International Journal of Asian Social Science

journal homepage: http://www.aessweb.com/journals/5007

INVESTIGATING THE EFFECT OF ELECTRONIC SERVICE QUALITY ON CUSTOMERS' TRUST TO RETAILERS

Nazli Mohammadi Ahranjani[1]

[1]*Faculty of Management, University of Tehran, Kish Campus, Iran*

ABSTRACT

This paper aims to investigate the effect of electronic service quality (ESQ), content quality and service quality on customers' trust to retailers in the context of e-services. Population is 157 customers in the area of Tehran that have used retailers' website to purchase their required products during the period of research. Data collected using a self-administrated questionnaire and convenience- sampling approach. A confirmatory factor analysis was used to test the validity of instrument while multiple regression analysis was used to test the proposed hypotheses. Our results indicated that process quality, content quality, and service quality are positively related to trust toward to the retailers' website.

© 2015 AESS Publications. All Rights Reserved.

Keywords: Electronic service quality, Content quality, Trust, Retailing, SEM.

Contribution/ Originality

This study contributes in the existing literature by proposing a regression model to analyze the influence of process quality (including the dimensions of efficiency, system available, design, and information), outcome quality, content quality (including the dimensions of content efficiency and content usefulness) and service quality (including the dimensions of service responsiveness and service stability) in the retailing industry.

1. INTRODUCTION

With the rapid development of information and communication technology, Internet and World Wide Web (WWW) have become important tools in business, which has a major impact on business world. Internet has significantly revolutionized news media in the last decade. In the early stage of Internet market, news websites had competed with traditional news media by providing online services at lower prices. With an increasing number of news agencies participating in the Internet market, the initial price advantages in news websites has nullified, and low price has

become a minimum qualification to compete in the Internet market (Sohn and Tadisina, 2008). Therefore, news agencies operating in the Internet market need to find something else to attract people to their news websites. Oliveria *et al.* (2002) state that electronic service (e-service) might be the key to long-term advantages in the digital times, and e-service quality is becoming even more critical for companies to retain and attract customers in the digital age (Oliveria *et al.*, 2002). Though e-service is very important in the Internet market, most news agencies seem not to focus on their online service to people. They do not recognize that the competition among news agencies relies mainly on their websites, and they do not have the motivation to adopt some strategies to develop or improve their online news services to people. Even though some retailers have realized the importance of their websites to people, they seem not to understand people's perception of their websites and how people assess their online service quality. Currently, despite many studies concerning traditional service quality, relatively few studies have been conducted in the Internet market, and even less on retailers' websites service quality. This study focuses on e-service quality dimensions in the Internet market with an empirical study on websites of retailers. The purpose of this study is to develop a scale to evaluate e-service quality, which provides fresh insight into the dimensions of e-service quality and their effects on customers' trust. The paper is in four parts. First, the conceptual framework presents the concept of electronic service quality, content quality and existing typologies of online customers. Next are the methodology and the principal results and finally, discussion of managerial implications, limitations and research avenues.

2. LITERATURE REVIEW

The notion of e-service has been recognized by both researchers and practitioners as being one of the key determinants in successful e-commerce. E-service can be defined as the role of service in cyberspace. Some researchers have recommended that 70-75 percent of Web budgets should be allocated to developing e-service (Waltner, 2000). The reason for such a recommendation is that e-service is perceived more than just order fulfillment, responsiveness to enquiries, e-mail communication, and status requests. E-service (in general) and e-service providers (in particular) represent the future of e-commerce. Thus, e-service is more than the role of service in cyberspace (Rust and Lemon, 2001). Currently, two main approaches to studying e-services can be distinguished. The first focuses on the technological interfaces and the generation of new categories for general self-service technology (Szymanski and Hise, 2000). The second uses existing service quality theory as a basis for further empirical research (Gronroos *et al.*, 2000; Parasuraman and Grewal, 2000). The concept of e-service quality (ESQ) was introduced and defined by Ziethaml, Parasuraman and Malhorta (Zeithaml, 2002). According to their definition, ESQ is "the extent to which a website facilitates efficient and effective shopping, purchasing and delivery of products and services" (Zeithaml, 2002). For companies to deliver superior service quality online, it is necessary to understand customers' perceptions about service quality and how customers evaluate it Zeithaml (2002). Parasuraman *et al.* (1985) found that the criteria used by customers to evaluate service quality in a traditional environment (as opposed to an online market space) were driven by the customers' perceptions of service quality. The dimensions of ESQ as perceived by customers

were found to be similar to those of traditional service quality (Zeithaml, 2002) describe several criteria customers use when evaluating ESQ and the quality of websites:

1) Information availability and content refers to the availability and depth of information; the ability to search price and quality information on the website; and the ability of the website's users to control the content, order, and duration (the amount of time the information is present) of product-relevant information.

2) Ease of use/usability refers to the idea that "customers' assessment of websites will likely be influenced by how easy the sites are to use and how effective they are in helping customers accomplish their tasks" and includes such website attributes as search functions, download speed, overall design and organization.

3) Privacy/security are two distinguished criteria of a website and e-service quality. Privacy involves "the protection of personal information – not sharing personal information collected about consumers with other websites (as in selling lists), protecting anonymity, and providing informed consent". Security involves "protecting users from the risk of fraud and financial loss from the use of their credit card or other financial information", as well as the ability to provide data confidentiality, security auditing, encryption, and anti-virus protection.

4) Graphic style involves website attributes such as choice of colors, layout, print size and type, photographs, graphics, animation, 3D-effects and multimedia.

5) Fulfillment/reliability is concerned with the actual performance of the company, rather than with the website performance; defined as the provider's ability to deliver the service or product as promised.

6) Access is the presence of the contact information on the company's website.

7) Responsiveness is the promptness with which the company's personnel gives feedback to customers via e-mails.

8) Personalization refers to the website's ability to provide personalized and customized services according to customers' preferences.

Zeithaml (2002) exploratory research suggests ESQ has seven dimensions, comprising four core dimensions that can be used to measure customers' perceptions of ESQ:

1) Efficiency, which defines the customer's ability to effectively access the website and information on it and check it out with minimal effort;

2) Fulfilment, which defines a company's actual performance against what is promised through the website, and incorporates accuracy of service promises, having products in stock, and timely delivery;

3) Reliability, which refers to the technical functioning of a website, such as the extent to which it is available and functions properly; and

4) Privacy, which refers to the company's will and ability to maintain the integrity of customer data;

and three recovery dimensions, which are mainly concerned with situations, in which a problem needs to be solved and "personal service" is required:

5) Responsiveness, which defines the company's ability to provide an appropriate problem-solving mechanism (online complaint ability, handling returns mechanism, online guarantees, etc.);

6) Compensation, which involves a money-back guarantee, return of shipping and handling costs; and

7) Contact points, which defines the company's ability to offer a live contact and customer support in real-time via online or other communication means.

Parasuraman (2004) lists the following eleven criteria of ESQ that influence customers' perceptions about website quality and ESQ:

1) Access;

2) Ease of navigation;

3) Efficiency;

4) Customization/personalization;

5) Security/privacy;

6) Responsiveness;

7) Assurance/trust;

8) Price knowledge;

9) Site aesthetics;

10) Reliability; and

11) Flexibility.

An important line of research has begun to address and analyse the impact of ESQ dimensions on value perception and trust (Yeh and Li, 2008; Barrutia and Gilsanz, 2012). For example, after reviewing existing research on service quality and the Internet, Barrutia and Gilsanz (2012), as well as Yeh and Li (2008) found that ESQ brings about a greater degree of perceived satisfaction and trust. As Barrutia and Gilsanz (2012) have acknowledged, the presence of certain aspects of ESQ (process quality including efficiency, system availability, design, information and outcome quality) will have significant effect on trust towards the websites. Therefore, we hypothesize that:

H1. Process quality has a significant positive effect on trust toward retailer's web site.

H2. Outcome quality has a significant positive effect on trust toward the retailer's web site.

Joo and Sohn (2008) defined the factors that affect customer's satisfaction of digital contents service with the following five elements within the three dimensions of quality (content provider, content itself, and service provider): the provider reliability, content usefulness, content efficiency, service stability, and service responsiveness. We adopted two dimensions of content efficacy and content usefulness as the element of content quality. They defined content usefulness as "how well and easy customers utilize the contents". Content efficiency is determined by the ratio of quality to price (Joo and Sohn, 2008). We propose that content quality (efficiency and usefulness) can affect trust towards the retailers' website. Hence, the following hypotheses are proposed:

H3. Content efficiency has a significant positive effect on value perception.

H4. Content usefulness has a significant positive effect on value perception.

Empirical studies also showed that satisfaction with digital content is affected by service quality (Joo and Sohn, 2008). As above mentioned, Joo and Sohn (2008) considered two dimensions of service responsiveness and service stability as the determinants of service quality in the context of digital content. They explained service responsiveness as how well it provides customers with acceptable feedback. Service stability means how stable the system is, and how

much it guarantees the quality of transmission. We propose that service quality can affect value perception and consequently, satisfaction with the news websites, and trust towards them. In their study of 212 experienced m-commerce customers, Yeh and Li (2008) indicated that service responsiveness is positively associated with satisfaction and trust. In addition, it seems that service stability is related to trust towards the retailers' websites. Based on the reasoning above, we hypothesized that:

H5. Service responsiveness has a significant positive effect on trust towards website.

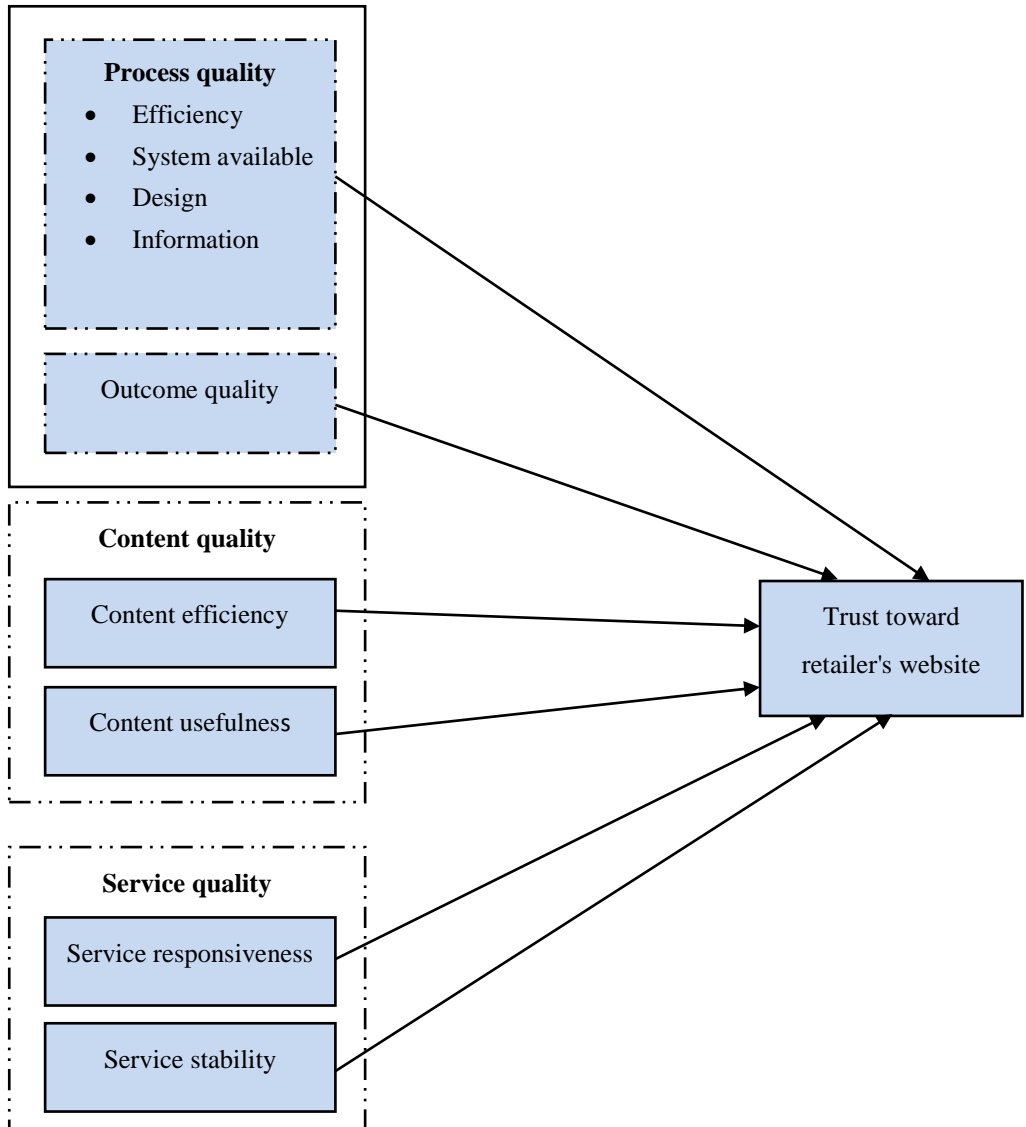H6. Service stability has a significant positive effect on trust towards website.

Figure-1. The study model and hypotheses

3. METHODOLOGY

3.1. Sampling

To achieve research goal, a survey research design was used at Tehran. The target population was customers of retailers who were used retailers' websites to purchase their required product during a three-week period of research in December 2014. A confidence interval approach was used to determine the sample size, suggested by Burns and Bush (1995). With 50% of the estimated variability in the population (Burns and Bush, 1995), the sample size was set at 157 at the 95% confidence level. We used convenience sampling approach to collect data.

3.2. Instrument

The survey questionnaire consisted of two major sections. The first section included questions relating to respondents' characteristics to identify the demographic characteristics. This section helps to gather information about gender, age, and the experience of using retailers' website by respondent. The second section concludes dimensions of Process Quality (4 items), Outcome Quality (3 items), Content efficiency (2 items), Service responsiveness (2 items), Service stability (2 items), Content usefulness (2 items), and trust (2 items). All of the items adopted from the literature (see Table 1). A five-point Likert scale (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree) was employed to measure research variables. A pilot test was performed to assess how well the survey instrument captured the constructs it was supposed to measure, and to test the internal consistency and reliability of questionnaire items. The first draft of the survey instrument was distributed to 30 randomly selected customers. A total of 30 questionnaires were collected at the site. Cronbach's alpha was used to verify the internal consistency reliability. The values of Cronbach alpha were at acceptable level (a Cronbach's alpha of 0.70; see Table 1). According the results of the pilot test, the final version was modified considering questionnaire design, wording, and measurement scale. To test the dimensionality of factors, a confirmatory factor analysis (CFA) was conducted. Completely standardized solutions of the items loaded ≥ 0.50 on their factors, and thus suggestive of convergent validity (see Table 1).

3.3. Data Analysis

Multiple regression analysis was employed to describe the relationships among the process quality, outcome quality, content efficiency, content usefulness, service responsiveness, service stability and the dependent variable of trust toward retailer's website. The following model was employed to determine the quantitative relationships among the research variables:

$$Y = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6$$

Where b_0, b_1, b_2, b_3, b_4, b_5, b_6, b_7, and b_8 are constants;

x_1 = process quality

x_2 = outcome quality

x_3 = content efficiency

x_4 = content usefulness

x_5 = service responsiveness

x_6 = service stability

ε is the error term.

The Statistical Software Package for Social Sciences (SPSS) version 18 produced descriptive statistics and provided the relationships among the dependent and the independent variables of the research.

Table-1. CFA results

Variable	Items	t-value	Loading	α
Process quality (Barrutia and Gilsanz, 2013)	Information at this website is well organized (Efficiency).	16.18	.86	.883
	This website launches and runs straight away (System availability).	16.31	.76	
	Symbols/icons are readily identifiable (Design).	12.01	.65	
	The information is up-to-date (Information).	17.33	.79	
Outcome quality (Barrutia and Gilsanz, 2013)	You can trust they will meet what they offer on their website	18.65	.85	.728
	Service performance is as desired.	17.66	.76	
	Service performance is absolutely reliable.	4.11	.31	
Content efficiency (Joo and Sohn, 2008)	Rating of price given quality	13.86	.79	.883
	Rating of quality given price	4.82	.58	
Service responsiveness (Joo and Sohn, 2008)	Providing continuous service	14.94	.82	.853
	Solving customer's inconvenience	17.25	.85	
Service stability (Joo and Sohn, 2008)	Transmission quality	12.22	.58	.720
	Transmission time	13.53	.56	
Content usefulness (Joo and Sohn, 2008)	Easiness of using contents	9.26	.73	.885
	Effectiveness of using contents	8.78	.68	
Trust (Yeh and Li, 2009)	Based on my experience with this website, I know it cares about customers	18.16	.83	.915
	Based on my experience with this website, I know it is predictable	15.14	.72	

4. RESULTS

4.1. Demographic Characteristics

Of a total sample 157 respondents, 78% were male and 22% were female. A large majority of respondents were used retailers' website more than 5 times. In terms of age, most respondents were aged between 41-50 years (34.5%) and 31-40 years (28.7%). Summary of demographic characteristics provided in Table 2.

Table-2. Sample profile

Characteristic		Percent
Gender	Male	51
	Female	49
Age	Below 30 years	22.3
		Continue

	31-40 years	28.7
	41-50 years	34.5
	Above 50 years	14.5
Experience of using retailers' website	Never	8.7
	1 time	12.3
	2-5 times	29.0
	More than 5 times	50.0

4.2. Multiple Regression Analysis

Multiple regression analysis was employed to determine whether independent variables (X1, X2, X3, X4, X5, and X6) simultaneously affect the dependent variable (Y). Consequently, this section investigates whether the multiple regression equation can be utilized to describe the causal relationships of the various factors with trust toward website in the context of retailing industry. To examine the effect of process quality (X1), outcome quality (X2), content efficiency (X3), content usefulness (X4), service responsiveness (X5), and service stability (X6) on customers' trust to the retailers' website, the model used for the regression analysis was provided in the general form as illustrated following:

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6$$

The casual relationships between the dependent variable and independent variables, and the results of testing the model significance were respectively interpreted. To interpret the results of regression analysis, the three key items should be considered: the multiple determinations coefficient, the regression coefficients and the standard error of estimate. The items and the results of multiple regression analysis have been presented and interpreted. Table 3 presents the result of proposed regression model. Table 3 represents the model with the coefficient of determination (R^2) 0.562 at a significant level of 0.05. The determination coefficient reveals that 56.2 % of the variation in the performance appraisal for the sample of 157 can be explained by process quality (X1), outcome quality (X2), content efficiency (X3), content usefulness (X4), service responsiveness (X5), and service stability (X6) while 43.7 % remains unexplained.

Table-3. The result of multiple regression model

Model	R	R squared	Adjusted R Squared	Std Error of the Estimate
1	0.753	0.562	0.563	4.0486

Table 4 shows analysis of variance (ANOVA) and F statistic which indicates *F*-value (14.425) being significant at confidence level of 0.05. The *F*-value is large enough to interpret that the independent variables including process quality (X1), outcome quality (X2), content efficiency (X3), content usefulness (X4), service responsiveness (X5), and service stability (X6) as a whole were contributing to the variance in customers' trust to the retailers' website.

Table-4. The results of ANOVA

Model		Sum of squares	df	mean square	F	Sig.
Model	Regression	78.125	14	15.823	14.425	0.000
	Residual	14.763	75	1.020		
	Total	126.756	89			

The results of the regression model using the eight independent variables have been illustrated and interpreted in Table 5.

Table-5. Regression model

	Regression coefficients				
	B	SE	β	*t*-value	Sig.
Constant	6.727	1.878	-	5.708	0.000
X1	1.285	0.192	0.263	6.728	0.000
X2	4.150	0.497	0.325	8.313	0.000
X3	2.024	0.539	0.144	3.770	0.000
X4	1.093	0.191	0.124	3.991	0.000
X5	0.889	0.483	0.922	4.255	0.000
X6	2.432	0.201	0.251	3.212	0.000

In evaluating the contribution of independent variables, it was determined that all independent variables significantly contributed in variance of performance appraisal at significance level of 0.05. However, the importance of each independent variable was different from others. In addition, since *p*-values were less than 0.05, the coefficients found to be significant and hence the regression equation can be as following:

$$Y = 6.727 + 1.285x_1 + 4.150x_2 + 2.024x_3 + 1.093x_4 + 0.889x_5 + 2.432x_6$$

Process quality was positively associated with trust toward retailer's web site with β=0.263 (p-value<0.05). Therefore approval was found to show that Process quality has an impact on customers' trust toward retailer's web site. Outcome quality was positively associated with trust toward retailer's web site with β=0.325 (p-value<0.05). Therefore approval was found to show that Outcome quality has an impact on trust toward retailer's web site. Content efficiency was positively associated with trust toward retailer's web site with β=0.144 (p-value<0.05). Therefore approval was found to show that content efficiency has an impact on customers' trust toward retailer's web site. Content usefulness was positively associated with trust toward retailer's web site with β=0.124 (p-value<0.05). Therefore approval was found to show that content usefulness has an impact on customers' trust toward retailer's web site. Service responsiveness was positively associated with trust toward retailer's web site with β=0.922 (p-value<0.05). Therefore approval was found to show that service responsiveness has an impact on trust toward retailer's web site. Service stability was positively associated with trust toward retailer's web site with β=0.251 (p-value<0.05). Therefore approval was found to show that service stability has an impact on trust toward retailer's web site.

Table-6. Hypothesis testing

Hypotheses	Description	Result
H1	Process quality has a significant positive effect on trust toward retailer's web site	Supported
H2.	Outcome quality has a significant positive effect on trust toward the retailer's web site	Supported
		Continue

H3.	Content efficiency has a significant positive effect on value perception	Supported
H4.	Content usefulness has a significant positive effect on value perception	Supported
H5.	Service responsiveness has a significant positive effect on trust towards website	Supported
H6.	Service stability has a significant positive effect on trust towards website	Supported

5. CONCLUSIONS AND IMPLICATIONS

The purpose of the current study was threefold: (1) understanding the e-service quality of retailers' websites, (2) developing and testing an instrument that captures the constructs of the dimensions of retailers' website quality, and (3) investigating the relationship between e-service quality and customer's trust. The empirical results of this study revealed that process quality has a significant positive effect on trust toward the web site. It was found that outcome quality is positively related to trust toward the web site. Additionally, the results of regression analysis showed that service responsiveness and service stability were found to be associated with trust towards website. The results have several implications for news websites managers, particularly Iran that are of practical importance. First, content usefulness is an important determinant of trust in retailing websites. Users need to be provided with useful content in retailer's websites to be accepted by them. In fact, usefulness affects users' intentions to use retailers' websites in the future. Hence, it is suggested that website content be in line with users' objectives. Second, content efficiency of websites is related to trust towards website. The higher perception of content efficiency of website, the more trust towards website content. The efficiency originates from customers' impressions on the costs of services and would affect the future behaviors and the images of retailers' website. It is recommended that retailers' websites provided customers with cost effective online services. Third, as service responsiveness is a determinant of trust to the website. In the online context, responsiveness has a considerable effect on consumer behavior. Then, it is suggested that retailers' websites respond to complaints of customers and provide them with on-going services. Further, they should send information that customers require to know and be responsible for customers' wants and needs. Fourth, service stability was found to be related to trust towards the websites. Offering continuous services meet customers' wants and leads to high level of involvement in dealing with firm. It is suggested that transferring private information of users should be in the control of users and the speed of transferring information should be improved. Fifth, process quality had a significant effect on trust tot the website. When the website has not a desired information structure, users seek to find other websites to gather needed information. Therefore, the suitable organization of information in the website, the availability of information for users in the website, the identification of signs and icons in website, as well as precise and updated information can lead to more trust to the website. Sixth, outcome quality refers to providing customers with the accurate and in time information. It then suggested that misleading information removed from the websites.

REFERENCES

Barrutia, J.M. and A. Gilsanz, 2012. Electronic service quality and value: Do consumer knowledge-related resources matter. Journal of Service Research, 16(2): 231-246.

Barrutia, J.M. and A. Gilsanz, 2013. Electronic service quality and value do consumer knowledge-related resources matter? Journal of Service Research, 16(2): 231-246.

Burns, A.C. and R.F. Bush, 1995. Marketing research. New Jersey: Prentice Hall.

Gronroos, C., F. Helnomen, K. Isoniemi and M. Lidholm, 2000. The netoffer model: A case example from the virtual marketplace. Management Decision, 38(4): 243-252.

Joo, Y.G. and S.Y. Sohn, 2008. Structural equation model for effective CRM of digital content industry. Expert Systems with Applications, 34(5): 63–71.

Oliveria, P., A.V. Roth and W. Gilland, 2002. Achieving competitive capabilities in e-services. Technology Forecasting & Social Change, 69(3): 721-739.

Parasuraman, A., 2004. Assessing and improving service performance for maximum impact: Insights from a two-decade-long research journey. Performance Measurement and Metrics, 5(2): 45-52.

Parasuraman, A. and D. Grewal, 2000. The impact of technology on the quality-value-loyalty chain: A research Agenda. Journal of the Academy of Marketing Science, 28(1): 168-174.

Parasuraman, A., V. Zeithaml and L. Berry Leonard, 1985. A conceptual model of service quality and its implications for future research. Journal of Marketing, 49(Fall): 41-50.

Rust, R.T. and K.N. Lemon, 2001. E-service and the consumer. International Journal of Electronic Commerce, 5(3): 85-101.

Sohn, C. and S.K. Tadisina, 2008. Development of e-service quality measure for the internet-based financial institutions. Total Quality Management & Business Excellence, 19(9): 903-918.

Szymanski, D.M. and R.T. Hise, 2000. E-satisfaction: An initial examination. Journal of Retailing, 76(3): 309-322.

Waltner, C., 2000. Web commerce means e-service. Information Week, 12(July): 68-72.

Yeh, Y.S. and Y.M. Li, 2008. Building trust in m-commerce: Contributions from quality and satisfaction. Online Information Review, 33(6): 1066-1086.

Yeh, Y.S. and Y.M. Li, 2009. Building trust in m-commerce: Contributions from quality and satisfaction. Online Information Review, 33(6): 1066-1086.

Zeithaml, V., 2002. Service excellence in electronic channels. Managing Service Quality, 12(13): 135-138.

BIBLIOGRAPHY

Anderson, J.C. and D.W. Gerbing, 1988. Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin, 103(3): 411–423.

Brady Michael, K., A. Gary, J. Knight, J. Joseph Cronin , M. Tomas Hult and D. Bruce Keillor, 2005. Removing the contextual lens: A multinational multi-setting comparison of service evaluation models. Journal of Retailing, 81(3): 215-230.

Zhang, P., D. Von and M. Gisela, 2002. User expectations and rankings of quality factors in different web sites domains. International Journal of Electronic Commerce, 6(2): 9-33.