Abstract
The aim of this paper is to investigate the impact of individual dimensions of perceived service quality on customer satisfaction, trust and loyalty in e-commerce settings. Empirical results indicate that the perceived service quality has positive direct effects on both customer satisfaction and trust. The results also show that customer satisfaction appears to have a positive direct effect on trust, while both customer satisfaction and trust have direct positive effects on loyalty through word-of-mouth and intention. Thus, both satisfaction and trust play an imperative role in creating customer loyalty as suggested by many authors. Some theoretical and managerial implications and suggestions for future research are also provided.

Keywords: SERVQUAL, customer satisfaction, trust, loyalty, e-commerce setting, Malaysia

Customer Loyalty in e-Commerce Settings: An Empirical Study

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INTRODUCTION
Loyal customers are indeed crucial to business survival (Reichheld and Schefter 2000, Semeijn 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.

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.

Indeed, perceived service quality and customer satisfaction are dominating the marketing literature. However, the relationships between the two constructs are debatable (Brown and Swartz 1989, Carman 1990, Cronin and Taylor 1992, 1994). Clearly, all companies need to consider and evaluate e-marketing and e-purchasing opportunities. A key challenge is designing a site that is attractive on first viewing and interesting enough to encourage repeat visits. Moreover, customers are becoming more open to competitive advances and are more familiar with brands and thus, satisfaction alone may not be adequate to ensure long-term customer commitment to a single online service provider (Heskett et al. 1994, Ranaweera and Prabhu 2003). Online companies often look beyond satisfaction to developing trust in order to reduce the perceived risk of using the service. Perhaps, trust is also seen as being a critical factor of considerable importance in the process of building and maintaining relationships in online services (Corbitt et al. 2003, Gummerus et al. 2004, Reichheld and Schefter 2000, Ribbink et al. 2004, Semeijn et al. 2005). Companies also face challenges in expanding the public 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...
secured. Research suggests that up to 75% 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 physical store (Anderson and Kerr 2002). 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 of service quality→customer satisfaction→trust→loyalty, drawing from Malaysian customers. Our study is expected to offer important managerial insights because of the unique cultural characteristics of the Malaysian society (the so called ‘truly Asia’ society) and the examination of the influences from the individual dimensions of constructs.

In this paper, first we present a short review of this research, 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 and some suggestions for future research.

THEORETICAL FRAMEWORK

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 (Cronin and Taylor 1992, 1994, Rust and Oliver 1994). Bitner et al. (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 (Bitner 1990, Parasuraman et al. 1988, Zeithaml 1988). This definition of service quality covers several points. One is an attitude developed over all previous encounters with a service firm (Bitner 1990, Bolton and Drew 1991a, 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 (Groonroos 1983). However, outcome quality is usually difficult for a customer to evaluate for any service because services tend to have more experience and credence qualities (Zeithaml 1988). 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 service encounter to service encounter (Bitner 1990, Groonroos 1984, Haywood-Farmer 1988). 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). Thus, 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 quality of e-service offerings in the virtual market place (Kim et al. 2006, Santos 2003) where there are almost no face-to-face interactions.

The SERVQUAL scale

Incidentally, measures of service quality have been discussed by academic researchers (for example, Cronin and Taylor 1992, Parasuraman et al. 1985, 1988, Teas 1993). For example, traditional SERVQUAL or ‘gap analysis model’, developed by Parasuraman et al. in the early 1980s, 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. Through the use of gaps scores, a set of five service quality dimensions (tangibles, reliability, responsiveness, assurance and empathy) across a broad spectrum of service industries are identified. Many studies (Finn and Lamb 1991, Singh 1991, Smith 1999) that employed SERVQUAL were not 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, tangibility, while responsiveness, assurance and empathy were found to be loaded into one factor. A more recent study by Gefen (2002) has shown that in an e-commerce environment, the SERVQUAL scale did not clearly evoke the five service quality dimensions defined by Parasuraman et al. (1988). The five dimensions of service quality in SERVQUAL were collapsed into three with online service quality: tangibles – a combined dimension of responsiveness and reliability; assurance; and empathy.

There have been several studies on the dimensions (or components) of service quality in e-commerce settings. These empirical studies (Ribbink et al. 2004, Srivinasan et al. 2002, Wolfinbarger and Gilly 2003, Yang et al. 2003, Zeithaml et al. 2000, 2002), however, have been conducted to identify the underlying key dimensions of service quality – 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) which we incorporated in our research model have been well-conceptualized and well-researched (for example, Gefen 2002, Ribbink et al. 2004) and are briefly discussed below.

**Ease of use.** The ease of use dimension is indeed an essential element of customer usage of computer technologies (Davis 1989, Morris and Turner 2001, Ribbink et al. 2004). It can be understood as the reliability dimension of the traditional SERVQUAL and is of particular importance for new users (Gefen and Straub 2000, Ribbink et al. 2004). In fact, ease of use is a determinant of service quality (Dabhokar 1996) and is decisive for customer satisfaction, since it enhances the efficiency of using the service and also in increasing customer trust (Gefen 2002). This dimension includes items such as functionality, accessibility of information, ease of ordering and navigation (Reibstein 2002, Ribbink et al. 2004). In fact, this dimension also reflects the service provider’s competence and therefore induces trust (Gummerus et al. 2004).

**Web site design or layout.** Previous studies (Gefen 2002, 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 of tangible SERVQUAL includes content, organization and structure of the site which are visually appealing, fascinating and pleasing to the eyes. 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 deliberately designed to communicate trust in e-commerce settings. Gefen (2002) found that this dimension is the most important in increasing customer loyalty.

**Responsiveness.** The responsiveness dimension can be understood as that of the traditional SERVQUAL (Zeithaml et al. 2002). This dimension has been identified by customers as an element of high-quality service (Voss 2000). It measures a company’s ability and willingness to provide prompt service when customers have questions/problems (Gefen 2002, Zeithaml et al. 2002). Understanding customer requirements and developing the service based on responsive feedback enhances service satisfaction and also increases customer trust (Gefen 2002, Gummerus et al. 2004). However, in practice, many companies have failed on this dimension (Kaynama and Black 2000).

**Personalization or customization.** The personalization or customization dimension can be also understood as the empathy dimension of the traditional SERVQUAL (Gefen 2002, Zeithaml et al. 2002). It reflects the degree to which information or a 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 2000). The concept of personalization consists of four components in an e-commerce setting: personal attention; preferences; understanding the specific needs of customers; and information regarding the products modification. According to Anderson and Kerr (2002), one of the three rules for success on the road of e-commerce is to make it personal. However, some of the previous studies (Gefen 2002, Ribbink et al. 2004) have found that this dimension (empathy) is a somewhat less important aspect of service quality in building trust.

**Assurance.** Finally, the assurance dimension is concerned with 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, efforts at increasing customer trust in online organization and privacy (Cai and Jun 2003, Gefen 2002, Ribbink et al. 2004). Privacy, security and ethics are important elements in e-commerce settings (Eriksson et al. 2005, Mukherjee and Nath 2003, 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. Therefore, perceived fears of service providers divulging personal information to others and the feelings of insecurity of the users provide unique challenges to the growth and development of online services. Hence, customers’ concerns about privacy and security may also accentuate the diversity of the privacy issue among them (Prahalad and Ramaswamy 2000). However, Wolfinbarger and Gilly (2003) found no effect of security/privacy on customer satisfaction and loyalty.

In the service marketing literature, however, there has been some debate concerning the appropriate manner to operationalize the service quality construct, the causal order between satisfaction and quality, and the process by which customers update the evaluation of quality...
Service quality and customer satisfaction

Although the discussions in the marketing literature largely support the performance-based over the disconfirmation-based evaluation of service quality, there are different opinions regarding the conceptual relationship between customer satisfaction and service quality (Bolton and Drew 1991a, 1991b, Cronin and Taylor 1992). Furthermore, both service quality and customer’s experience interact to form satisfaction, and this process can be complex (Carsky and Steinberg 1993). For example, academics are concerned with the causal link between service quality and customer satisfaction while practitioners are only interested in how customer repurchase intention behaviour can be predicted (Bolton and Drew 1991a, 1991b, Cronin and Taylor 1992).

The literature is confused about this relationship between customer satisfaction/dissatisfaction and service quality (Chong et al. 1997) and there are three theories about it, as shown in Figure 1. In the first theory, customer satisfaction is described as a judgment on the basis of a specific service encounter (Bolton and Drew 1991, Cronin and Taylor 1992) while service quality is considered a global judgment or attitude regarding the superiority of the service (Parasuraman et al. 1988). This judgment agrees with Oliver’s (1981) view that satisfaction is an emotional reaction which influences attitude and is consumption-specific. From this perspective, customer satisfaction should be limited to transaction-specific judgments and service quality to long-term attitudes (Cronin and Taylor 1994). Consequently, the cumulative effect of service encounter satisfactions should lead to a global evaluation of service quality over time (Parasuraman et al. 1994). Thus, customer satisfaction/dissatisfaction is an antecedent of service quality (Bittner 1990, Bittner and Hubbert 1994, Bolton and Drew 1991, Oliver 1981).

In contrast, the second theory indicates that service quality is an antecedent of customer satisfaction and that customer satisfaction exerts a stronger influence on future purchase intentions than does service quality (Anderson and Sullivan 1993, Cronin and Taylor 1992, Gotlieb et al. 1994, Woodside et al. 1989). The argument supporting service quality as an antecedent of satisfaction is that customers do not necessarily purchase the highest quality service, but may also weigh convenience, price and availability factors (Cronin and Taylor 1994). In addition, satisfaction appears to be a broader, more inclusive concept that is based upon perceived service quality and other factors (Zeithaml and Bittner 1996). Moreover, customer satisfaction appears to be a combination of cognitive and affective elements (Dabholkar 1995, Woodruff et al. 1993) while service quality seems to be mainly cognitive (Bittner 1990, Parasuraman et al. 1985). Indeed, when feeling satisfied, the affective components may be more important for customers than cognitive aspects (Dabholkar 1995, Oliver 1989, Westbrook 1987).

Next, consider the third theory about the process by which customers update their evaluation of quality. Service quality can be a global judgment, i.e. service quality is updated each time the customers experience the service (Boulding et al. 1993). In other words, this third theory proposes that customer satisfaction and service quality can be examined at both transaction-specific and global perspectives (Dabholkar 1995, Teas 1993). Thus, due to the lack of consensus in the literature about the causal link between service quality and customer satisfaction and the process by which customers update their evaluations, Dabholkar (1993) asserts that quality and satisfaction are interchangeable.

Indeed, both satisfaction and service quality have been conceptualized as acting jointly on intentions and higher purchasing intentions are reported when both perceived service quality and satisfaction levels are high (Taylor and Baker 1994).

Importantly, despite the disagreements about the linkages and dimensions of quality and satisfaction, most researchers agree that service quality or satisfaction comprises dimensions that are both measurable and variable. Moreover, the findings across studies support the contention that service dimensions would lead to ‘important actions’ that customers might take after the consumption (Asubonteng et al. 1996: 66). These important actions include willingness to return and willingness to recommend (Woodside et al. 1989).
Our view of the relationship between service quality and customer satisfaction draws conceptually from the second theory discussed above, i.e. perceived service quality as an antecedent of customer satisfaction. This choice is supported by other marketing researchers who suggest that customer satisfaction exerts a stronger influence on future purchase intentions than does perceived service quality (Anderson and Sullivan 1990, Cronin and Taylor 1992, Gotlieb et al. 1994, Woodside et al. 1989).

Importance of trust

Trust is an important construct catalyst in many transactional relationships. For example, in the commitment-trust relationship marketing literature, trust has been conceptualized 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 conceptualized as a dimension of technology acceptance model (TAM), could have a striking influence on user willingness to engage in online exchanges of money and personal sensitive information as well (e.g. Friedman et al. 2000, Hoffman et al. 1999, 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). On the other hand, 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. Also, the existence of trust in a relationship is a kind of insurance against risks and unexpected behaviour. Trust partly depends on experience from interacting with another party. For example, a customer who has been doing business with a service provider for sometime and is pleased with the results is inclined to trust that service provider.

Many authors considered trust as an outcome of customer satisfaction and as an antecedent of customer commitment and customer loyalty (Moorman et al. 1993). According to Gronroos (2001) trust towards a system depends not only on the laws, industry regulations and contracts but also on the professionalism of the other party. If a customer, for example, has entered into a long-term contract with a service provider, the customer trusts that the service provider will perform according to expectations.

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). In a research on online banking customers, Mukherjee and Nath (2003) looked at trust as a driver of customer relationship commitment. They found that trust has a significant positive influence on relationship commitment. Another positive effect of trust on customer loyalty with respect to the service provider has been demonstrated by Gefen (2002) for an online vendor. In line with these findings, when a customer trusts an online vendor s/he is expected to increase loyalty towards that vendor. At the same time, it decreases the perceived risk with the online vendor as well. Although many authors suggested that trust is directly affecting loyalty but its anticipated contribution to loyalty is much less than to satisfaction (see Ribbink et al. 2004).

Customer loyalty and its antecedents

The various definitions of loyalty have been discussed by a number of researchers more than 20 years ago (Jacoby and Chestnut 1978). They argue that customer loyalty involves both attitudinal and behavioural components. Thus, in order to assess the antecedents of customer loyalty, it is important for us to understand the difference between attitudinal loyalty and behavioural loyalty. For example, some researchers 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 favourable set of stated beliefs toward the brand purchased. If the consumer believes that a brand has desirable attributes, s/he will have a more favourable attitude toward the brand. These attitudes then may be measured by asking people how much they like the brand, feel committed to it, would recommend it to others, and have positive beliefs and feelings about it (Dick and Basu 1994). It has also been found that attitudinal loyal customers are much less susceptible to negative information about the brand than the 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 favourable. As such, the strength of this attitude is considered by many researchers as the key predictor of a brand’s purchase and repeat patronage (see Oliver 1997: 392). As a result, intent to purchase and repurchase capture the behavioural component of loyalty. Research on factors that influence customer loyalty has made considerable progress within the field of consumer behaviour for many years. In this study, customer loyalty is behaviourally expressed by retention (Bansal and Taylor 1999) and emotionally (Ranaweera and Prabhu, 2003) expressed by word-of-mouth (WOM). Retention of current customers or loyalty is of interest to many researchers (for example, Dowling and Uncle 1997, Ganesh et al. 2000, Mittal and Lasser
1998, Zeithaml, 2000). Furthermore, it drives the notion of relationship marketing (Marshall and Javalgi 1995). The emphasis of defensive marketing on customer retention is justified by the lesser cost of retaining a customer than obtaining a new one (Fornell 1992, Fornell and Wernerfelt 1987, Keaveney 1995, Reichheld and Kenny 1990, Reichheld and Sasser 1990). Furthermore, a company can presumably increase its revenues and profits by inducing its existing customers to increase their usage (Danaher and Rust 1996). In other words, the company can do more business with its existing customers and thus make its customer more profitable. This profitability is assumed to result from quality because higher quality leads to satisfied customers and thus make its customer more profitable. This profitability is assumed to result from quality because higher quality leads to satisfied customers (Anderson et al. 1994, Cronin and Taylor 1992, Danaher and Rust 1996, Parasuraman et al. 1988). Moreover, satisfied customers tend to use more of a service or product (Danaher and Rust 1996). Thus, building relationships is a form of cross-selling in the traditional sense where many companies focus on selling additional products and services to their existing customers. It can also be done through up-selling which involves marketing higher value products or services to existing customers. Nurturing the relationships can thus make them continue to use the products and services.

In contrast, an offensive marketing strategy aims to attract new customers (Fornell and Wernerfelt 1987). Traditionally, offensive marketing seeks to attract new customers through advertising, sales promotion and pricing (Danaher and Rust 1996). However, high quality can also attract new customers, either by communicating high quality through advertising or by communication through WOM (Boulding et al. 1993, Danaher and Rust 1996, Heskett et al. 1994, Levesque and McDougall 1996, Zeithaml et al. 1996). 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 will eventually influence their purchasing intentions. This type of loyalty is known as an emotionally expressed behaviour (Ranaweera and Prabhu 2003) where customers are willing to inform others on service incidents that have given them satisfaction (Soderlund 1998). Based on this research, it was reported that 78% of consumers said that they trusted direct recommendations from other consumers through WOM. Everywhere, it seems, people still trust their friends (Pfanner 2007). As has been repeatedly modelled 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 the attitudinal part of loyalty. Just like repurchase intent, they found that intent to recommend was a causal outcome of favourable attitudes and not a direct measure of them (e.g. I am satisfied, therefore I recommend). Thus, intent to recommend is also a behavioural intention (Zeithaml et al. 1999) but not satisfaction. 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 quantities 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).

Proposed theoretical framework and hypotheses development

In essence, the framework in Figure 2 suggests six primary links between the constructs involved in customer satisfaction, trust and customer loyalty in an e-commerce setting derived from the literature as discussed above. The first two links suggest separate relative effects of different service quality dimensions on customers’ satisfaction and trust. The third link is that trust is considered as an outcome of customer satisfaction. The fourth and fifth links proposed that both customer satisfaction and trust are antecedents of WOM and customer intentions. The final link is that the latter is considered as an outcome of WOM. These six links are important because they suggest how customer satisfaction, trust and customer loyalty are constructed and related and, how the dimension-specific of service quality dimensions can shape this construction and their relationship in the e-commerce service settings. These links will be examined in turn.

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

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

Finally, 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. We assumed that these effects can be expected in e-commerce. The six links in the theoretical framework of Figure 2 are now discussed in turn.

**Links 1 and 2: Service quality dimensions help construct customer satisfaction and trust.** The first link depicts five dimensions of service quality in modelling the customer satisfaction process and customer trust. Consider the satisfaction process first. Overall satisfaction with a service is a result of a complex process involving the interrelationships between many dimensions. Thus, without an understanding of the potential effects of individual dimensions it will be difficult for managers to design or operate their service processes effectively other than through estimation. Moreover, those dimensions may indicate the relative importance that customers attach to a particular dimension of the service performance as it involves both service provider and customer (Carman 1990, Rust and Zahorik 1993). This explanation appears to be applied in e-commerce settings as well. To that effect we hypothesize:

**Hypothesis 1a:** Ease of use is positively related to customer satisfaction.

**Hypothesis 1b:** Website design is positively related to customer satisfaction.

**Hypothesis 1c:** Responsiveness is positively related to customer satisfaction.

**Hypothesis 1d:** Customization is positively related to customer satisfaction.

**Hypothesis 1e:** Assurance is positively related to customer satisfaction.

Indeed, the quality elements of the services are expected to affect trust directly (see Gefen 2002, Ribbink et al. 2004). The relative importance of the service dimension would represent trust cues that convey the trustworthiness of the site and the system according to customers’ expectations (Gefen 2002, Ribbink et al. 2004).

We thus hypothesize:

**Hypothesis 2a:** Ease of use is positively related to trust.

**Hypothesis 2b:** Website design is positively related to trust.

**Hypothesis 2c:** Responsiveness is positively related to trust.

**Hypothesis 2d:** Customization is positively related to trust.

**Hypothesis 2e:** Assurance is positively related to trust.

**Link 3: Customer satisfaction builds customer trust.** In this model trust is considered as an outcome of customer satisfaction. Accordingly, satisfaction with a specific application of the system will increase customers’ confidence in the system as a whole (Ribbink et al. 2004). Thus, we hypothesize:

**Hypothesis 3:** Satisfaction is positively related to trust.

**Links 4 and 5: Customer satisfaction and trust create customer loyalty.** The fourth link is about the relationship between customer satisfaction and customer loyalty. Satisfaction is a causal driver of recommendation and repeat intentions, as discussed above. Moreover, Ribbink et al. (2004) found that these
relationships may be even more important in e-commerce. This discussion leads to:

Hypothesis 4a: Customer satisfaction is positively related to loyalty through word-of-mouth.
Hypothesis 4b: Customer satisfaction is positively related to loyalty through intention.

Many researchers regard trust as an antecedent of customer relationship commitment or loyalty (Gefen 2002, Moorman et al. 1993, Mukherjee and Nath 2003). Also, the existence of trust in a relationship is a kind of insurance against risks and unexpected behaviour. On the grounds of the above-mentioned argument, we hypothesize:

Hypothesis 5a: Trust is positively related to loyalty through word-of-mouth.
Hypothesis 5b: Trust is positively related to loyalty through intention.

Link 6: Word-of-mouth helps create intentions. Finally, WOM and INTENT represent the emotional and behavioural extent of customer loyalty and as such there must be a relationship between them. Thus, based on this argument we hypothesize:

Hypothesis 6: Word-of-mouth is positively related to intention.

METHODOLOGY

This research was carried out in three stages. In the first stage, a questionnaire was designed to measure service quality, to evaluate the customers’ satisfaction and trust, and to assess the sentimental and behavioural dimensions of their loyalty towards their online service providers. Stage two involved the administration of the questionnaire for data collection and the appraisal of the measurement method. Finally, in the third stage, structural equation modelling (SEM) was used to establish the causal relations between the constructs.

Stage one

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 (Appendix 1). The perceived service quality construct was based on the traditional SERVQUAL conceptualization (Parasuraman et al. 1985, 1988, Zeithaml et al. 2000) 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. 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.

Stage two – data collection and appraisal of the scale

A convenience sample was used in this study. A personally-administered questionnaire method was employed for the survey to identify the potential respondents in Malaysia. 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, Burns and Bush 2000, Malhotra 1993, Sekaran 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 by visiting organizations and private residences. The respondents who had and had not previously used e-commerce services were included in the survey. The survey was conducted over a period of six weeks. Of a total of 300 questionnaires distributed, 241 respondents responded in which 85.1% were Malaysians and 14.9% were non-Malaysians. The majority of the respondents were male (60.6%) between 21 to 50 years of age (93.4%). Most respondents (70.5%) had obtained college degrees with monthly income levels between RM3,001 to RM10,000 (42.3%) (1 USD=RM3.33), while 48.5% of the respondents did not wish to reply.

To test the dimensionality of the instrument, all the 20 items were analyzed using oblique rotation (Jabnoun and Al-Tamimi 2003). The criterion of meaningful factor loading was set to 0.4 (Tsoukatos and Rand 2006). Use of these criteria resulted in a three-dimensional solution – assurance, while ease of use and website design or layout and responsiveness and personalization were found to be loaded into a single factor, respectively – explaining 65.6% of the variance. These factors are labelled as user friendly website (UFW), empathy (EMPATHY) and assurance (ASSURANCE). The same procedure was repeated using principal component extraction using varimax rotation. This procedure resulted in the same four factors. The sample factor means, standard deviation and correlations are reported in Table 1.
AMOS 4 was used to perform a confirmatory factor analysis (CFA) to investigate the constructs dimensionality (see Table 2). The robust maximum likelihood estimation was used to allow for the absence of multivariate normality. Model fits were evaluated using the 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 (Fan et al. 1999). The initial CFA model for trust was not acceptable, so the approach suggested by Anderson and Gerbing (1988) was utilized and one item was eliminated to achieve an acceptable fit as shown in Table 2.

Table 3 reports the psychometric properties of each scale of the three dimensions of perceived quality, and of customer satisfaction, trust, word-of-mouth and intentions. The significant factor loadings demonstrate the convergent validity. Also, all the average variances extracted exceeded the minimum level of 0.50 (Fornell and Larcker 1981) demonstrating adequate discriminant validity of the constructs.

Third stage – structural equation modelling

The hypotheses were tested using 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. 1995). 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 CFI and the RMSEA because of their robustness, stability, and lack of sensitivity to sample size (Fan et al. 1999).

RESULTS

The model of Chi-square, CFI, RMSEA, degrees of freedom (df) and p-statistic are reported in Table 4. We can thus safely conclude that the model is valid and therefore, we can continue to analyze the outcome of the hypothesized effects.

As can be seen in Table 4, 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.

Table 1. Scale development sample factor means, standard deviations and correlations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. UFW</td>
<td>4.577</td>
<td>0.763</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. EMPATHY</td>
<td>4.146</td>
<td>0.804</td>
<td>0.607</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ASSURANCE</td>
<td>3.945</td>
<td>1.151</td>
<td>0.532</td>
<td>0.531</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SAT</td>
<td>4.437</td>
<td>0.876</td>
<td>0.682</td>
<td>0.656</td>
<td>0.630</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. TRUST</td>
<td>3.771</td>
<td>0.979</td>
<td>0.542</td>
<td>0.565</td>
<td>0.588</td>
<td>0.635</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. WOM</td>
<td>4.535</td>
<td>1.092</td>
<td>0.617</td>
<td>0.559</td>
<td>0.439</td>
<td>0.729</td>
<td>0.671</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>7. INTENT</td>
<td>4.309</td>
<td>1.042</td>
<td>0.550</td>
<td>0.666</td>
<td>0.565</td>
<td>0.733</td>
<td>0.657</td>
<td>0.728</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: UFW= User friendly website; SAT= Satisfaction; TRUST= Trust; WOM= Word-of-mouth; and INTENT= Retention Intentions. All correlations are significant at p<0.01

Table 2. Fit statistics for all scales (CFA results)

<table>
<thead>
<tr>
<th></th>
<th>UFW</th>
<th>EMPATHY</th>
<th>ASSURANCE</th>
<th>SAT</th>
<th>TRUST</th>
<th>WOM</th>
<th>INTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>χ²</td>
<td>10.66</td>
<td>15.66</td>
<td>3.08</td>
<td>3.42</td>
<td>0.36</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>df</td>
<td>7</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>p</td>
<td>0.15</td>
<td>0.07</td>
<td>0.08</td>
<td>0.18</td>
<td>0.55</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>CFI</td>
<td>1.00</td>
<td>0.99</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>No. of items</td>
<td>8</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Note: The just identified (two-item scales) models were appropriate as the numbers of data parameters perfectly reproduced the sample covariance matrix. The chi-square statistic and the degrees of freedom are equal to zero.
Table 3. The measures and their psychometric properties

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Perceived service quality</th>
<th>Items</th>
<th>Factor loadings</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>User friendly website (UFW)</td>
<td>(\alpha=0.91, \text{CR}=0.91, \text{AVE}=0.58)</td>
<td>EOU1 0.693</td>
<td>0.481</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EOU2 0.842</td>
<td>0.708</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EOU3 0.808</td>
<td>0.653</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EOU4 0.748</td>
<td>0.559</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LAYOUT1 0.665</td>
<td>0.443</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LAYOUT2 0.726</td>
<td>0.528</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LAYOUT3 0.904</td>
<td>0.818</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LAYOUT4 0.650</td>
<td>0.423</td>
<td></td>
</tr>
<tr>
<td>Empathy (EMPATHY)</td>
<td>(\alpha=0.89, \text{CR}=0.91, \text{AVE}=0.56)</td>
<td>REPN1 0.664</td>
<td>0.441</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>REPN2 0.768</td>
<td>0.590</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>REPN3 0.775</td>
<td>0.601</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>REPN4 0.784</td>
<td>0.615</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CUST1 0.747</td>
<td>0.557</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CUST2 0.774</td>
<td>0.599</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CUST3 0.775</td>
<td>0.601</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CUST4 0.715</td>
<td>0.511</td>
<td></td>
</tr>
<tr>
<td>Assurance (ASSURANCE)</td>
<td>(\alpha=0.93, \text{CR}=0.93, \text{AVE}=0.76)</td>
<td>ASSURE1 0.908</td>
<td>0.825</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASSURE2 0.906</td>
<td>0.821</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASSURE3 0.843</td>
<td>0.711</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASSURE4 0.826</td>
<td>0.682</td>
<td></td>
</tr>
<tr>
<td>Satisfaction (SAT)</td>
<td>(\alpha=0.91, \text{CR}=0.91, \text{AVE}=0.58)</td>
<td>SAT1 0.854</td>
<td>0.729</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAT2 0.881</td>
<td>0.777</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAT3 0.866</td>
<td>0.750</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAT4 0.752</td>
<td>0.565</td>
<td></td>
</tr>
<tr>
<td>Trust (TRUST)</td>
<td>(\alpha=0.79, \text{CR}=0.89, \text{AVE}=0.68)</td>
<td>TRUST1 0.770</td>
<td>0.590</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TRUST2 0.970</td>
<td>0.930</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TRUST3 0.780</td>
<td>0.610</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TRUST4 0.770</td>
<td>0.590</td>
<td></td>
</tr>
<tr>
<td>Word-of-mouth (WOM)</td>
<td>(\alpha=0.94, \text{CR}=0.94, \text{AVE}=0.89)</td>
<td>LOY1 0.920</td>
<td>0.929</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LOY2 0.964</td>
<td>0.846</td>
<td></td>
</tr>
<tr>
<td>Intention (INTENT)</td>
<td>(\alpha=0.81, \text{CR}=0.82, \text{AVE}=0.69)</td>
<td>LOY3 0.920</td>
<td>0.847</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LOY4 0.735</td>
<td>0.540</td>
<td></td>
</tr>
</tbody>
</table>

Note: \(\alpha\)=Cronbach’s alpha, CR=Composite Reliability, AVE=Average Variance Extracted

DISCUSSION

The final and parsimonious model of the relationships is shown in Figure 3. The results provide support for all but one of the six hypotheses, the exception being Hypothesis 2a.

First, as expected, service quality is an antecedent and that it positively affects customer satisfaction (Ribbink et al. 2004). This result was confirmed by the \(t\)-value, which identified the independent variables (user friendly website, empathy and assurance) and which explained 60.9 per cent of the variance of the dependent variable, i.e. customer satisfaction.

Second, interestingly, the results of the analysis also indicate that service quality is an antecedent of trust. However, only the coefficients of empathy and assurance are significant with trust while the coefficient of user friendly website is insignificant. Specifically, assurance is the primary dimension in building customer trust in an online environment. Thus, our results seem to confirm the hypotheses of Ribbink et al. (2004) and Gefen (2002) that it helps in building and in increasing customer trust in online organizations or transactions. Both assurance and empathy (the combined dimension of responsiveness and personalization) explained 48.6% of the trust’s variance. A possible explanation for the lesser role of the combined dimension of ease of use (reliability) and website design (tangibles) may be that the respondents are very familiar with the Internet and have a high technology readiness (Parasuraman 2000). This conclusion is well supported by the data (55.2% of the respondents access the Internet several times a day). As such, the user friendly website does not appear to be an important factor in building trust among the Internet users. Thus, the findings suggest that assurance and the combined dimension of responsiveness and personalization (empathy) are the most critical. However, a more recent study by Gefen (2002) reflected a different view with regards to the role of empathy in building customer trust. According to him, because of the lack of human interaction it makes empathy a somewhat less important aspect of service quality dimension. His findings, however, fail to confirm the claim made by Anderson and Kerr (2002) that one of the three rules for success on the road of e-commerce is to make it personal.

Third, customer satisfaction was found to be positively and significantly related to trust. The results confirm what was claimed about this variable in the introduction: trust is an outcome of customer satisfaction. Thus, our results seem to confirm the hypothesis of Ribbink et al. (2004) that satisfaction drives trust.

Fourth, customer satisfaction was also found to be positively and significantly related to customer loyalty (both emotional and behavioural dimensions of customer loyalty). The results were confirmed with by the \(t\)-value that identified satisfaction as the best predictor of WOM and intentions. As has been modelled repeatedly...
in the field of customer satisfaction, satisfaction is a causal driver of recommend and repeat intentions.

Fifth, the direct effect of customer trust on customer loyalty was found to be positively and significantly related. This result confirms Pfanner’s (2007) claims that consumers trusted direct recommendations from other consumers through WOM. Thus, trust seems to be an important factor in creating and building WOM and intentions in an online environment but its role in the process is much less than satisfaction (Ribbink et al. 2004).

Finally, we introduce a new path of WOM as an antecedent of intention. Our inspection of the coefficient found that WOM does influence retention intentions. This confirms our hypothesis that emotional loyalty positively influences customer behavioural loyalty, where it explains 62.9% of intention’s variance.

CONCLUSIONS AND DIRECTION FOR FUTURE RESEARCH

The major contribution of this study is the adoption of a more comprehensive approach to investigating determinants of loyalty than previous studies (Gefen 2002, Ribbink et al. 2004). The present study contributes to the body of knowledge by proposing and testing a conceptual model that considers emotional loyalty (WOM) as an antecedent of behavioural loyalty (reten-

![Figure 3. Parsimonious model](image-url)

**Table 4. Full structural equation model**

<table>
<thead>
<tr>
<th>Path</th>
<th>Standardized path coefficients</th>
<th>t-value</th>
<th>p-value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT ← UFW</td>
<td>0.35</td>
<td>6.641</td>
<td>0.00</td>
<td>H1a: Accepted</td>
</tr>
<tr>
<td>SAT ← EMPATHY</td>
<td>0.29</td>
<td>5.473</td>
<td>0.00</td>
<td>H1b: Accepted</td>
</tr>
<tr>
<td>SAT ← ASSURANCE</td>
<td>0.29</td>
<td>5.799</td>
<td>0.00</td>
<td>H1c: Accepted</td>
</tr>
<tr>
<td>TRUST ← UFW</td>
<td>0.10</td>
<td>1.504</td>
<td>ns</td>
<td>H2a: Rejected</td>
</tr>
<tr>
<td>TRUST ← EMPATHY</td>
<td>0.18</td>
<td>2.790</td>
<td>0.01</td>
<td>H2b: Accepted</td>
</tr>
<tr>
<td>TRUST ← ASSURANCE</td>
<td>0.26</td>
<td>4.251</td>
<td>0.00</td>
<td>H2c: Accepted</td>
</tr>
<tr>
<td>TRUST ← SAT</td>
<td>0.29</td>
<td>3.862</td>
<td>0.00</td>
<td>H3: Accepted</td>
</tr>
<tr>
<td>WOM ← SAT</td>
<td>0.52</td>
<td>10.155</td>
<td>0.00</td>
<td>H4a: Accepted</td>
</tr>
<tr>
<td>INTENT ← SAT</td>
<td>0.31</td>
<td>5.474</td>
<td>0.00</td>
<td>H4b: Accepted</td>
</tr>
<tr>
<td>WOM ← TRUST</td>
<td>0.38</td>
<td>7.434</td>
<td>0.00</td>
<td>H5a: Accepted</td>
</tr>
<tr>
<td>INTENT ← TRUST</td>
<td>0.16</td>
<td>2.940</td>
<td>0.00</td>
<td>H5b: Accepted</td>
</tr>
<tr>
<td>INTENT ← WOM</td>
<td>0.33</td>
<td>5.602</td>
<td>0.00</td>
<td>H6: Accepted</td>
</tr>
</tbody>
</table>

*Note: Model fit: $\chi^2=(df=3)$ 7.070, $p<0.070$; CFI=0.996, RMSEA=0.000*
tion and customer trust. Apparently, customer satisfaction and trust do in fact have direct relationships with customer loyalty. Understanding the role of satisfaction and trust in the customer intention decision has important managerial implications in the present competitive business environment given the potential effect on the company’s future profits from customers’ intentions to use the services and in attracting new customers through WOM. As such, this study is unique in that it investigates a set of previously untested relationships in e-commerce settings. 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 customer satisfaction, trust and loyalty in e-commerce settings. In brief, our finding reveals that quality and contacts are of almost equal importance in online environments.

Several limitations are related to the sample. First, the sample size is very small and therefore a more representative sample selection will increase the validity of the study. Since this study is considered as the first attempt to investigate the impact of individual dimensions of service quality on customer satisfaction, trust and loyalty in a developing country, there is a clear need for further research. Comparative studies with other developed countries could also be 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 customer satisfaction and trust on loyalty may be more or less. Since customer relationships are built over time, this cross-sectional research cannot fully capture the dynamic, interactive and 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.

**MANAGERIAL IMPLICATIONS**

The importance of our findings for managerial decision-making processes is evident. This study supports the importance of service quality in creating and building customer satisfaction and trust. The findings of this study suggest that the quality of services provided by an online retailer is the main reason for customer satisfaction and feelings of security. Specifically, the combined dimension of reliability and tangibles (user friendly website) is the primary dimension in creating customer satisfaction while assurance and empathy (the combined dimensions of responsiveness and personalization) are primary dimensions in building both customer satisfaction and customer trust.

Satisfaction, which contributes considerably to loyalty, can be increased by providing an attractive user interface, and an easy to use and interesting system. Specifically, the positive word-of-mouth decreases the need for marketing expenses and can increase revenue if new customers are attracted.

Trust, on the other hand, can be easily inspired by making the system trustworthy, secure, private, responsive and personalized for their users.

Finally, of particular interest is the finding that emotional loyalty (WOM) is an antecedent of behavioural loyalty (retention intentions). Consequently, companies should direct their before and after sales service mechanisms towards developing consumers’ willingness to engage in positive WOM in favour of the company and its services.

**References**


Appendix

Measurement scales
Perceived service quality dimensions

1. 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 around the site

2. Website design and layout (LAYOUT)
LAYOUT1 The information on the site is attractively displayed
LAYOUT2 The information on the site is well organized
LAYOUT3 The information on the site is easy to understand and follow
LAYOUT4 The site layout and colours are appealing (fascinating)

3. Responsiveness (REPN)
REPN1 It is easy to get in contact with the online organization which provides the online services.
REPN2 The online organization is interested in getting feedback
REPN3 The online organization is prompt in replying to queries
REPN4 The online organization is prompt in replying to requests

4. 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

5. Assurance (ASSURANCE)
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

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

Trust (TRUST)
TRUST1 I am prepared to give private information to online companies
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

Word-of-mouth (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: developed for this study, adapted from Ribbink et al., (2004)