



The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings

Perceived
service quality
dimensions

351

A cross cultural analysis

Norizan Kassim

Department of Management and Marketing, College of Business and Economics, Qatar University, Doha, Qatar, and

Nor Asiah Abdullah

Faculty of Management, Multimedia University, Cyberjaya, Malaysia

Received April 2009
Revised September 2009
March 2010
Accepted March 2010

Abstract

Purpose – The paper aims to empirically investigate the relationship between perceived service quality, satisfaction, trust, and loyalty in e-commerce settings in two cultures – Malaysian and Qatari – at the level of construct dimensions.

Design/methodology/approach – A survey method approach was used in this study. To test the dimensionality of the perceived service quality, all 20 items were analyzed using oblique rotation and varimax rotation. The hypotheses were tested using the structural equations modeling and general linear model of univariate analysis of variance.

Findings – Perceived service quality was found to have a significant impact on customer satisfaction. In turn customer satisfaction was found to have a significant effect on trust. Both customer satisfaction and trust have significant effects on loyalty through word of mouth (WOM) while WOM is an antecedent of repeat visits or repurchase intentions. Interestingly, trust does not directly influence the latter. With the exception of the effect of satisfaction on trust, we found no significant difference between the effects of perceived service quality on satisfaction, satisfaction on loyalty, and trust on loyalty among the Qatari and Malaysian customers indicating that the relationships in the model did not hold across the two cultural groups because the respondents have similar cultural background.

Research limitations/implications – This study suffers from a limitation in that it uses a convenience sampling technique without a fully matched profile of the respondents. However, the satisfactory fit of the estimated model allows for the study to be a basis of a reliable comparison for future research.

Practical implications – In an e-commerce setting companies can increase customer loyalty directly by improving the ease of use, the attractiveness, and the security of their website. Thus, marketers should tailor their marketing strategies to fit each marketing environment because overseas success of their business is very much a function of cultural adaptability.

Originality/value – The major contribution of this study is that it is the first attempt to investigate the impact of word of mouth on trust and intention.

Keywords SERVQUAL, Customer satisfaction, Customer loyalty, Electronic commerce, Malaysia, Qatar

Paper type Research paper



1. Introduction

Loyal customers are indeed crucial to business survival (Reichheld and Schefer, 2000; Semejin *et al.*, 2005). For that reason many companies use defensive marketing strategies to increase their market share and profitability by maximizing customer retention (Tsoukatos and Rand, 2006). Although, traditionally, more efforts are dedicated to

offensive strategies (Fornell, 1992), research has shown that defensive strategies can be more profitable through increased cross selling, possibly at higher prices, and positive word of mouth (WOM) communication (Tsoukatos and Rand, 2006).

In an e-commerce setting, at its highest level, companies can use the internet to deliver products and services to their customers. They can have mutually rewarding relationships with customers they have never seen, met, or spoken to. The entire relationship can successfully exist in cyberspace. Leveraging the internet can free up resources to deliver higher levels of value to customers in new ways. The internet provides companies and consumers with opportunities for much greater interaction and individualization.

Clearly, in e-commerce settings, all companies need to consider and evaluate e-marketing and e-purchasing opportunities thoroughly. A key challenge is designing a site that is attractive on first viewing and interesting enough to encourage repeat visits. To ensure consumers of long-term commitment to a single on-line service provider, many online companies often look beyond satisfaction to developing trust in order to reduce the perceived risk of using the service (Ranaweera and Prabhu, 2003). Perhaps, trust is also seen as being a critical factor of considerable importance in the process of building and maintaining relationships in online services (Gummerus *et al.*, 2004; Reichheld and Schefter, 2000; Ribbink *et al.*, 2004; Semejin *et al.*, 2005). They also face challenges in expanding the public's use of e-commerce. Customers will have to feel that the information that they supply is confidential and not to be sold to others. They will need to trust that online transactions are secure. Research suggests that up to 75 percent of online shoppers do not complete their purchase on the internet. Instead they use e-commerce sites to find and research products or services before completing their purchase either by phone or with a visit to a store location (Anderson and Kerr, 2002). Nevertheless, the theoretical background and the empirical support for these issues come mostly from developed countries.

The purpose of our study is to investigate the path service quality → customer satisfaction → trust → loyalty, drawing from Malaysian and Qatari customers because it has been contended that constructs of service quality that are developed in one culture might not be applicable in another culture (Ladhari, 2008). Our study is expected to offer important managerial insights because of the unique cultural characteristics of the Malaysian (so called "truly Asia") and Arab societies and the examination of the influences from the individual dimensions of constructs.

In this paper, first we present a short review of this research. Although what we presented in the theoretical framework shares the same elements of other customer satisfaction and trust models and their relationships with customer loyalty in the literature (see Gefen, 2002; Ribbink *et al.*, 2004), this one differs from the current literature in four aspects:

- (1) it examines customer behavioral loyalty separately through emotional loyalty (such as WOM) and behavioral loyalty (such as retention intentions);
- (2) it investigates the effects of customer satisfaction and trust on WOM and intentions;
- (3) it examines the link between WOM and intentions; and
- (4) it examines the model's appropriateness across cultures.

Next, followed by the methodology and the main results of our study. Then, we present the theoretical and managerial implications of the findings. Finally, we present the limitations of the research as well as some suggestions for future research.

2. Theoretical framework

2.1 Service quality

The conceptual definition of service quality developed by Parasuraman *et al.* (1988) has been largely employed for comparing excellence in the service encounters by customers. Bitner (1990) defined service quality as the customers' overall impression of the relative inferiority/superiority of a service provider and its services and is often considered similar to the customer's overall attitude towards the company (Parasuraman *et al.*, 1988). This definition of service quality covers several points. One of them is an attitude developed over all previous encounters with a service firm (Bitner, 1990; Parasuraman *et al.*, 1985, 1988).

The word "attitude" includes outcome quality and process quality. Similarly, other researchers have termed outcome quality as what the customer actually received and process quality as how the service is delivered (Gronroos, 1990). However, outcome quality is usually difficult for a customer to evaluate for any service because services tend to have more experience and credence qualities (Rushton and Carson, 1989). This situation leads customers to include process quality, i.e. the service is evaluated by customers during its delivery (Swartz and Brown, 1989). Hence, quality of service evaluation does not depend solely on the outcome quality of the service but it also involves evaluation of the process of service delivery. These components have a strong impact on future expectations of a service firm but the relative impact of each may vary from one service encounter to the other (Bitner, 1990). This definition briefly describes quality of service as the outcome and process quality of the service from all previous service encounters. Thus, the way a product is evaluated by a customer depends on the extent to which it is tangible or intangible (Rushton and Carson, 1989). Hence, both physical goods and services are conceptualized to fall on the continuum ranging from tangible to intangible. In an e-commerce setting, perceived service quality is defined as the consumers' overall judgment of the excellence and the quality of e-service offerings in the virtual market place (Santos, 2003) where there are almost no face-to-face interactions.

2.2 The SERVQUAL scale

There is voluminous academic research on the measurement of service quality. The traditional SERVQUAL or "gap analysis model" was developed by Parasuraman, Zeithaml and Berry in the early 1980s, which is based on the view that customers assess service quality by comparing expectations of services provided with perceptions of the actual service received from a particular service provider. A set of five service quality dimensions (namely: tangibles, reliability, responsiveness, assurance, and empathy) across a broad spectrum of service industries is identified. However, many studies (Finn and Lamb, 1991; Singh, 1991; Smith, 1999) that employed SERVQUAL were never successful in retaining all of the 22 items of the five dimensions, although they were pre-validated by Parasuraman *et al.* (1988). As a result of further diagnostic assessment (Parasuraman *et al.*, 1994) to their initial 22 items, these were collapsed into three categories: reliability and tangibility, while responsiveness, assurance, and empathy were found to be loaded into one factor.

Even though currently there is a lack of consensus in the literature, the SERVQUAL model has been the most extensively and successfully used service quality measurement in the twenty-first century (Tsoukatos and Rand, 2006). For example, recently, research has turned to the dimensions (or components) of service quality in e-commerce settings – ease of use, website design, responsiveness, personalization or customization, and assurance. The effects of these dimensions on customer satisfaction

(i.e. both as an antecedent and mediator to loyalty) have been well-conceptualized and well-researched (see Gummerus *et al.*, 2004; Ribbink *et al.*, 2004).

The ease of use dimension is indeed an essential element of customer usage of computer technologies (Ribbink *et al.*, 2004), and is of particular importance for new users (Gefen and Straub, 2000). This dimension includes items such as functionality, accessibility of information, and ease of ordering and navigation (Reibstein, 2002). In fact, this dimension also reflects the service provider's competence and therefore induces trust (Gummerus *et al.*, 2004).

Previous studies (Van Riel *et al.*, 2004; Wolfinbarger and Gilly, 2003; Zeithaml *et al.*, 2002) suggest that in creating satisfaction, the website design dimension is important because it is directly related to the user interface. This dimension includes content, organization, and structure of the site, which are visually appealing, fascinating, and pleasing to the eye. It is also assumed that a website interface often directly affects the perceived trustworthiness of the system (Luo *et al.*, 2006). That is, the first impression of a retailing website may strongly affect the development of trust, and effective communication may facilitate trust maintenance (Egger, 2000). For example, the graphic elements of usability or content design were most likely to communicate trust in e-commerce settings.

The responsiveness dimension can be understood as that of the traditional SERVQUAL (Zeithaml *et al.*, 2002). It measures a company's ability and willingness to provide prompt service when customers have questions/problems (Zeithaml *et al.*, 2002). Understanding customer requirements and developing the service based on responsive feedback enhances service satisfaction and also trust (Gummerus *et al.*, 2004).

The personalization or customization dimension can be also understood as the empathy dimension of the traditional SERVQUAL (Zeithaml *et al.*, 2002). It reflects the degree to which information or service is tailored to meet the needs of the individual visitor (Lee, 2005). This dimension has become more important and is an essential part of online service quality (Zeithaml *et al.*, 2002). The concept of personalization consist of four components in an e-commerce setting: personal attention, preferences, understanding the specific needs of customers, and information regarding the products modification.

Finally, the assurance dimension addresses the customer's perceived security and privacy. In the service quality literature, trust could also be thought as "trust in the service itself" (Parasuraman *et al.*, 1985, 1988). Such a relationship is crucial to managing trust, because a customer typically must buy a service before experiencing it. These items are related to issues such as online transaction security, customer trust in online organization, and privacy (Ribbink *et al.*, 2004). Privacy, security, and ethics are important elements in e-commerce settings (Wang *et al.*, 2003). The usage intention of online services could be affected by users' perceptions of credibility regarding security and privacy (Wang *et al.*, 2003). Security refers to the protection of information or systems from unsanctioned intrusions or outflows. Fear of lack of security has been identified in most studies as affecting the use of online services. Privacy, on the other hand, refers to the protection of various types of data that are collected (with or without the knowledge of the user) during users' interactions with the online system, which may also affect the usage of the systems. However, Wolfinbarger and Gilly (2003) found no effect of security/privacy on customer satisfaction and loyalty. On the basis of the above discussions, we propose the following hypotheses:

H1. Ease of use is positively related to customer satisfaction.

H2. Website design is positively related to customer satisfaction.

- H3. Responsiveness is positively related to customer satisfaction.
- H4. Customization is positively related to customer satisfaction.
- H5. Assurance is positively related to customer satisfaction.

2.2.1 Importance of cultural differences. Culture is believed to be one of the most influential factors to shape individual values and to affect behavior. Yet, despite increasing research attention, culture remains difficult for marketers to understand. Culture is a complex whole that includes common affective reactions, typical cognition (beliefs) and characteristics patterns of behavior that are shared by an entire society or country. Culture is also referred to as a national character by some researchers because of the pattern of personal characteristics found among people within the nation. Hofstede (1991) has identified four cultural dimensions, namely, power distance, femininity/masculinity, uncertainty avoidance, and individualism/collectivism.

Individualism is the extent to which the individual expects personal freedom vs the acceptance of responsibility to family, tribal, or national groups (that is, collectivism) in exchange for loyalty (Soares *et al.*, 2007). Hence, in multicultural and multiethnic Malaysia, people with Malay, Chinese, and Indian ethnic backgrounds value family and business based on kinship, loyalty, and subservience. They collectively make decisions for the community. Interestingly, this is also true for Arabs as well. But, the interesting thing about Arabs is tribalism. Arabs tend to be individualistic collectivists because they usually identify more with their tribe/clan before the national identity. They think of it as a hierarchy of identities (Kassim, 2009). Indeed, the collectivist culture ranks the highest in uncertainty avoidance and power distance.

Uncertainty avoidance reflects the extent to which members of a society attempt to cope with anxiety by minimizing uncertainty. Power distance refers to the extent people accept inequality, as in a hierarchy or a strict chain of command (McCoy *et al.*, 2006). Malaysian society tends to prefer autocratic leadership whereas for those in the Middle East much emphasis is placed on the use of power through social contacts and family influence, and the chain of command must be rigidly followed (Deresky, 2006).

Arabs score high in masculinity (low femininity) cultures that value competition, assertiveness, and the acquisition of money and material goods. In contrast, Malaysian cultures value relationships and altruism (low masculinity and high femininity).

McCoy *et al.* (2006) found that cultures with low uncertainty avoidance, high masculinity, high power distance, and high collectivism seem to nullify the effects of perceived ease of use and/or perceived usefulness from accepting a technology. Moreover, several service quality researchers have also suggested that there is a need to develop culturally specific measures of service-quality dimensions, particularly with respect to cultural traditions of “power distance” and “individualism/collectivism” (Ladhari, 2008).

Thus, understanding the differences in values and norms across cultural segments will be beneficial to online marketers as they develop and market their offerings to a complex and diverse marketplace. To that effect we hypothesize:

- H6a-e.* The effects of (a) ease of use, (b) website design, (c) responsiveness, (d) customization, and (e) assurance on customer satisfaction are greater for Qatari than for Malaysian customers.

2.2.2 Importance of trust. Trust has been defined as “a psychological state composing the intention to accept vulnerability based on expectations of the intentions or behavior of another” (Rousseau *et al.*, 1998, p. 395). Trust is an important construct catalyst in many

transactional relationships. For example, in the commitment-trust relationship marketing literature, trust has been conceptualised as existing when one party has confidence in a partner's reliability and integrity (Morgan and Hunt, 1994; Ranaweera and Prabhu, 2003). Indeed trust could exist at the individual level (Rotter, 1967) or at the firm level (Moorman *et al.*, 1993). Furthermore, trust when conceptualised as a dimension of technology acceptance model, could have also been thought of having a striking influence on user willingness to engage in online exchanges of money and personal sensitive information (Wang *et al.*, 2003). Thus, perceived ease of use and perceived usefulness may not fully reflect the users' intention to adopt internet banking (Eriksson *et al.*, 2005; Wang *et al.*, 2003). Recent research suggests that satisfaction alone may not be adequate to ensure long-term customer commitment to a single service provider (e.g. Ranaweera and Prabhu, 2003). Instead, it may be necessary to look beyond satisfaction to other variables that strengthen retention such as trust (Hart and Johnson, 1999). This view is consistent with research on marketing channels, which shows that firms often look beyond satisfaction to developing trust in order to ensure economically viable, long-term relationships (e.g. Morgan and Hunt, 1994). Trust is seen as being of considerable importance in the process of building and maintaining relationships, although it is also recognized as being difficult to manage (Bejou *et al.*, 1998).

Although the consequence of trust in business-to-customer relationships has been firmly established, the trust construct has been used in somewhat different ways (Ranaweera and Prabhu, 2003). For example, Parasuraman *et al.* (1985, 1988) used trust (together with assurance) as a dimension of the service quality construct. Gremler and Brown (1996) proposed trust as a conceptual antecedent of customer loyalty. Gwinner *et al.* (1998) proposed trust as a confidence benefit rated highly by customers in long-term relational exchange with service firms. On the other hand, Tax *et al.* (1998) found trust, together with commitment, to be a consequence of satisfaction with complaint handling. Moreover, Levesque and McDougall (1996) indicate that complaint handling could have a qualitatively different impact on trust from than on satisfaction. In studies of online banking customers, Kassim and Abdullah (2006) did look at trust as a driver of customer relationship commitment. They found that trust has a significant positive influence on relationship commitment. These findings suggest that where customers maintain long-term contractual relationships (similar to the context of current research) with their online service providers, trust would be likely to be a strong driver of customer relationship commitment or loyalty. We thus hypothesize:

H7. Customer satisfaction is positively related to trust.

H8. The effect of customer satisfaction on trust is greater for Qataris than for Malaysians.

2.2.3 Importance of customer loyalty. Much research in the last two decades has investigated the various definitions of loyalty (Jacoby and Chestnut, 1978). They argue that there must be a strong "attitudinal commitment" to a brand for true loyalty to exist (e.g. Jacoby and Chestnut, 1978). This is seen as taking the form of a consistently favorable set of stated beliefs toward the brand purchased. If the consumer believes that a brand has desirable attributes, s/he will have a more favorable attitude toward it. These attitudes then may be measured by asking people how much they like the brand, feel committed to it, will recommend it to others, and have positive beliefs and feelings about it (Donio *et al.*, 2006). It has also been found that attitudinal loyal customers are much less susceptible to negative information about the brand than non-loyal customers (Donio

et al., 2006). This attitudinal loyalty, in turn, determines consumer intentions. Consumer intentions to purchase a particular brand, for example, should grow stronger as his or her attitude toward this brand becomes more favorable. As such, the strength of this attitude is considered by many researchers as the key predictor of a brand's purchase and repeat patronage (Donio *et al.*, 2006). As a result, intent to purchase and repurchase capture the behavioral component of loyalty. Research on factors that influence customer loyalty has made considerable progress within the field of consumer behavior for many years. In this study, customer loyalty is behaviorally expressed by retention (Bansal and Taylor, 1999) and emotionally (Ranaweera and Prabhu, 2003) expressed by WOM. Of particular interest is the positive WOM. For example, research has consistently found a direct relationship between both service quality and likeliness or willingness to recommend by saying positive things about the organization. Indeed, satisfied customers are also known to provide positive WOM to individuals who have no relation to a specific transaction which eventually will influence their purchasing intentions. This type of loyalty is known as an emotionally expressed behavior (Ranaweera and Prabhu, 2003) where customers are willing to inform others on service incidents that have given them satisfaction. Based on this research, it was reported that 78 percent of the consumers said that they trusted direct recommendations from other consumers through WOM of which 61 percent said they trusted consumer opinions posted online; what marketers call viral marketing. Everywhere, it seems, people still trust their friends (Pfanner, 2007). As has been repeatedly modeled in the field of customer satisfaction, satisfaction is a causal driver of recommend and repeat intentions. These relationships are expected to apply in an online environment as well (Ribbink *et al.*, 2004).

Next, the researchers then argue whether both intent to recommend and satisfaction together somehow capture attitudinal part of loyalty. Just like repurchase intent, they found that intent to recommend was a causal outcome of favorable attitudes and not a direct measure of them (e.g. I am satisfied, therefore I recommend). Thus, intent to recommend is also a behavioral intention but not satisfaction (Zeithaml *et al.*, 1996). The researchers argue that the latter is a causal antecedent of attitudinal loyalty (e.g. I am satisfied, therefore I am inclined to be loyal). All these studies are grounded in considerable amounts of market research and data analysis. But, despite the weight of empirical evidence, controversy persists. In fact, we need to explicitly recognize that satisfaction is not a direct indicator of attitudinal loyalty because some satisfied customers still defect (Oliver, 1999). Thus, satisfaction may not have been probed deep enough for us to be sure that there is a true loyalty. Instead, it may be necessary to look beyond satisfaction to other variables that strengthen retention such as trust (Hart and Johnson, 1999). This view is consistent with research on marketing channels, which shows that firms often look beyond satisfaction to developing trust in order to ensure economically viable, long-term relationships (e.g. Morgan and Hunt, 1994). We thus hypothesize:

- H9. Customer satisfaction is positively related to WOM.
- H10. The effect of customer satisfaction on WOM is greater for Qataris than for Malaysians.
- H11. Customer satisfaction is positively related to retention intentions.
- H12. The effect of customer satisfaction on retention intentions is greater for Qataris than for Malaysians.
- H13. Trust is positively related to WOM.

- H14. The effect of trust on WOM is greater for Qataris than for Malaysians.
- H15. Trust is positively related to retention intentions.
- H16. The effect of trust on retention intentions is greater for Qataris than for Malaysians.
- H17. WOM is positively related to retention intentions.
- H18. The effect of WOM on retention intentions is greater for Qataris than for Malaysians.

Although the framework presented in this section (see Figure 1) shares the elements of other customer satisfaction and trust models and their relationships with customer loyalty in the literature (see Ribbink *et al.*, 2004; Gefen, 2002), this one differs from the current literature in four aspects.

First, this framework's difference is justified on the basis that this study seeks to explain how customer behavioral loyalty may be demonstrated separately through emotional loyalty such as WOM (such as willingness to recommend the website to others) and behavioral loyalty (retention intentions, such as continuing using or visiting the website and preferring the website).

Second, the framework seeks to depict the effects of customer satisfaction and trust on WOM and INTENT separately and these effects are barely shown in other models. This inclusion is justified because this is the main focus of this research as discussed above.

Third, the link from WOM to INTENT was included in the model for testing the relationship between them even though empirical research in this domain is scarce. Thus, we assumed that these effects can be expected in e-commerce settings as well.

Finally, this research investigates the research model's appropriateness across cultures using the cultural dimensions provided by Hofstede.

3. Methodology

3.1 The questionnaire design and appraisal of the scale

A questionnaire was designed to measure service quality, to evaluate the customers' satisfaction and trust and to assess the sentimental and behavioral dimensions of their

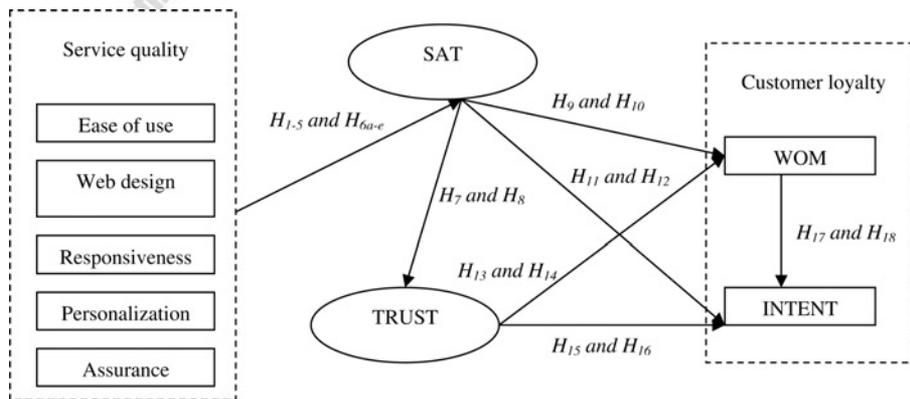


Figure 1.
Proposed research
framework

Notes: SAT = satisfaction; TRUST = trust; WOM = word-of-mouth; INTENT= retention intentions

loyalty toward their online service providers. The questionnaire of the study will now be described.

The questionnaire was divided into three parts. It began with the general information pertaining to respondents' internet usage and their perceptions of the online products or services.

Part two dealt with the respondents' assessment of the service quality, satisfaction, trust, and loyalty constructs (see Appendix). The perceived service quality construct was based on the traditional SERVQUAL conceptualization (Parasuraman *et al.*, 1985, 1988) in an e-commerce setting (Ribbink *et al.*, 2004), which employed 20 Likert-scale items. The customer satisfaction (four related items), trust (five related items) and loyalty (four related items) included measures from a scale by Ribbink *et al.* (2004). All items were measured with a six-point modified Likert-scale, anchored by (1) strongly disagree and (6) strongly agree. The rating scales of this research, which did not have a mid-point, were used to minimize social desirability bias arising from respondents' desires to please the interviewer or appear helpful (Garland, 1991). Moreover, the surveys were conducted in a conservative market where respondents were more guarded in offering praises.

Part three consisted of a series of respondents' demographic and socio-economic characteristics such as ethnicity, gender, age, marital status, education, and income. This information was asked at the end of the questionnaire because of its private and personal nature.

3.2 Data collection

A convenience sampling technique was employed to collect data from Malaysia and Qatar. These countries were selected for the purpose of comparing the impact of perceived service quality dimensions on the unique cultural characteristics of Malaysian, and Qatari customers. A personally administered questionnaire method was employed for the survey to identify the potential respondents in Malaysia and Qatar. This method was chosen because of its relevant advantages such as the ability to ask complex questions, to clarify the question, speed, motivation, anonymity, sample control, and quality control. The disadvantages of a personally administered survey were cost, the potential for interviewer's bias and longer duration of data collection (Aaker *et al.*, 2000). However, these disadvantages were minimized where possible and they did not outweigh the benefits provided by a high response rate in a short period of time. The survey was carried out in shopping malls and also by visiting organizations and private residences. Respondents who had and had not previously used the e-commerce services were included in the sample.

3.3 Data analysis technique

Structural equation modeling (SEM) and general linear model of univariate analysis of variance analyses were used to establish the causal relations between the constructs. AMOS 4 software was used to conduct the former and SPSS 13 was used to perform the latter. The result of the study is described in the next section.

4. Results

4.1 Demographics profile

Of a total of 600 questionnaires distributed 357 respondents responded, yielding a response rate of 59.5 percent. The final composition of the sample comprised 57 percent Malaysians and 43 percent Qataris. Majority of the respondents (99.2 percent) have used e-services (e.g. e-ticketing, hotel reservation) before. Respondents between 22 and

30 years of age represent 39 percent of the sample and those between 31 and 40 years represent 22 percent. About 50 percent of the respondents are single with 52 percent being male. Of the sample, 67 percent of the respondents have at least a Bachelor's degree and 65 percent have a profession either in a public or a private sector. Finally, 19 percent of respondents have monthly salary of less than US\$1,000. About 19 percent of the respondents have a monthly salary of between US\$1,500 and US\$3,000 and 13 percent of them have monthly salary of above US\$3,000, while 32 percent of the respondents did not wish to disclose their salary. However, it should be noted that since we have a convenience sample, we could not get a matched profile of respondents from the two countries. There is a significant difference among the two groups of respondents in terms of age and occupation. To correct for the difference in the demographic variables between the two groups, we included these demographic factors in the final model. The representativeness of the sample of respondents could not be compared with the population from which the sample was drawn because there was no other survey or data about the population of e-commerce users in Malaysia and Qatar available.

4.2 EFA and CFA

To test the dimensionality of the perceived service quality dimensions, all 20 items were analyzed using oblique rotation (Tsoukatos and Rand, 2006) through exploratory factor analysis (EFA). The criterion of meaningful factor loading was set to 0.4 (Tsoukatos and Rand, 2006). Using these criteria resulted in a five-dimensional solution – ease of use, website design or layout, responsiveness, customization, and assurance – explaining 72.3 percent of the variance. The same procedure was repeated using principal component extraction using varimax rotation. This procedure resulted in the same five factors. For EFA, Pallant (2001) suggested that both oblique and varimax rotations should be conducted and from the results we should choose those that are the clearest and easiest to interpret. The reason being that oblique rotation allows for the factors to be correlated, but they are more difficult to interpret, describe, and report. Nevertheless, these two approaches often result in very similar solutions, particularly when the pattern of correlations among items is clear as in the case of this research.

Next to confirm the measurement developed using EFA we performed confirmatory factor analysis (CFA) to investigate the constructs' dimensionality (see Table I) using AMOS 4 software. The robust maximum likelihood estimation was used to allow for the absence of multivariate normality. Model fits were evaluated using the chi-square (χ^2), goodness-of-fit index (GFI), comparative fit index (CFI) and the root mean square error of approximation (RMSEA) because of their robustness, stability, and lack of sensitivity to sample size (Hair *et al.*, 2006). The initial CFA model for trust was not acceptable, so the approach suggested by Anderson and Gerbing (1988) was utilized and two items were eliminated (items 3 and 4) to achieve an acceptable fit as shown in Table I.

Table I reports the psychometric properties of each scale of the five dimensions of perceived service quality, customer satisfaction, trust, WOM, and intentions. The significant factor loadings demonstrate the convergent validity. Also, all the average variance extracted (AVE) exceeded the minimum level of 0.50 (Fornell and Larcker, 1981) demonstrating adequate discriminant validity of the constructs (see Table II). The sample factor means, standard deviation, correlations, and AVE are reported in Table II.

No.	Constructs	Factor loadings	Square multiple regression
(1)	Perceived service quality ($\chi^2 = 444.49$ with 160 degrees of freedom ($p = 0.00$); ($GFI = 0.92$); CFI = 0.93; RMSEA = 0.06) <i>Ease of use</i> (cronbach = 0.87), CR = 0.87		
	EOU1	0.76	0.57
	EOU2	0.81	0.65
	EOU3	0.81	0.66
	EOU4	0.79	0.63
	<i>Web site design</i> (cronbach = 0.87, CR = 0.87)		
	WEB1	0.71	0.51
	WEB2	0.78	0.61
	WEB3	0.79	0.62
	WEB4	0.71	0.51
	<i>Responsiveness</i> (cronbach = 0.86), CR = 0.86)		
	RESP1	0.75	0.56
	RESP2	0.76	0.58
	RESP3	0.82	0.68
	RESP4	0.77	0.59
	<i>Customization</i> (cronbach = 0.83), CR = 0.83)		
	CUST1	0.76	0.58
	CUST2	0.70	0.49
	CUST3	0.76	0.57
	CUST4	0.75	0.56
	<i>Assurance</i> (cronbach = 0.92), CR = 0.92)		
	ASSURE1	0.88	0.77
	ASSURE2	0.88	0.78
	ASSURE3	0.86	0.74
	ASSURE4	0.80	0.64
(2)	Satisfaction (cronbach = 0.87, CR = 0.88) ($\chi^2 = 7.85$ with two degrees of freedom ($p = 0.02$); ($GFI = 0.99$); CFI = 0.99; RMSEA = 0.02)		
	SAT1	0.85	0.72
	SAT2	0.87	0.76
	SAT3	0.83	0.68
	SAT4	0.64	0.40
(3)	Trust ^a (cronbach = 0.76, CR = 0.78)		
	TRUST1	0.93	0.87
	TRUST2	0.73	0.53
	TRUST5	0.52	0.27
(4)	Loyalty ($\chi^2 = 1.14$ with one degree of freedom ($p = 0.29$); ($GFI = 1.00$); CFI = 1.00; RMSEA = 0.00) <i>WOM</i> (Cronbach = 0.93, CR = 0.93)		
	WOM1	0.89	0.79
	WOM2	0.97	0.94
	<i>Intention</i> (cronbach = 0.76, CR = 0.77)		
	INTENT1	0.87	0.75
	INTENT2	0.71	0.50

Notes: ^aA just-identified model with perfect fit (Hair *et al.*, 2006); χ^2 = chi square; d.f. = degree of freedom; GFI = goodness of fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation

Table I.
The measures and their psychometric properties

	Mean	SD	1	2	3	4	5	6	7	8	9
(1) EOU	4.632	0.870	<i>0.63</i>	–	–	–	–	–	–	–	–
(2) WEB	4.591	0.814	0.63	<i>0.56</i>	–	–	–	–	–	–	–
(3) RESP	4.181	0.949	0.50	0.46	<i>0.55</i>	–	–	–	–	–	–
(4) CUST	4.279	0.849	0.54	0.54	0.58	<i>0.55</i>	–	–	–	–	–
(5) ASSURE	3.932	1.179	0.39	0.42	0.38	0.50	<i>0.73</i>	–	–	–	–
(6) SAT	4.455	0.882	0.56	0.56	0.47	0.52	0.54	<i>0.64</i>	–	–	–
(7) TRUST	3.578	1.102	0.39	0.40	0.37	0.52	0.54	0.45	<i>0.56</i>	–	–
(8) WOM	4.555	1.073	0.56	0.54	0.37	0.51	0.46	0.60	0.56	<i>0.87</i>	–
(9) INTENT	4.342	1.021	0.53	0.48	0.50	0.53	0.49	0.61	0.50	0.70	<i>0.63</i>

Table II.
Scale development
sample factor means,
standard deviations,
and correlations

Notes: EOU = ease of use; WEB = website design or layout; Resp = responsiveness; CUST = customization; Assure = assurance; SAT = satisfaction; TRUST = trust; WOM = word-of-mouth; INTENT = intention; in italic is the AVE; all correlations are significant at $p < 0.01$ (two-tailed)

4.3 Structural equation modeling and general linear model of univariate analysis of variance

The hypotheses were tested using the SEM because this technique provides statistical efficiency and its ability to assess the relationships comprehensively has provided a transition from exploratory to confirmatory analysis (Hair *et al.*, 2006). Moreover, SEM techniques are particularly appropriate for the study of multiple dependence relationships such as those investigated in this research. Similar model fit indices were evaluated using the χ^2 , GFI, CFI, and the RMSEA because of their robustness, stability, and lack of sensitivity to sample size (Hair *et al.*, 2006). The general linear model of univariate analysis of variance was used to measure the effect of culture on perceived service quality, satisfaction, trust, and loyalty.

Model fit statistics of χ^2 , CFI, RMSEA, degrees of freedom (d.f.), and p -statistic are reported in Table III. We can thus safely conclude that the model is valid (Hair *et al.*, 2006) and therefore, we can continue to analyze the outcome of the hypothesized effects. As can be seen in Table IV, the strength of the relationships among the constructs was represented by the respective standardized path coefficient. Following Cohen's (1988) recommendations, standardized path coefficient (β) with absolute values of less than 0.10 may indicate "small" effect; values of around 0.30 a "medium" effect; and "large" effects may be suggested by coefficients with absolute value of 0.50 or more. The results of the analyses are discussed below.

5. Discussion of results

The final and parsimonious model of the relationships is shown in Table III. First, we tested the relationship of ease of use website design, responsiveness, customization, and assurance on customer satisfaction. The standardized path coefficients (β) support that quality is an antecedent and that it positively affects customer satisfaction (see Cronin and Taylor, 1992). However, only the coefficients of ease of use ($\beta = 0.213$; $t_{\text{value}} = 2.791$), website design ($\beta = 0.239$; $t_{\text{value}} = 2.969$), and assurance ($\beta = 0.325$; $t_{\text{value}} = 5.735$) are significant with satisfaction while coefficient of responsiveness ($\beta = 0.107$; $t_{\text{value}} = 1.669$) and customization ($\beta = 0.095$; $t_{\text{value}} = 1.175$) are not. Thus, $H3$ and $H4$ are rejected. A possible explanation for this phenomenon could be that the collectivist consumers are probably more tolerant and

Hypothesis	Independent variable	Dependent variable	Estimate (β)	t -value	F -value	p -value	Results
<i>SEM analysis</i>							
H1	EOU	SAT	0.213	2.791		0.005*	Accepted
H2	WEB	SAT	0.239	2.969		0.003*	Accepted
H3	RESP	SAT	0.107	1.669		0.095	Rejected
H4	CUST	SAT	0.095	1.175		0.240	Rejected
H5	ASSURE	SAT	0.325	5.735		0.000*	Accepted
H7	SAT	TRUST	0.566	7.215		0.000*	Accepted
H9	SAT	WOM	0.502	7.833		0.000*	Accepted
H11	SAT	INTENT	0.369	5.684		0.000*	Accepted
H13	TRUST	WOM	0.312	5.077		0.000*	Accepted
H15	TRUST	INTENT	0.042	0.733		0.463	Rejected
H17	WOM	INTENT	0.571	8.937		0.000*	Accepted
<i>Fit indices</i>							
	<i>Statistics</i>	<i>d.f.</i>	<i>p</i>				
χ^2	1106.62	413	0.000*				
GFI	0.83						
CFI	0.90						
RMSEA	0.06						
<i>General linear model of univariate analysis of variance</i>							
H6a	EOU*CULTURE	SAT			1.382	0.115	Rejected
H6b	WEB*CULTURE	SAT			1.108	0.351	Rejected
H6c	RESP*CULTURE	SAT			0.592	0.948	Rejected
H6d	CUST*CULTURE	SAT			0.478	0.971	Rejected
H6e	ASSURE*CULTURE	SAT			0.956	0.518	Rejected
H8	SAT*CULTURE	TRUST			1.772	0.028**	Accepted
H10	SAT*CULTURE	WOM			1.215	0.249	Rejected
H12	SAT*CULTURE	INTENT			0.934	0.549	Rejected
H14	TRUST*CULTURE	WOM			0.989	0.496	Rejected
H16	TRUST*CULTURE	INTENT			1.323	0.135	Rejected
H18	WOM*CULTURE	INTENT			0.740	0.839	Rejected

Notes: EOU = ease of use; WEB = website design or layout; Resp = responsiveness; CUST = customization; Assure = assurance; SAT = satisfaction; TRUST = trust; WOM = word-of-mouth; INTENT = intention; CULTURE = Age*Occupation; χ^2 = chi square; d.f. = degree of freedom; GFI = goodness of fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation; * $p < 0.01$; ** $p < 0.05$

Table III.
SEM and general linear
model of univariate
analysis of variance
results

less demanding compared to the individualistic customers (see Table III). The independent variables (ease of use, website, and assurance) explain 63.0 percent of the variance of customer satisfaction. Therefore, H1, H2, and H5 are substantiated.

Second, we examined H7 that dealt with the relationship between customer satisfaction and trust. Interestingly, the results of the analysis indicate that customer satisfaction ($\beta = 0.566$; $t_{\text{value}} = 7.215$) is an antecedent of trust. As such, satisfaction does appear to be an important factor in building trust among the online users. Thus, H7 is supported (see Table III).

Third, we tested the direct effect of customer satisfaction and trust on customer loyalty. The argument that satisfaction and trust are antecedents and positively related to loyalty is also supported by the findings. Table III shows that the path coefficients from satisfaction to WOM ($\beta = 0.502$; $t_{\text{value}} = 7.833$) and from trust to WOM ($\beta = 0.961$; $t_{\text{value}} = 2.869$) are significant, where, they explain 53.4 percent of WOM's

Hypothesis	Supported
<i>H1.</i> Ease of use is positively related to customer satisfaction	Accepted
<i>H2.</i> Website design is positively related to customer satisfaction	Accepted
<i>H3.</i> Responsiveness is positively related to customer satisfaction	Rejected
<i>H4.</i> Customization is positively related to customer satisfaction	Rejected
<i>H5.</i> Assurance is positively related to customer satisfaction	Accepted
<i>H6a.</i> The effect of ease of use on customer satisfaction is greater for Qatari than for Malaysian customers	Rejected
<i>H6b.</i> The effect of website design on customer satisfaction is greater for Qatari than for Malaysian customers	Rejected
<i>H6c.</i> The effect of responsiveness on customer satisfaction is greater for Qatari than for Malaysian customers	Rejected
<i>H6d.</i> The effect of customization on customer satisfaction is greater for Qatari than for Malaysian customers	Rejected
<i>H6e.</i> The effect of assurance on customer satisfaction is greater for Qatari than for Malaysian customers	Rejected
<i>H7.</i> Customer satisfaction is positively related to trust	Accepted
<i>H8.</i> The effect of customer satisfaction on trust is greater for Qataris than for Malaysians	Accepted
<i>H9.</i> Customer satisfaction is positively related to WOM	Accepted
<i>H10.</i> The effect of customer satisfaction on WOM is greater for Qataris than for Malaysians	Rejected
<i>H11.</i> Customer satisfaction is positively related to INTENT	Accepted
<i>H12.</i> The effect of customer satisfaction on intentions is greater for Qataris than for Malaysians	Rejected
<i>H13.</i> Trust is positively related to WOM	Accepted
<i>H14.</i> The effect of trust on WOM is greater for Qataris than for Malaysians	Rejected
<i>H15.</i> Trust is positively related to intentions	Rejected
<i>H16.</i> The effect of trust on intentions is greater for Qataris than for Malaysians	Rejected
<i>H17.</i> WOM is positively related to intentions	Accepted
<i>H18.</i> The effect of WOM on intentions is greater for Qataris than for Malaysians	Rejected

Table IV.
Summary of results
of hypotheses

variance. Thus, *H9* and *H13* are supported. It should be noted, however, that when examining the direct effect of satisfaction and trust on intentions, only satisfaction appears to have positive and significant impact on customers ($\beta = 0.369$; $t_{\text{value}} = 5.864$). Hence, *H11* is supported and *H15* is rejected. This could be a specific characteristic of the collectivist culture where individuals belong to groups that look after them in exchange for loyalty.

Fourth, we examined *H17* deals with the direct effect of WOM on intention. Our inspection of the path coefficient found that WOM does influence intention ($\beta = 0.571$; $t_{\text{value}} = 8.937$). This confirms our hypothesis that emotional loyalty does influence positively the customers' behavioral loyalty, where it explains 79.8 percent of intention's variance (see Table III).

Fifth, we tested *H6a-e*, *H8*, *H10*, *H12*, *H14*, *H16*, and *H18*, which compare the effect of the perceived service quality dimensions, satisfaction, trust, and customer loyalty between two cultures (i.e. Malaysian and Qatari). AMOS is unable to measure the effect of the interaction terms between culture on one hand and EOU, WEB, RESP, CUST ASSURE, SAT, TRUST, WOM, and INTENT on the other hand. Therefore, we used general linear model of univariate analysis of variance (SPSS 13). *H6a-e* stipulates that the impact of EOU, WEB, RESP, CUST, and ASSURE on SAT is greater for Qatari

than for Malaysian users. The results indicate that the interaction between these service quality dimensions and culture are insignificant in determining SAT. Thus, the effect of service quality dimensions on satisfaction on both Qatari and Malaysian users is the same. Consequently, *H6a-e* is not supported. With respect to the effect of satisfaction, the results show that the interaction between SAT and culture is significant in determining TRUST ($F_{\text{value}} = 1.772$; $p_{\text{-value}} = 0.028$). The impact of satisfaction on trust is greater for Qatari than for Malaysian users. Therefore, *H8* is supported. As for *H10*, *H12*, *H14*, *H16*, and *H18* the results show that they are insignificant. Therefore, *H10*, *H12*, *H14*, *H16*, and *H18* are not supported.

The research hypotheses were confirmed and disconfirmed through SEM and general linear model of univariate analysis of variance in order of their presentation as summarized in Table IV. Nine of the hypotheses were fully supported and 13 were rejected. The limitations and implications of these results will now be described in the following sections.

6. Limitations

As in any study, there are a few limitations of the current research that should be understood when interpreting the results and implications. First, the convenience sampling used was not random and it is difficult to obtain a fully matched profile of respondents from Malaysia and Qatar. Although this issue has been rectified, we believed that a selection of a sample where respondents from the two countries have a matched profile might lead to better results. Finally, it is fruitful to replicate this study in a broader cultural setting.

7. Theoretical and managerial implications

7.1 Theoretical implications

Admittedly, given the nature of the sample, caution must be exercised in the generalizability of the results. This study examines and identifies the pertinent service quality dimensions affecting customer satisfaction. More importantly, the path of individual dimensions of service quality → customer satisfaction → trust → loyalty were clarified. Apparently, only EOU, WEB, and ASSURE are found to be affecting SAT while RESP and CUST are not. This finding confirms as well as disconfirms previous studies (see Ribbink *et al.*, 2004; Wolfinbarger and Gilly, 2003) and suggests that RESP and CUST are no longer critical factors in determining SAT in online services or purchasing. Of particular interest is the finding that SAT does in fact effect TRUST and suggests that satisfied customers are more inclined to trust the online service provider than dissatisfied customers. Interestingly, both SAT and TRUST have significant effects on WOM while WOM is found to be affecting repeat visits or repurchase intention (INTENT). TRUST does not directly influence the latter. Thus, it appears that both SAT and TRUST play imperative roles in building customer loyalty.

This study also sheds some light on culture differences. The findings in the study suggest that an understanding of cultural differences allows marketers to determine when adaptation may be necessary and when commonalities allow for regional or global approaches. For example, few cultures today are as homogeneous as those of Japan and Saudi Arabia. Elsewhere, intercultural differences based on nationality, religion, race, or ethnicity have resulted in the emergence of distinct subcultures. Thus, understanding differences in values and norms across cultural segments will be beneficial as online marketers develop and market their offerings to a complex and diverse marketplace.

When examining the effect of perceived service quality on satisfaction, the effects of satisfaction on loyalty and trust on loyalty across culture, the current research found that there was no significant difference among the Qatari and Malaysian customers. The finding demonstrates that the relationships in the model (except for one) did not hold across the two cultural groups because the respondents have similar cultural background. However, with respect to the effect of satisfaction on trust there was a significant difference among the Qatari and Malaysian customers. This finding agrees with the view that Arabs are heavily reliant on dealings with family, tribe, or clan or personal contacts for satisfaction and trust (Deresky, 2006).

7.2 Managerial implications

The importance of our findings also generates insights for marketing managers. For example, online service providers seek to improve their customers' loyalty levels, in their effort to increase retention rates and attract new customers through WOM (such as willingness to recommend the website to others) and behavioral loyalty (such as continuing using or visiting the website and prefer the website). These "important actions" may benefit from the information about the effect of individual dimensions of service quality on customer satisfaction, trust, and loyalty (both behavioral and emotional).

Of particular interest is a significant positive effect of WOM on intention was also demonstrated. Consequently, it is not going to be enough for managers to just make the system easy to interact with, attractive (on first viewing) and interesting enough to encourage repeat visits or repurchase intentions but they also need to develop online systems which are trustworthy, secured, private, responsive, and personalized for their users. Companies can therefore increase customer loyalty directly by improving the ease of use, website design or layout, and assurance dimensions of their website. It is also suggested that customers of different cultures might react differently to certain factors of customer loyalty. Thus, marketers should tailor their marketing strategies to fit each marketing environment because overseas success is very much a function of cultural adaptability.

8. Conclusions and direction for future research

The major contribution to this study is the adoption of a more comprehensive approach to investigating determinants of loyalty than previous studies. The literature on the aggregate relationships between service quality, customer satisfaction, trust, and loyalty is quite rich but it is not the case when the construct's individual dimensions are taken into account. Thus, this study has a wider coverage of the key dimensions of service quality and their impact on satisfaction, trust, and loyalty in e-commerce settings.

Since this study is considered as the first attempt to investigate the path of service quality → customer satisfaction → trust → loyalty, at the level of constructs, drawing from the Middle Eastern and South East Asian perspectives, directions for further research are needed. Comparative studies with other developed countries could be also carried out in order to find out whether the effect of individual service quality dimensions in the competitive mix may be greater or lesser than in other markets, and whether the effect of ease of use, website design and assurance on satisfaction, trust, and loyalty may be more or less. Since customer relationships are built over time, the cross-sectional research cannot fully capture the dynamic, interactive, and non-linear nature of so many relationship variables. Moreover, the research could be enhanced by expanding the current model. The role of cultural issues could be investigated to add further depth to the model.

References

- Aaker, D., Kumar, A. and Day, G.S. (2000), *Marketing Research*, John Wiley and Sons, New York, NY.
- Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modelling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-23.
- Anderson, K. and Kerr, C. (2002), *Customer Relationship Management*, McGraw-Hill, New York, NY.
- Bansal, H.S. and Taylor, S.F. (1999), "The service provider switching model (SPSM): a model of consumer switching behavior in the service industry", *Journal of Service Research*, Vol. 2 No. 2, pp. 200-18.
- Bejou, D., Ennew, C.T. and Palmer, A. (1998), "Trust, ethics and relationship satisfaction", *International Journal of Bank Marketing*, Vol. 16 No. 4, pp. 170-5.
- Bitner, M.J. (1990), "Evaluating service encounters; the effects of physical surroundings and employee responses", *Journal of Marketing*, Vol. 54 (April), pp. 69-82.
- Cohen, J. (1988), *Statistical Power Analysis for the Behavioural Sciences*, Academic Press, New York, NY.
- Cronin, J.J. and Taylor, S.A. (1992), "Measuring service quality: a reexamination and extension", *Journal of Marketing*, Vol. 56 (July), pp. 55-68.
- Deresky, H. (2006), *International Management: Managing Across Borders and Culture*, Pearson/Prentice Hall, New Jersey, NJ, pp. 121-2, 426.
- Donio, J., Massari, P. and PassianteDabho, G. (2006), "Customer satisfaction and loyalty in a digital environment: an empirical test", *Journal of Consumer Marketing*, Vol. 23 No. 7, pp. 445-57.
- Egger, N.F. (2000), "Towards a model of trust for e-commerce system design", available at: www.zurich.ibm.com/~mrs/chi2000/contributions/egger.html (accessed March 20, 2007).
- Eriksson, K., Kerem, K. and Nilsson, D. (2005), "Customer acceptance of internet banking in Estonia", *International Journal of Bank Marketing*, Vol. 23 No. 2, pp. 200-16.
- Finn, D.W. and Lamb, C.W. (1991), "An evaluation of the SERVQUAL scale in a retailing setting", *Advances in Consumer Research*, Vol. 18, pp. 483-90.
- Fornell, C. (1992), "National customer satisfaction barometer: the Swedish experience", *Journal of Marketing*, Vol. 56 (January), pp. 6-21.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18, pp. 39-50.
- Garland, R. (1991), "The mid-point in rating scale: is it desirable?" *Marketing Bulletin*, Vol. 2 (May), pp. 66-70.
- Gefen, D. (2002), "Customer loyalty in e-commerce", *Journal of Association for Information Systems*, Vol. 3, pp. 27-51.
- Gefen, D. and Straub, D.W. (2000), "The relative importance of perceived ease of use in IS adoption: a study of e-commerce adoption", *Journal of the Association for Information System*, Vol. 1 No. 8, pp. 1-28.
- Gremler, D.D. and Brown, S.W. (1996), "Service loyalty: its nature, importance, and implications", in Edvardsson, B., Brown, S.W., Johnston, R. and Scheuing, E. (Eds), *QUIS V: Advancing Service Quality: A Global Perspective*, International Service Quality Association, New York, NY, pp. 171-81.
- Groonroos, C. (1990), *Service Management and Marketing*, Lexington Books, Toronto.
- Gummerus, J., Liljander, V., Pura, M. and Van riel, A. (2004), "Customer loyalty to content-based websites: the case of an online health care service", *Journal of Services Marketing*, Vol. 18 No. 3, pp. 175-86.

- Gwinner, K.P., Gremler, D.D. and Bitner, M.J. (1998), "Relational benefits in services industries: the customers' perspective", *Journal of the Academy of Marketing Science*, Vol. 26 No. 2, pp. 101-14.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006), *Multivariate Data Analysis*, Prentice Hall International, New York, NY.
- Hart, C.W. and Johnson, M.D. (1999), "Growing the trust relationship", *Marketing Management*, Vol. 8 (Spring), pp. 8-19.
- Hofstede, G. (1991), *Culture and Organizations: International Cooperation and its Importance for Survival*, HarperCollins, London, p. 30.
- Jacoby, J. and Chestnut, R.W. (1978), *Brand Loyalty: Measurement and Management*, John Wiley, New York, NY.
- Kassim, N.M. (2009), "Consumers' behavior and their perceptions of quality of life: does culture matters?", *Proceedings of the Pan-Pacific Conference XXVI, Shenzhen, June 1-3*, pp. 260-2.
- Kassim, N.M. and Abdullah, M.A.A. (2006), "The influence of attraction on internet banking: an extension to the trust-relationship commitment model", *International Journal of Bank Marketing*, Vol. 24 No. 6, pp. 424-42.
- Ladhari, R. (2008), "Alternative measures of service quality: a review", *Managing Service Quality*, Vol. 18 No. 1, pp. 65-86.
- Lee, M.L. (2005), "The impact of perceptions of interactivity on customer trust and transaction intentions in mobile commerce", *Journal of Electronic Commerce Research*, Vol. 6 No. 3, pp. 165-80.
- Levesque, T.J. and McDougall, G.H.C. (1996), "Determinants of customer satisfaction in retail banking", *International Journal Bank Marketing*, Vol. 14 No. 7, pp. 12-20.
- Luo, J.T., McGoldrick, P., Beatty, S. and Keeling, K.A. (2006), "On-screen characters: their design and influence on consumer trust", *Journal of Services Marketing*, Vol. 2 No. 2, pp. 112-24.
- McCoy, S., Galletta, D. and King, W.R. (2006), "Applying TAM across cultures: the need for caution", *European Journal of Information Systems*, Vol. 16, pp. 81-90.
- Moorman, C., Deshpande, R. and Zaltman, G. (1993), "Constructs affecting trust in the market research relationships", *Journal of Marketing*, Vol. 57 No. 1, pp. 81-101.
- Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol. 58, July, pp. 20-38.
- Oliver, R.L. (1999), "Whence consumer loyalty?", *Journal of Marketing*, Vol. 63, pp. 33-4.
- Pallant, J. (2001), *SPSS Survival Manual*, Allen and Unwin, Crow's Nest.
- Parasuraman, A., Zeithaml, V. and Berry, L.L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, Vol. 49, pp. 41-50.
- Parasuraman, A., Zeithaml, V. and Berry, L.L. (1988), "SERVQUAL: a multiple-item scale for measuring customer perceptions of service quality", *Journal of Retailing*, Vol. 64, pp. 420-50.
- Parasuraman, A., Zeithaml V.A. and Berry L.L. (1994), "SERVQUAL: alternative scales for measuring service quality? A comparative assessment based on psychometric and diagnostic criteria", *Journal of Retailing*, Vol. 70 No. 1, pp. 193-9.
- Pfanner, E. (2007), "Consumers word is best advertisement, survey shows", available at: www.iht.com/articles/2007/09/30/business/ad01.php (accessed February 20, 2008).
- Ranaweera, C. and Prabhu, J. (2003), "The influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting", *International Journal of Service Industry Management*, Vol. 14 No. 4, pp. 374-95.
- Reibstein, D.J. (2002), "What attracts customers to online stores, and what keeps them coming back?", *Journal of the Academy of Marketing Science*, Vol. 30 No. 4, pp. 465-73.

- Reichheld, F.F. and Scheffer, P. (2000), "E-loyalty: your secret weapon on the web", *Harvard Business Review*, Vol. 78 No. 4, pp. 105-13.
- Ribbink, D., van Riel, A.C.R., Liljander, V. and Streukens, S. (2004), "Comfort your online customer: quality, trust, and loyalty on the internet", *Managing Service Quality*, Vol. 14 No. 6, pp. 446-56.
- Rotter, J. (1967), "A new scale for the measurement of interpersonal trust", *Journal of Personality*, Vol. 35 No. 4, pp. 651-65.
- Rousseau, D., Sitkin, S., Burt, R. and Camerer, C. (1998), "Not so different at all: a cross-discipline view of trust", *Academy of Management Review*, Vol. 23, pp. 393-404.
- Rushton, A.M. and Carson, D.J. (1989), "The marketing of services: managing the intangibles", *European Journal of Marketing*, Vol. 23 No. 8, pp. 23-43.
- Santos, J. (2003), "E-service quality: a model of virtual service quality dimensions", *Managing Service Quality*, Vol. 13 No. 3, pp. 233-46.
- Semejin, J., Van Riel, A.C.R., Van Birgelen, M.J.H. and Streukens, S. (2005), "E-services and offline fulfillment: how e-loyalty is created", *Managing Service Quality*, Vol. 15 No. 2, pp. 182-95.
- Singh, J. (1991), "Understanding the structure of consumers' satisfaction evaluations of service delivery", *Journal of the Academy of Marketing Science*, Vol. 19 No. 3, pp. 223-44.
- Smith, A.M. (1999), "Some problems when adopting Churchill's paradigm for the development of service quality management scales", *Journal of Business Research*, Vol. 46 No. 2, pp. 109-20.
- Soares, A.M., Farhangmehr, M. and Shoham, A. (2007), "Hofstede's dimensions of culture in international marketing studies", *Journal of Business Research*, Vol. 60, pp. 277-84.
- Swartz, T.A. and Brown, S.W. (1989), "Consumer and provider expectations and experience in evaluating professional service quality", *Journal of the Academy of Marketing Science*, Vol. 17 (Spring), pp. 189-95.
- Tax, S.S., Brown, S.W. and Chandrashekar, M. (1998), "Customer evaluations of service complaint experiences: implications for relationship marketing", *Journal of Marketing*, Vol. 62, pp. 60-76.
- Tsoukatos, E. and Rand, G.K. (2006), "Path analysis of perceived service quality, satisfaction and loyalty in Greek insurance", *Managing Service Quality*, Vol. 16 No. 5, pp. 501-19.
- Van Riel, A.C.R., Lemmick, J., Streukens, S. and Liljander, V. (2004), "Boost customer loyalty with online support: the case of mobile telecoms providers", *International Journal of Internet Marketing and Advertising*, Vol. 1 No. 1, pp. 4-23.
- Wang, Y.S., Wang, Y.M., Lin, H.H. and Tang, T.I. (2003), "Determinants of user acceptance of internet banking: an empirical research", *International Journal of Bank Marketing*, Vol. 14 No. 5, pp. 501-19.
- Wolfenbarger, M.F. and Gilly, M.C. (2003), "EtailQ: dimensionalizing, measuring and predicting detail quality", *Journal of Retailing*, Vol. 79 No. 3, pp. 183-98.
- Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60, pp. 31-46.
- Zeithaml, V.A., Parasuraman, A. and Malhotra, A. (2002), "Service quality delivery through websites: a critical review of extant knowledge", *Journal of the Academy of Marketing Science*, Vol. 30 No. 4, pp. 362-75.

Further reading

- Szymanski, D.M. and Hise, R.T. (2000), "E-satisfaction: an initial examination", *Journal of Retailing*, Vol. 76 No. 3, pp. 309-22.
- Zeithaml, V.A. and Bitner, M.J. (1996), *Services Marketing*, McGraw Hill, New York, NY.

Appendix. Measurement scales

1. Perceived service quality dimensions

a. Ease of use (EOU)

- EOU1 It is easy to get access to the online organization's website in which I obtained online services
- EOU2 The site is user friendly
- EOU3 Navigation on the site is easy
- EOU4 It is easy to find my way on the site

b. Website design (WEB)

- WEB1 The information on the site is attractively displayed
- WEB2 The information on the site is well organized
- WEB3 The information on the site is easy to understand and follow
- WEB4 The site layout and colors are appealing (fascinating)

c. Responsiveness (RESP)

- RESP1 It is easy to get in contact with the online organization, which provides the online services
- RESP2 The online organization is interested in getting feedback
- RESP3 The online organization is prompt in replying to queries
- RESP4 The online organization is prompt in replying to requests

d. Customization (CUST)

- CUST1 I feel my personal needs have been met when using the site or doing transactions with the online organization
- CUST2 I feel the online organization has the same norms and values as I have
- CUST3 This site provides me with information and products according to my preferences
- CUST4 This site provides me with information on how to do the products modification according to my preferences

e. Assurance (ASSURE)

- ASSURE1 I feel secure about the electronic payment system of the online organization
- ASSURE2 I feel secure when providing private information to the online organization
- ASSURE3 I would find the online systems secure in conducting the online transactions
- ASSURE4 The online organization is trustworthy

2. Satisfaction (SAT)

- SAT1 I am generally pleased with the organization's online services
- SAT2 I am very satisfied with the organization's online services
- SAT3 I am happy with the online organization
- SAT4 The website of the online organization is enjoyable

3. Trust (TRUST)

- TRUST1 I am prepared to give private information to online organizations
- TRUST2 I am willing to give my credit card number to most online organizations
- TRUST3 It is not a problem to pay in advance for purchased products over the internet
- TRUST4 Online organizations are professionals
- TRUST5 Online organizations always fulfill their promises

4. Loyalty

WOM

- LOY1 I will recommend the online organization to other people

LOY2 I would recommend the organization's website to others

Intention (INTENT)

LOY3 I intend to continue using the online organization

LOY4 I prefer the online organization above others

Source: Adapted from Ribbink *et al.* (2004)

Corresponding author

Norizan Kassim can be contacted at: izanmk@yahoo.com

Perceived
service quality
dimensions

371

Fonte: Asia Pacific Journal of Marketing and Logistics, v. 22, n. 3, p.351 - 371, 2010. [Base de Dados]. Disponível em: <<http://www.emeraldinsight.com>>. Acesso em: 20 ago. 2010.

A utilização deste artigo é exclusiva para fins educacionais

To purchase reprints of this article please e-mail: reprints@emeraldinsight.com
Or visit our web site for further details: www.emeraldinsight.com/reprints