industry, since services are intangible it is hard to measure quality. The industry-specific national service quality indices should be formed for each industry and country similar to these national customer satisfaction indices. The main difference between national customer satisfaction index and industry-specific national service quality index is that national customer satisfaction index focuses on just one country and it does not have any different dimensions for different industries. It eliminates the diversities among industries. But industry-specific national service quality index should have different dimensions for each unique industry. Otherwise, it would become just national service quality index, not industry-specific national service quality index.

Conclusion

The importance of service quality is already well known (Lewis and Booms, 1983; Grönroos, 1984; Parasuraman et al., 1985; Mangold and Babakus, 1990). In the emerging service industry, it is important to measure the service quality. The first finding of this study was the requirement of an industry-specific service quality index. Since SERVQUAL was not valid for every industry, it was suggested that the validity of SERVQUAL should be examined in a variety of service industries and the adaptations of items in SERVQUAL for each industry should be organized (Finn and Lamb, 1991; Carman, 1990; Babakus and Boller, 1992; Brown et al. 1993; Ryan and Cliff, 1996). Moreover, Babakus and Boller (1992) emphasized the requirement of industry-specific measures of service quality. In order to measure service quality effectively in different industries, an industry-specific service quality index should be developed since every industry has its different unique characteristics. For example, the dimensions that measure the supermarket service quality can be differed from the dimensions of service quality in car washing services or health care services. The measurement of service quality in the retail industry requires different scales since retail stores offer products and significant services together. The Retail Service Quality Scale was developed to measure the service quality in retailers. However, this scale is not sufficient for an industry based index. This scale should be diversified for various retail types such as a scale for department stores and another scale for supermarkets since department stores and supermarkets offer different level of service due to their natures. Because of the differences among the characteristics of each industry, it was highly suggested developing an industry-specific service quality index in this research.

The second finding of this study was the requirement of national service quality index. Service quality can be differentiated in different countries since countries' cultures affect customers' perceptions on quality (Laroche et al., 2004). For example, researchers from different countries (Siu and Cheung, 2001; Nakip et al., 2006; Celik; 2011) have investigated service quality in retailers for years and the results showed that there was significant differences on quality perceptions. Furrer et al. (2000) argued that perceptions of service quality varied across cultural groups and proposed Cultural Service Quality Index by testing SERVQUAL dimensions correlated with Hofstede's cultural dimensions (1980, 1991). Because of these developments that show the importance of cultural differences, it was highly suggested developing a national service quality index in this research.

The main comprehensive result of this study was that a service quality index that consists of both industry-specific and national dimensions should be developed based on every different industry in a country since the unique characteristics of these industries and cultural differences among countries. This review study suggested that there is a general need for developing an industry-specific national service quality index to be able to measure the unique service quality dimensions in each industry. The index which was proposed to develop in the future was suggested for the first time in this study.

Another result was that the national customer satisfaction indices which have existed in the literature have been recommended as a model example for industry-specific national service quality indices. After defining the problem with the help of the literature review, national customer satisfaction indices were proposed as a solution of the problem. Because of the close relations between service quality and customer satisfaction, national customer satisfaction models can be taken as a fundamental basis for developing industry-specific national service quality index. In the case of taking the national customer satisfaction models as a basis for industry-specific national service quality index, it would be helpful to show the relations between the models.

The measurements at the second part of Table 1 called Scale Development Studies in SQ are the most suitable examples for industry-specific national service quality index since they focused on a specific industry in a country such as car rental services (RENTQUAL) in Northern Cyprus, restaurant services (DINESERV) in USA, and fitness center services (SQFS) in USA. However these measurements focused on a specific industry in a country, they were inadequate in forming an industry-specific national service quality index. They need to be improved in terms of creating industry-specific national service quality index.

Developing an industry-specific national service quality index helps service companies to find their unique industrial characteristics that should be improved continuously in order to increase the service quality and serve the customers better. E-service quality is an essential strategy for online retailers, and more important than low price and web presence (Zeithaml et al., 2002). In order to develop e-service quality, industry-specific national e-service quality index should be created. Discovering the main dimensions that increase the service quality of online companies enables them to gain competitive advantage in forming the websites and offerings.

Limitation and Further Research Directions

The limitation of the study was that the only limited numbers of studies (6 service quality measurement studies, 9 replication or adaptation studies in service quality, and 12 e-service quality measurement studies) from the literature could be reviewed and grouped into three dimensions. Three-dimensional framework that analyzed the service quality measurement studies into three groups according to industry, country, and dimensions should be improved in further studies. Moreover, the empirical studies on industry-specific national service quality index need to be implemented in future researches. The dimensions of each service industry should be classified and tested in terms of reliability and validity.

References

Abels, E. G., White, M. D. & Hahn, K. (1999). A user-based design process for Web sites. *OCLC Systems & Services*, *15* (1), 35-44.

Akbaba, A. (2006). Measuring service quality in the hotel industry: a study in a business hotel in Turkey. *Hospitality Management*, *25*, 170–192.

Akinci, S., Inan, E. A., Aksoy, S. & Buyukkupcu, A. (2009). Pazarlama literatüründe hizmet kalitesi kavramının dünü ve bugünü. *Hacettepe Üniversitesi İİBF Dergisi*, *27* (2), 61-82.

Akinci, S., Atilgan-Inan, E. & Aksoy, S. (2010). Re-assessment of ES-Qual and E-RecS-Qual in a pure service setting. *Journal of Business Research*, *63* (3), 232-240.

Al-Nasser, A. D., Al-Rawwash, M. Y. & Alakhras, A. S. (2011). An approach to setting up a national customer satisfaction index: the Jordan case study. *Journal of Applied Statistics*, *38* (9), 1977-1993.

Aldlaigan, A. H. & Buttle, F. A. (2002). SYSTRA-SQ: A new measure of bank service quality. *International Journal of Service Industry Management*, *13* (4), 362-381.

Anderson, E. W., Fornell, C. & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: findings from Sweden. *Journal of Marketing*, *58*, 53-66.

Andreassen, T. W. & Lindestad, B. (1998). Customer loyalty and complex services: the impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise. *International Journal of Service Industry Management*, *9* (1), 7-23.

Athanassopoulos, A. D. (2000). Customer satisfaction cues to support market segmentation and explain switching behavior. *Journal of Business Research*, *47*, 191-207.

Atrek, B. & Bayraktaroglu, G. (2012). Is there a need to develop a separate service quality scale for every service sector? Verification of SERVQUAL in higher education services. *Suleyman Demirel University The Journal of Faculty of Economics and Administrative Sciences*, *17* (1), 423-440.

Aydin, K. & Yildirim, S. (2012). The measurement of service quality with SERVQUAL for different domestic airline firms in Turkey. *Serbian Journal of Management*, *7*(2), 219-230.

Babakus, E. & Boller, G. W. (1992). An empirical assessment of the SERVQUAL scale. *Journal of Business Research*, *24*(3), 253-268.

Babakus, E. & Mangold, W. G. (1992).Adapting the SERVQUAL scale to hospital services: an empirical investigation. *HSR: Health Services Research*, *26*(6), 767.

Barnes, S. J. & Vidgen, R. T. (2002). An integrative approach to the assessment of e-commerce quality. *Journal of Electronic Commerce Research*, *3*(3), 114-127.

Barutcu, S. (2010). E-customer satisfaction in the e-tailing industry: an empirical survey for Turkish e-customers. *Ege Academic Review*, *10*(1), 15-35.

Bauer, H. H., Falk, T. & Hammerschmidt, M. (2006). eTransQual: A transaction process-based approach for capturing service quality in online shopping. *Journal of Business Research*, *59*(7), 866-875.

Bojanic D. C. & Rosen, L. D. (1994). Measuring service quality in restaurants: An application of the SERVQUAL instrument. *Journal of Hospitality and Tourism Research*, *18*(1), 3-14.

Boulding, W., Kalra, A., Staelin, R. & Zeithaml, V. A. (1993). A dynamic process model of service quality: from expectations to behavioural intentions. *Journal of Marketing Research*, *30*, 7-27.

Brady, M. K. & Cronin Jr, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *Journal of Marketing*, *65*(3), 34-49.

Brady, M. K., Cronin, J. J. & Brand, R. R. (2002). Performance-only measurement of service quality: a replication and extension. *Journal of Business Research*, *55*, 17-31.

Brown, T. J., Churchill Jr, G. A. & Peter, J. P. (1993). Improving the measurement of service quality. *Journal of Retailing*, *69*(1), 127-139.

Bulbul, H. & Demirer, O. (2008). Hizmet kalitesi ölçüm modelleri SERVQUAL ve SERPERF'in karşılaştırmalı analizi. *Selçuk Üniversitesi SBE Dergisi*, *20*, 181-198.

Cabuk, S., Nakiboglu, B. & Canoglu, M. (2013). Algılanan otel imaji ve hizmet kalitesi ile tekrar satin alma niyeti arasindaki ilişkiler. *Anatolia: Turizm Araştırmaları Dergisi*, *24*(1), 96-108.

Calleros, O., Rivera, H., Serrato, H., Delgado, M., Leon, C., Acevedo, A. & Ramirez, I. (2012). Development of the Mexican user satisfaction index (IMSU) to evaluate social government programs in Mexico: the case of the daycare social program. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, *25*, 118-129.

Carman, J. M. (1990). Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions. *Journal of Retailing*, *66*(1), 33-55.

Cati, K. & Yildiz, S. (2005). Şehirlerarası Otobüs İşletmelerinde Hizmet Kalitesinin Ölçülmesi ve Bir Uygulama. *Hacettepe Üniversitesi İİBF Dergisi*, *23*(2), 121-144.

Celik, H. & Basaran, B. (2008). Bireysel müşteriler tarafından algılanan elektronik hizmet kalitesi. *Anadolu University Journal of Social Sciences*, *8*(2).

Celik, H. (2011). Alışveriş merkezlerinde hizmet kalitesi algısı ve bir araştırma. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, *16(3)*, 433-448.

Chang, T. Z. & Chen, S. J. (1998). Market orientation, service quality and business profitability: a conceptual model and empirical evidence. *Journal of Services Marketing*, *12*(4), 246-264.

Chang, K. & Chelladurai, P. (2003). System-based quality dimensions in fitness services: development of the scale of quality. *The Service Industries Journal*, *23*(5), 65-83.

Chang, H. H. & Wang, H. W. (2008). The relationships among e-service quality, value, satisfaction and loyalty in online shopping. *European Advances in Consumer Research*, *8*(1), 10-14.

Chang, H. H., Wang, Y. H. & Yang, W. Y. (2009). The impact of e-service quality, customer satisfaction and loyalty on e-marketing: Moderating effect of perceived value. *Total Quality Management*, *20*(4), 423-443.

Chen, C. F. & Kao, Y. L. (2010). Relationships between process quality, outcome quality, satisfaction, and behavioural intentions for online travel agencies-evidence from Taiwan. *The Service Industries Journal*, *30*(12), 2081-2092.

Chu, P. Y., Lee, G. Y. & Chao, Y. (2012). Service quality, customer satisfaction, customer trust, and loyalty in an e-banking context. *Social Behavior and Personality: An International Journal*, *40*(8), 1271-1283.

Cronin, J. J. & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, *56*, 55-68.

Dabholkar, P. A., Thorpe, D. I. & Rentz, J. O. (1996). A measure of service quality for retail stores: scale development and validation. *Journal of the Academy of Marketing Science*, *24*(1), 3-16.

Demirci Orel, F., Nakiboglu, G. & Oygur, L. (2012). Lojistik hizmetlerde algılanan hizmet kalitesi boyutlarının müşteri tatmini üzerindeki etkileri. *Finans Politik ve Ekonomik Yorumlar*, *49(*563), 41-57.

Dotchin, J. A. & Oakland, J. S. (1994). Total quality management in services. *International Journal of Quality & Reliability Management*, *11*(3), 27-42.

Ekiz, E. H. & Bavik, A. (2008). Scale development process: service quality in car rental services. *Electronic Journal of Business Research Methods*, 6(2).

Eklof, J. and Westlund, A.H. (2002). The Pan European customer satisfaction index program. *Total Quality Management*, *13*(8), 1099-1106.

Finn, D. W. & Lamb Jr, C. W. (1991). An evaluation of the SERVQUAL Scales in a retailing setting. *Advances in Consumer Research*, *18*(1), 483-490.

Fornell, C. (1992). A national customer satisfaction barometer: the Swedish experience. *Journal of Marketing*, *56*, 6-21.

Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J. & Bryant, B.E. (1996).The American customer satisfaction index: nature, purpose, and findings. *Journal of Marketing*, *60*, 7-18.

Francis, J. E. & White, L. (2002). PIRQUAL: a scale for measuring customer expectations and perceptions of quality in internet retailing. In Proceedings of the 2002 American Marketing Association winter educators' conference: marketing theory and applications, *13*, 263-70.

Frost, F. A. & Kumar, M. (2000). INTSERVQUAL–an internal adaptation of the GAP model in a large service organisation. *Journal of Services Marketing*, *14*(5), 358-377.

Fuentes-Blasco, M., Saura, I. G., Berenguer-Contrí, G. & Moliner-Velázquez, B. (2010). Measuring the antecedents of e-loyalty and the effect of switching costs on website. *The Service Industries Journal*, *30*(11), 1837-1852.

Furrer, O., Liu, B. S. C., & Sudharshan, D. (2000). The relationships between culture and service quality perceptions basis for cross-cultural market segmentation and resource allocation. *Journal of Service Research*, *2*(4), 355-371.

Gabbie, O. & Neill, M. A. (1996). SERVQUAL and Northern Ireland hotel sector: a comparative analysis - part 1. *Managing Service Quality*, *8*(5), 306-311.

Ghobadian, A., Speller, S. & Jones, M. (1994). Service quality: concepts and models. *International Journal of Quality & Reliability Management*, *11*(9), 43-66.

Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, *18*(4), 36-44.

Gummesson, E. (1998). Productivity, quality and relationship marketing in service operations. *International Journal of Contemporary Hospitality Management*, *10*(1), 4-15.

Haywood-Farmer, J. (1988). A conceptual model of service quality. *International Journal of Operations & Production Management*, *8*(6), 19-29.

Hedvall, M. B. & Paltschik, M. (1991). Intrinsic service quality determinants for pharmacy customers. *International Journal of Service Industry Management*, *2*(2), 38-48.

Ho, C. T. B. & Lin, W. C. (2010). Measuring the service quality of internet banking: scale development and validation. *European Business Review*, *22*(1), 5-24.

Hofstede, Geert (1980). *Culture's Consequences: International Differences in Work-Related Values*. Beverly Hills, CA: Sage.

Hofstede, Geert (1991). *Cultures and Organizations: Software of the Mind*. London: McGraw-Hill.

Hosseini, S. Y., Zadeh, M. B. & Bideh, A. Z. (2013). Providing a multidimensional measurement model for assessing mobile telecommunication service quality (MS-Qual). *Iranian Journal of Management Studies*, *6*(2), 7-29.

Hotamisli, M. & Eleren, A. (2011). GSM operatörlerinde hizmet kalitesinin SERVQUAL ölçeği ile ölçülmesi: Afyonkarahisar örneği, *ZKÜ SBE Dergisi*, *7*(13), 221-238.

Huang, J.,Wang, X. & Chen, R. (2011). Regional differences in customer satisfaction in China. *Social Behavior and Personality*, *39*(10), 1403-1412.

Ilter, B. (2009). E-perakendecilikde e-hizmet kalitesi, müşteri memnuniyeti ve müşteri sadakati ilişkisi: İşletme fakültesi öğrencileri üzerine bir araştırma. *İşletme Fakültesi Dergisi*, *10*(1), 97-117.

Ingle, S. & Connolly, R. (2006). Methodological and research issues using ES-QUAL to measure online service quality in Irish SMEs. *Irish Journal of Management*, *27*(2).

Jayawardhena, C. (2004). Measurement of service quality in internet banking: the development of an instrument. *Journal of Marketing Management*, *20*(1-2), 185-207.

Jun, M. & Cai, S. (2001). The key determinants of internet banking service quality: a content analysis. *International Journal of Bank Marketing*, *19(7*), 276-291.

KA Research Limited. (2011). A national measure of quality and satisfaction, Retrieved from: http://www.ka.com.tr/TMME.aspx?BI=fragment-1

Kalder. (2014). TMME çalışma ve uygulama programı, Retrieved from: http://www.kalder.org/kalderhakkinda.aspx?id=785

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.

Kayabasi, A., Celik, B. & Buyukarslan, A. (2013). The analysis of the relationship among perceived electronic service quality, total service quality and total satisfaction in banking sector. *International Journal of Human Sciences*, *10*(2), 304-325.

Kaynama, S. & Black, C. (2000). A proposal to assess the service quality of online travel agencies: An exploratory study. *Journal of Professional Service Marketing*, *21*(1), 63-88.

Khan, M. M., & Su, K. D. (2003). Service quality expectations of travellers visiting Cheju Island in Korea. *Journal of Ecotourism*, *2*(2), 114-125.

Kristensen, K., Martensen, A. & Gronholdt, L. (1999). Measuring the impact of buying behaviour on customer satisfaction. *Total Quality Management*, *10*(4-5), 602-614.

Kuo, Y. F., Wu, C. M. & Deng, W. J. (2009). The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. *Computers in Human Behavior*, *25*(4), 887-896.

Laroche, M., Ueltschy, L. C., Abe, S., Cleveland, M. & Yannopoulos, P. P. (2004). Service quality perceptions and customer satisfaction: evaluating the role of culture. *Journal of International Marketin*g, *12*(3), 58-85.

Lam, T. & Zang, H. Q. (1998). Service quality of travel agents: the case of travel agents in Hong Kong. *Journal of Tourism Management*, *20*(3), 341-349.

Lehtinen, U. & Lehtinen, J. R. (1982). Service quality: a study of quality dimensions. Helsinki: Service Management Institute, Unpublished working paper, Finland OY.

Leonard, F. S. & Sasser, W. E. (1982). The incline of quality. *Harvard Business Review*, *60* (5): 163-71.

Lewis, R. C. & Booms, B. H. (1983). The marketing aspects of service quality. *Emerging Perspectives on Services Marketing*, *65*(4), 99-107.

Li, Y. L., Si, H. X. & Zhao, X. H. (2012). The Impact of Online Shopping Service Quality on Customer Loyalty in Emerging Economies: The Case of Chinese Customers. *Proceedings of International Joint Conference on Service Sciences*, 152-157.

Liang, Y. H. (2012). Exploring the relationship between perceived electronic service quality, satisfaction, and personality: a study of Taiwan's online game industry. *Total Quality Management & Business Excellence*, *23*(7-8), 949-963.

Liu, C. T., Guo, Y. M. & Hsieh, T. Y. (2010). Measuring user perceived service quality of online auction sites. *The Service Industries Journal*, *30*(7), 1177-1197.

Loiacono, E. T., Watson, R. T. & Goodhue, D. L. (2002). WEBQUAL: A measure of website quality. *Marketing Theory and Applications*, *13*(3), 432-438.

Lovelock, C. (1994). *Product Plus*. New York: McGraw Hill.

Lovelock, C. & Wirtz, J. (2011). *Services Marketing*. New Jersey: Pearson.

Lu, Y., Zhang, L. & Wang, B. (2009). A multidimensional and hierarchical model of mobile service quality. *Electronic Commerce Research and Applications*, *8*(5), 228-240.

Mangold, W. G. & Babakus, E. (1990). Monitoring service quality. *Review of Business*, *11*(4), 21-27.

Marimon, F., Petnji Yaya, L. H. & Casadesus Fa, M. (2012). Impact of e-Quality and service recovery on loyalty: A study of e-banking in Spain. *Total Quality Management & Business Excellence*, *23*(7-8), 769-787.

Martensen, A., Gronholdt, L. & Kristensen, K. (2000). The drivers of customer satisfaction and loyalty: cross-industry findings from Denmark. *Total Quality Management*, *11*(4-6), 544-553.

Martinez Caro, L. & Martinez Garcia, J. A. (2007). Measuring perceived service quality in urgent transport service. *Journal of Retailing and Consumer Services*, *14*(1), 60-72.

McDougall, G. H. & Levesque, T. (2000). Customer satisfaction with services: putting perceived value into the equation. *Journal of Services Marketing*, *14*(5), 392-410.

Mehta, S. C. & Durvasula, S. (1998), Relationship between SERVQUAL dimensions and organizational performance in the case of a business-to-business service. *Journal of Business and Industrial Marketing*, *13*(1), 40-53.

Meng, J. & Mummalaneni, V. (2010). Measurement equivalency of web service quality instruments: A test on Chinese and African American consumers. *Journal of International Consumer Marketing*, *22*(3), 259-269.

Meyer, A. & Dornach, F. (1996), *The German Customer Barometer: Quality and Satisfaction-Yearbook of Customer Satisfaction in German*, German Marketing Association and German Post AG, Dusseldorf.

Nakip, M., Varinli, I. & Gullu, K. (2006). Süpermarketlerde çalışanların ve tüketicilerin hizmet kalitesi beklentilerinin ve algılamalarının karşılaştırılmasına yönelik bir araştırma. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, *20*(2), 373-386.

Okumus, A. & Duygun, A. (2008). Eğitim hizmetlerinin pazarlanmasında hizmet kalitesinin ölçümü ve algılanan hizmet kalitesi ile öğrenci memnuniyeti arasındaki ilişki. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, *8*(2), 17-38.

Owlia, M. S. & Aspinwall, E. M. (1996). A framework for the dimensions of quality in higher education. *Quality Assurance in Education*, *4*(2), 12-20.

Ozer, A., Argan, M. T. & Argan, M. (2013). The effect of mobile service quality dimensions on customer satisfaction. *Procedia-Social and Behavioral Sciences*, *99*, 428-438.

Park, Y. A., Gretzel, U. & Sirakaya-Turk, E. (2007). Measuring web site quality for online travel agencies. *Journal of Travel & Tourism Marketing*, *23*(1), 15-30.

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.

Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*. *64*(1),12-40.

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

Pearson, A., Tadisina, S. & Griffin, C. (2012). The role of e-service quality and information quality in creating perceived value: antecedents to web site loyalty. *Information Systems Management*, *29*(3), 201-215.

Philip, G. & Hazlett, S. A. (1997). The measurement of service quality: a new PCP attributes model. *International Journal of Quality & Reliability Management*, *14*(3), 260-286.

Rafiq, M., Lu, X. & Fulford, H. (2012).Measuring Internet retail service quality using E-S-QUAL. *Journal of Marketing Management*, *28*(9-10), 1159-1173.

Riedl, C., Leimeister, J. M. & Krcmar, H. (2009). New service development for electronic services: A literature review. *Proceedings of the Fifteenth Americas Conference on Information Systems (AMCIS),* San Francisco.

Rust, R. T. & Oliver, R. L. (1994). Service quality: insights and managerial implications from the frontier in R. T. Rust and R. L. Oliver (eds.) *Service Quality: New Directions in Theory and Practice*: 1-19. California: Sage.

Ryan, C., & A. Cliff (1996). Users and non-users on the expectation item of the SERVQUAL scale. *Annals of Tourism Research*, *23*(4), 931-934.

Saat, M. (1999). Kavramsal hizmet modeli ve hizmet kalitesini ölçme aracı olarak SERVQUAL analizi. *Gazi Üniversitesi İİBF Dergisi*, 3(99), 107-118.

Sahin, A. (2009). A comparison of the Turkish Customer Satisfaction Index with the American Customer Satisfaction Index in the food manufacturing industry. *5th International Conference on Business, Management and Economics*, Cesme-Izmir/Turkey, October 22-24, 2009, Proceedings Book I, 44-55.

Sangeetha, J. (2012). Development of a service quality scale for multiple technology interfaces in commercial banking. *Journal of Internet Banking & Commerce*, *17*(3).

Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality*, *13(*3), 233-246.

Sasser, W. E., Olsen, R. P. & Wyckoff, D. D. (1978). *Management of Service Operations*. Boston: Allyn & Bacon.

Seethamraju, R. (2006). Web quality – a study of user perceptions. *IIMB Management Review*, *18*, 15-24.

Seth, N., Deshmukh, S. G., & Vrat, P. (2005). Service quality models: a review. *International Journal of Quality & Reliability Management*, *22*(9), 913-949.

Shchiglik, C. & Barnes, S. J. (2004). Evaluating web site quality in the airline industry. *Journal of Computer Information Systems*, *44*(3), 17-25.

Silvestro, R. & Cross, S. (2000). Applying service profit chain in a retail environment. *International Journal of Service Industry Management*, *11*(3), 244-268.

Siu, N. Y. & Cheung, J. T. H. (2001). A measure of retail service quality. *Marketing Intelligence & Planning*, *19*(2), 88-96.

Siu, N. Y. M. & Mou, J. C. W. (2005). Measuring service quality in internet banking: the case of Hong Kong. *Journal of International Consumer Marketing*, *17*(4), 99-116.

Stevens, P., Knutson, B. & Patton, M. (1995). DINESERV: a tool for measuring service quality in restaurants. *The Cornell Hotel and Restaurant Administration Quarterly*, *36*(2), 5-60.

TMME 2013 3rd Quarter. (2013, December 25). *Kalder*. Retrieved from: http://www.kalder.org/images/Haber_resim/6edbeff0d2cd497bb7b486f8ee8714ca.pdf

TMME 2013 4th Quarter. (2013, April 8). *Kalder*. Retrieved from: http://www.kalder.org/images/Haber_resim/9b316c042d464efd923c120bed0f48d1.pdf

TMME 2014 1st Quarter. (2014, July 7). *Kalder*. Retrieved from: http://www.kalder.org/images/Haber_resim/67a3c90a02244f4185b3e797ab3b11c6.pdf

TMME 2014 2nd Quarter. (2014, September 15). *Kalder*. Retrieved from: http://www.kalder.org/images/Haber_resim/39d340af35a048398a009df321256777.pdf

Turkyilmaz, A. & Ozkan, C. (2007). Development of a customer satisfaction index model: An application to the Turkish mobile phone sector. *Industrial Management and Data Systems*, *107*(5), 672-687.

Türk, B., Scholz, M. & Berresheim, P. (2012). Measuring service quality in online luxury goods retailing. *Journal of Electronic Commerce Research*, *13*(1), 88-103.

Wolfinbarger, M. & Gilly, F. M, C. (2002). .comQ: dimensionalizing, measuring and predicting quality of the e-tail experience. *Marketing Science Institute*, Working Paper No. 02- 100, Cambridge, MA.

Wolfinbarger, M. & Gilly, M. C. (2003). eTailQ: Dimensionalizing, measuring and predicting etail quality. *Journal of Retailing*, *79*(3), 183-198.

Wu, Y. L., Tao, Y. H. & Yang, P. C. (2012). Learning from the past and present: measuring Internet banking service quality. *The Service Industries Journal*, *32*(3), 477-497.

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.

Yaprakli, S. &Saglik, E. (2010). Hizmet işletmelerinde rekabet aracı olarak hizmet kalitesi ve ilişki kalitesi: konaklama işletmelerinde bir uygulama. *Marmara Üniversitesi Öneri Dergisi*, 9 (34), 71-85.

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.

Zaim, S., Turkyilmaz, A., Tarim, M., Ucar, B. & Akkas, O. (2010). Measuring customer satisfaction in Turk Telekom Company using structural equation modeling technique. *Journal of Global Strategic Management*, *4*(1): 89-98.

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.

Zhang, J. (2006). The roles of players and reputation: Evidence from eBay online auctions. *Decision Support Systems*, *42*(3), 1800-1818.

Zhu, F. X., Wymer, W. & Chen, I. (2002). IT-based services and service quality in consumer banking. *International Journal of Service Industry Management*, *13(*1), 69-90.