Customer Interface Quality on Customer e-Loyalty and e-Satisfaction in Malaysia with the Effects of Trustworthiness

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Abstract

With the increasing usage of e-commerce as one of the marketing channels, it has become tremendously critical for a business to leverage Internet to extend their business via online. In this case, an interactive customer interface plays a role as virtual representation of e-retailers to capture more customers and retain the existing online customer. Therefore, the primary objective of this study is to investigate the direct impact of customer interface quality and trustworthiness on customer e-loyalty and e-satisfaction. This study also aims to examine the indirect impact of customer interface quality on customer e-loyalty and e-satisfaction through the mediating effect of trustworthiness. A survey method was conducted with three hundred and night-five respondents who had online purchasing experience in the past. Data collected from 395 useful respondents were tested against the research model using smart partial least squares (smartPLS 2.0 (M3). The findings indicated that customer interface quality is positively related to customer e-loyalty and e-satisfaction (at significant P<0.01 level) in the context of Malaysia. Additionally, in this study, trustworthiness has played the role of a mediator. These findings provide several implications, limitations of the study, and recommendations for future research are outlined.

Keywords: Customer Interface Quality, e-Loyalty, e-Satisfaction, Trustworthiness
1. Introduction

The rapid growth of e-commerce has changed the customer shopping experience, especially living in this electronic- or mobile-based society. More traditional, offline shoppers are encouraged to switch to online shopping due to many advantages offered by Internet, such as convenience, usefulness, ease-of-use, enjoyment, and so on. Perhaps, due to the time constraint and serious traffic jam problems on the highway, they are more willing to stay at home or office to order the needed products or services via online with a single click of mouse. Therefore, it confirms Internet as an excellent platform (Cheng, Wang, Lin, & Vivek, 2009) and efficient advertising platform (Lim, Yap, & Lau, 2010).

The phenomenal growth in the numbers of Internet users and the perceived benefits of Internet usage cannot be denied. However, Internet businesses should focus on the quality interface itself to achieve customer loyalty and satisfaction. This is because technology quality is deemed as the main determinant of customer satisfaction and customer loyalty, especially from an online perspective. Moreover, customers in recent times are smart and are fortunate to have the opportunity to evaluate the quality of Internet technology, based on how they perceive the quality criteria of the particular website. Evidently, past survey study, Genex found that 65 percent of online customers are discouraged to do online shopping due the issue of poor customer interface (Tsao, 2005). Hence, this study generally aims to investigate the direct impact of customer interface quality (convenience, customization, interactivity, and character) and trustworthiness on customer e-loyalty and e-satisfaction amongst Malaysian online shoppers. In addition, this study also examines the indirect impact of customer interface quality on customer e-loyalty and e-satisfaction through the mediating effect of trustworthiness.

2. Theoretical Foundations and Hypotheses Development

2.1 Customer e-Loyalty

In this study, customer loyalty is conceptualized as behavioural loyalty (e.g., repeat purchase via positive recommendation). As customer loyalty facilitates repeat purchasing behaviour (Anderson & Srinivasan, 2003), it is also able to increase customer retention (Chirico & Presti, 2008; Singh, 2006), a profitable outcome for e-retailers (Srinivasan et al., 2002). Oliver (1997) found that customer loyalty involves a higher level of commitment to repurchase particular products or services in future (Costabile, Raimondo, & Miceli, 2010). Correspondingly, Lin and Wang (2006) defined customer loyalty as customers, who showed their positive attitude to enhance their repeat buying behaviour (Liao, 2012).

In the literature reviewing, Cyr (2008) had earlier defined e-loyalty as e-customers’ intention to stay with the same website (Cyr, Head, & Ivanov, 2009). As a proxy definition of e-loyalty, e-loyalty is defined as a favourable customer attitude toward the similar e-retailer
that affects the repeat buying behaviour. In this study, there are three dimensions which are proposed to examine customer e-loyalty, word-of-mouth, complaining behaviour, and future purchase intention. As stated, online word-of-mouth refers to the content of the shared information, such as opinions and past experiences (e.g., positive or negative) via the Internet (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2002). Accordingly, this, word-of-mouth is a powerful and persuasive marketing tool for companies to convey the product or service information to the customers (Liu & Payne, 2010). Positive word-of-mouth is a strong driver in increasing the credibility of a company and its products (Grönroos, 1990). Future purchase intention is found to have links to previous purchase intention (LaBarbera & Mazursky, 1983), because the intention to repurchase is the driver of future behaviour (Jones & Sassar, 1995). In this study, customer e-purchase intention refers to an individual’s purchase intention via the Internet (Salisbury, Pearson, Pearson, & Miller, 2001). In addition, complaining behaviour is defined as a negative response occurring when customers are dissatisfied with a product or service (Chirico & Presti, 2008).

2.2 Customer e-Satisfaction

E-Satisfaction, in this study, is measured based on non-store retailing. Creating e-satisfaction requires customers to feel comfortable shopping on websites (Szymanski & Hise, 2000), and maintain a positive attitude and response throughout the experience (Muylle, Moenaert, & Despontin, 2004). Anderson and Sullivan (1990) found that repurchase intention significantly influences satisfaction levels (Choi, Kim, & Kim, 2000). This finding is in line with a study by Bolton and Drew (1991) in which customer satisfaction influenced purchase intention and purchase behaviour. Customers are satisfied if their actual experience exceeds their prior expectations (Anderson & Sullivan, 1993). For the purposes of this study, the researcher has selected repurchase intention and revisit as the dimensions of customer e-satisfaction. Repurchase intention refers to the number of e-purchases users plan to make from a website (Reibstein, 2002). Additionally, revisit is defined as the decision to repurchase the same products and visit the same stores regularly (Dholakia & Bagozzi, 2001), and is associated with consumer motivation values.

2.3 Trustworthiness

Trustworthiness, generally, is defined as an attribute of trust by the trustees (Kate, 2009). Gabarro (1978) defined trustworthiness as a complex construct that creates competence and character of trustees and Liberman (1981) acknowledged trustworthiness as the beliefs of trustees towards trust in lifelong relationships (Akter, D’Ambra, & Ray, 2011). In this study, trustworthiness is represented as mediator and it is referred to the trust beliefs that eventually lead to a consumer trusting a website. Furthermore, trustworthiness and trust are considered to play an important role in the process of online purchase decision-making. As a result, the
researcher intent to apply these three specific dimensions, honest, benevolence, and competence. As acknowledged in the literature, benevolence means the trustors, e-consumers, feel confident that trustees are willing to provide the best services (Akter et al., 2011). The definition of honesty is similar with integrity in this study, which is defined as the basis of trustee-trustor relationship (Akter et al., 2011). It is the expectation that trustees will act in a proper manner, based on satisfactory standards of honesty, towards the trustors (Ridings et al., 2002). Despite honesty and benevolence, with the attribute of competence, e-consumers expect to determine the quality and accuracy of information, hence it is the knowledge, talents, and expertise required to complete the purchase (Hosmer, 1995).

2.4 Customer Interface Quality

Customer interface is interpreted as the online virtual representative of online retailers to provide needed and relevant information to the customers (Chang & Chen, 2008). In fact, website is a place for customers to interface with e-retailers in the digital world (Gehrke & Turban, 1999). Based upon the review of the previous research, there are a number of validated antecedent that has been used to measure the customer interface quality. Swaminathan, Anderson, and Ponnavaolu (2002) indicated that cultivation, choice, care, community, convenience, customization, character and interactivity are antecedent of customer e-loyalty (Mutum & Ghazali, 2010). Srinivasan et al. (2002) proposed eight antecedents of loyalty namely, customization, interactivity, cultivation, care, choice, character and convenience (Donnelly, 2009). However, for the purpose of this study, the researcher has adapted the dimensions of customer interface quality, which contented convenience, customization, interactivity, and character. From the customer’s point of view, convenience means speed and ease of shopping (Seiders, Berry, & Gresham, 2000). Convenience also refers to ease-of-navigation and takes minimum time to sort information, and get into the process of online purchasing (Ye & Jia, 2010). Apart from convenience, customization is interpreted as an ability of a website to provide the ease of service, accessing availability, and ensure satisfaction of online consumers from the website (Chang & Chen, 2008). This is also known as customization website. Customized website eases the online consumers to create their own website to record their history of purchase, relevant products or services information, and their preferences (Kim, Kim, & Kandampully, 2009). Moreover, in the literature reviewing, Fortin (1997) acknowledged interactivity as a process of interaction among the consumers and retailers or using the network communication device to communicate with other people such as email at any time and reexecute the information (Dholakia, Dholakia, & Fortin, 2000). In addition, character is defined as the surface looks of a website or the aesthetics. With an aesthetical or emotional appeal, a website captures the attention of online consumer to stop to look for it (Beaird, 2007).
2.5 Development of Hypotheses

Previous studies have found that customer interface factors contributed to customer e-loyalty, these include character, customization, interactivity, and convenience (Mehta, 2005; Chang & Chen, 2008). As stated in the literature reviewing, customization is a driver of customer e-loyalty (Kassim & Ismail, 2008; Tarafdar & Zhang, 2008), and hence it increases customer loyalty (Ansari & Mela, 2003). Besides, interactivity also creates positive impact on customer e-loyalty (Ng & Matanda, 2010; Srinivasan, Anderson, & Ponnavolu, 2002). Convenience, the third identified factor, also influences customer e-loyalty (Chang & Chen, 2008). In addition to its impact on customer e-loyalty, customer interface quality factors, such as customization, interactivity, and character, affect customer satisfaction as well (Chang & Chen, 2008). Rodgers et al. (2005) proposed that interactivity influences customer satisfaction (Montoya-Weiss, Voss, & Grewal2003). Jiang and Benbaset (2007), examined the correlation between interactivity, purchasing intention and revisit of the same website in future (Cyr, Head, & Ivanov, 2009). Convenience is also a strong attribute affecting customer e-satisfaction (Dholakia & Zhao, 2010; Kim et al., 2009). This finding was further concurred by Kim, Ma, and Kim (2006), who found that convenience determined e-purchasing intention and customer satisfaction. An empirical study by Chang and Chen (2008) discovered that character was associated with customer satisfaction. Therefore, the existing literature implied that factors affecting customer interface quality would have a positive impact on customer e-loyalty and e-satisfaction in the current study. Subsequently, the following hypotheses were formulated:

H1: Customer Interface Quality is related positively to customer e-loyalty and e-satisfaction.

There are many examples in the literature of the influence of trust on customer e-loyalty (Deb & Chavali, 2009; Kim, Chung, & Lee, 2010). Hart and Johnson (1999) argued that trust generates true loyalty (Hamid, 2008) and Morgan and Hunt (1994) suggested that trust also underpins commitment. When customers trust e-retailers, they disclose their personal information (Kim, 2003) and e-retailers are easier to deal with in the future and money transactions would be easier to track. Moreover, trust is an efficient marketing tool, which can attract more customers to engage in future buying behaviour (Gefen, 2000) and influence their e-purchasing intentions (Pennington, Wilcox, & Grover, 2003). Consequently, existing research has shown a strong link between trust and customer e-loyalty (Ribbink, van Riel, Liljander, & Streukens, 2004). Moreover, trust also has a similar impact on customer satisfaction in terms of revisit intention and e-purchase intention (Yang, Zhang, & Wu, 2010; Sam &Tahir, 2010). According to Grabner-Kräuter and Kalusha (2003), trust facilitates customer’s intention to repurchase (Alam & Khokhar, 2006). Further, Chang, Chen (2008)
and Ku, Liu (2010) support these findings and agreed that trust does affect repurchase intentions in the Internet. Hence, the following hypothesis was proposed:

**H2:** Trustworthiness is positively related to customer e-loyalty and e-satisfaction.

Apart from the direct impact, trust also mediates the relationship between interactivity and customer e-loyalty (Cyr et al., 2009). However, the findings of Ribbink et al. (2004) and Kassim and Ismail (2009) identified that customization insignificantly affects trust in online buying. Therefore, in the current study, the researcher implies that trustworthiness mediates the relationship between customer interface quality with customer e-loyalty and e-satisfaction, and has proposed the following hypotheses:

**H3:** Trustworthiness mediates the relationship between customer interface quality and customer e-loyalty and e-satisfaction.

### 3. Methods

#### 3.1 Samples and Measures

The sample data for the study was collected in Kuala Lumpur, Cyberjaya, and Putrajaya, in Malaysia. The reason for the shortlisted sites is because these three urban areas have high concentrations of Internet users and account for a large percentage of the total population. According to the Ninth Malaysian Plan (2006), the population who stay in the urban area are highly computer literate and have higher purchasing power than other areas. Besides, these three selected states are considered as advanced technology areas and have the highest personal computer ownership. The population of interest in this study was Internet users who are registered with Telekom Malaysia (TM) Berhad, have an active Internet subscription and owned a personal e-mail account. Thus, the participants chosen for our study are internet users who have adequate experience in accessing the Internet. All these Internet users also carried out an e-transaction via the Internet, at least once, and have experienced e-purchasing once in the previous three months. These respondents were knowledgeable and computer literate. The total sample size was 395, which fulfilled the rule of thumb of Roscoe’s (1975) (Sekaran, 2010). A non-probability purposive sampling method was conducted to select representative respondents.

The quantitative method was employed to collect the data through a set of questionnaire, which was divided into two parts. Part A focused on all the predictors that had impact upon customer e-loyalty and e-satisfaction. Part B described the respondent’s profile. A careful review of the literature was undertaken in order to develop multi-items of contrasts and a seven-point rating scale from ‘1’ strongly disagree to ‘7’ strongly agree. Confidentiality was guaranteed in all cases. SmartPLS (M3) was used as the analytical tool.
4. Findings

Three Hundred and Ninety Five (395) usable responses were obtained from the different demographic backgrounds. Females recorded 213 (53.9%) and males 182 (46.1%), 230 respondents were single and 164 were married. Chinese were scored as the largest group, represented by 191 samples (48.4%), Malays were 30.1 percent (n=119) followed by 8.9 percent of Indians (n=35). Majority of respondents were in the range of RM3001 to RM5000, while 29.9 percent (n=118) were within RM1001 to RM3000, followed by 17.5 percent (n=69) who earned RM5001 to RM7000. Academically, the respondents who had a minimum secondary school level of qualification were only 2.5 percent (n=10). The highest percentage were undergraduate degree holders (n=307, 77.7%) followed by Master’s degree (n=41, 10.4%) and diploma holders (n=30, 7.6%). This showed that they had higher purchasing power parity. As for respondents age, majority were 26 to 30 years old (n=113, 28.6%), 21.5 percent (n=85) of respondents were 18 to 25 years old and 21.3 percent (n=84) were 31-35 years old. Moreover, 43 percent of respondents were categorized as others (n=170) which was made up of university or college students, waitresses, part-time workers, blue-collar workers, and others. The second largest group was professionals, which recorded 133 respondents (33.7%) followed by 42 executives (10.6%). Besides, approximately, 41.5 percent (n=164) of the respondents were recorded using the Internet for one to five hours a week, 16.2 percent (n=64) for over 20 hours, 15.9 percent (n=63) recorded six to ten hours, and 13.7 percent accessed the Internet 11 to 20 hours. In total, 386 respondents (97.7%) had significant e-purchasing experience in the past. However, 390 respondents (98.7%) frequently sought product information.

Assessment of the Measurement Model

The empirical data was analyzed using the partial least squares (SmartPLS) approach in order to study the impact of this study. Partial Least Squares (PLS) is a soft modelling technique developed by Herman Wold (1982, 1985) and is useful in theoretical knowledge. In general, PLS is an exploratory analysis and confirmatory analysis method (Barroso, Carrión, & Roldán, 2010). Wold (1979, as cited in Barroso et al., 2010) stated that PLS is a predictive-based analysis, whereby it investigates a complex model with a large amount of variables and the relationship between the exogenous variables and endogenous variables. It is able to judge the formative and reflective constructs in a study’s model (Helm, Eggert, & Garnefeld, 2010). Chin and Newsted (1999) found that PLS path modelling can provide accurate information even with a sample size of 20 (Henseler, Ringle, & Sinkovics, 2009). In addition, PLS provides corresponding analysis of measurement model, structural model, and interaction relationships.
Confirmatory factor analysis (CFA) has been conducted to test the measurement model, which includes convergent validity, composite reliability, and discriminant validity. As shown in Table 1 and 2, the cross-loading for all proposed items measured were loaded highly on its own construct rather than any other constructs. The results showed that all indicators achieved the minimum levels of AVE, 0.5, in the current study (Henseler et al., 2009). In other words, all the latent variables in this study were able to explain more than half of the variance of indicators, on average (Karim, 2009). Moreover, all constructs results of CR fulfilled the recommended value, 0.7 as suggested by Gefen et al. (2000) and thus indicated that the items of each construct could be used to measure the value with high reliability. Correspondingly, Cronbach value for every constructs exceeded the ideal value, 0.7 as recommended by Sekaran (2010). (see Table 2) Additionally, the square root of AVE was tested on the inter-correlations of the constructs with the other constructs to ensure discriminant validity (Fornell & Larcker, 1981). (see Table 4) In summary, measurement model of this study was completely satisfactory with the evident results of reliability, convergent validity and discriminant validity.

Table 1: Loading and Cross Loading

<table>
<thead>
<tr>
<th>Constructs</th>
<th>CIQ</th>
<th>Trustworthiness</th>
<th>e-Loyalty</th>
<th>e-Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>meanCHA</td>
<td>0.681</td>
<td>CIQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>meanCON</td>
<td>0.754</td>
<td>0.545</td>
<td>0.555</td>
<td>0.540</td>
</tr>
<tr>
<td>meanCUS</td>
<td>0.858</td>
<td>0.728</td>
<td>0.725</td>
<td>0.691</td>
</tr>
<tr>
<td>meanINT</td>
<td>0.712</td>
<td>0.583</td>
<td>0.591</td>
<td>0.486</td>
</tr>
<tr>
<td>meanBEN</td>
<td>0.698</td>
<td>0.902</td>
<td>0.682</td>
<td>0.659</td>
</tr>
<tr>
<td>meanHON</td>
<td>0.673</td>
<td>0.861</td>
<td>0.646</td>
<td>0.676</td>
</tr>
<tr>
<td>meanCOMP</td>
<td>0.717</td>
<td>0.911</td>
<td>0.683</td>
<td>0.719</td>
</tr>
<tr>
<td>meanWOM</td>
<td>0.692</td>
<td>0.688</td>
<td>0.858</td>
<td>0.724</td>
</tr>
<tr>
<td>meanFPI</td>
<td>0.742</td>
<td>0.628</td>
<td>0.865</td>
<td>0.680</td>
</tr>
<tr>
<td>meanCB</td>
<td>0.558</td>
<td>0.505</td>
<td>0.707</td>
<td>0.547</td>
</tr>
<tr>
<td>meanREP</td>
<td>0.710</td>
<td>0.732</td>
<td>0.727</td>
<td>0.944</td>
</tr>
<tr>
<td>meanRI</td>
<td>0.737</td>
<td>0.718</td>
<td>0.793</td>
<td>0.945</td>
</tr>
</tbody>
</table>

Note: Bold values are loadings for items that are above the recommended value 0.5

Table 2: Results of Measurement Model

<table>
<thead>
<tr>
<th>Model Construct</th>
<th>Measurement Item</th>
<th>Cronbach Alpha</th>
<th>Factors Loading</th>
<th>CR&lt;sup&gt;a&lt;/sup&gt;</th>
<th>AVE&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-loyalty</td>
<td>WOM</td>
<td>0.741</td>
<td>0.858</td>
<td>0.853</td>
<td>0.661</td>
</tr>
<tr>
<td></td>
<td>FPI</td>
<td></td>
<td>0.865</td>
<td>0.853</td>
<td>0.661</td>
</tr>
<tr>
<td></td>
<td>CB</td>
<td></td>
<td>0.707</td>
<td>0.853</td>
<td>0.661</td>
</tr>
<tr>
<td>e-satisfaction</td>
<td>REP</td>
<td>0.880</td>
<td>0.944</td>
<td>0.943</td>
<td>0.893</td>
</tr>
<tr>
<td></td>
<td>RI</td>
<td></td>
<td>0.945</td>
<td>0.943</td>
<td>0.893</td>
</tr>
<tr>
<td>CIQ</td>
<td>CON</td>
<td>0.745</td>
<td>0.754</td>
<td>0.840</td>
<td>0.569</td>
</tr>
<tr>
<td></td>
<td>CUS</td>
<td></td>
<td>0.858</td>
<td>0.840</td>
<td>0.569</td>
</tr>
<tr>
<td></td>
<td>CHA</td>
<td></td>
<td>0.681</td>
<td>0.840</td>
<td>0.569</td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td></td>
<td>0.712</td>
<td>0.840</td>
<td>0.569</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>BEN</td>
<td>0.871</td>
<td>0.902</td>
<td>0.921</td>
<td>0.796</td>
</tr>
<tr>
<td></td>
<td>HON</td>
<td></td>
<td>0.861</td>
<td>0.921</td>
<td>0.796</td>
</tr>
<tr>
<td></td>
<td>COMP</td>
<td></td>
<td>0.911</td>
<td>0.921</td>
<td>0.796</td>
</tr>
</tbody>
</table>

Note: <sup>a</sup> Composite Reliability (CR)=\{(square of the summation of the factor loadings)\}/\{(square of the summation of the error variances)\}
Average Variance Extracted (AVE) = \frac{(\text{sum} \text{ of} \text{square} \text{of} \text{factor} \text{loadings})}{(\text{sum} \text{of} \text{square} \text{of} \text{the} \text{factor} \text{loadings}) + (\text{sum} \text{of} \text{error} \text{variances})}

Table 3: Summary Results of the Model Constructs

<table>
<thead>
<tr>
<th>Model Construct</th>
<th>Measurement Item</th>
<th>Standard estimate</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-loyalty</td>
<td>WOM</td>
<td>0.858</td>
<td>62.479</td>
</tr>
<tr>
<td></td>
<td>FPI</td>
<td>0.865</td>
<td>63.401</td>
</tr>
<tr>
<td></td>
<td>CB</td>
<td>0.707</td>
<td>18.310</td>
</tr>
<tr>
<td>e-satisfaction</td>
<td>REP</td>
<td>0.944</td>
<td>129.295</td>
</tr>
<tr>
<td></td>
<td>RI</td>
<td>0.945</td>
<td>139.300</td>
</tr>
<tr>
<td>CIQ</td>
<td>CON</td>
<td>0.754</td>
<td>31.126</td>
</tr>
<tr>
<td></td>
<td>CUS</td>
<td>0.858</td>
<td>63.880</td>
</tr>
<tr>
<td></td>
<td>CHA</td>
<td>0.681</td>
<td>21.858</td>
</tr>
<tr>
<td></td>
<td>INT</td>
<td>0.712</td>
<td>20.327</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>BEN</td>
<td>0.902</td>
<td>84.411</td>
</tr>
<tr>
<td></td>
<td>HON</td>
<td>0.861</td>
<td>46.617</td>
</tr>
<tr>
<td></td>
<td>COMP</td>
<td>0.911</td>
<td>90.049</td>
</tr>
</tbody>
</table>

Note: Final items numbers (initial numbers)

Table 4: Discriminant Validity of Constructs

<table>
<thead>
<tr>
<th>CIQ</th>
<th>e-Loyalty</th>
<th>e-sat</th>
<th>Trustworthiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIQ</td>
<td>0.754</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e-Loyalty</td>
<td>0.522</td>
<td>0.813</td>
<td></td>
</tr>
<tr>
<td>e-sat</td>
<td>0.666</td>
<td>0.805</td>
<td>0.945</td>
</tr>
<tr>
<td>trustworthiness</td>
<td>0.612</td>
<td>0.752</td>
<td>0.768</td>
</tr>
</tbody>
</table>

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations

Assessment of Structural Model

To test path analysis and the hypotheses, bootstrapping resampling technique is used to determine the significant t-statistic. Bootstrapping resampling technique is a statistical resampling method (Kline, 2005) that determines confidence intervals (Henseler et al., 2009). The summarized results of the structural model including path coefficients (Beta Value), t-values, and p-values are shown in Table 5. Theoretically, a 5 percent and 1 percent significance level, with t-values: 1.96 and 2.58 respectively plays role as statistical decision criterion. As presented in Table 5, the results summarizes that customer interface quality was positively related to customer e-loyalty ($\beta = 0.603; t = 15.314, p < 0.05$) and e-satisfaction ($\beta = 0.426; t = 9.882, p < 0.05$) which exceeded the recommended value, 1.96 ($p < 0.05$). This is supporting H1. Empirical results from the study also postulated that trustworthiness was positively related to the customer e-loyalty ($\beta = 0.281; t = 6.929, p < 0.05$) and e-satisfaction ($\beta = 0.435; t = 9.698, p < 0.05$). The path is significant and the coefficient is positive. Hypothesis 2, H2, was therefore supported. According to McKinnon, Warsi, and Dwyer (1995), the mediating effects only exist when

(a) Independent variables have a significant impact on mediator;

(b) Independent variables have a significant impact on dependent variables in the absence of mediator;
(c) Mediator has a significant impact on dependent variables; and lastly

(d) The effect of independent variables and dependent variables become smaller with the existence of mediator (Ramayah, Samat, & Lo, 2011).

Based on the rule of thumb, customer interface quality had a significant impact on trustworthiness ($\beta = 0.781, p< 0.01$) as well as trustworthiness on customer e-loyalty ($\beta = 0.281, p< 0.01$) and e-satisfaction ($\beta = 0.435, p< 0.01$). Next, the result also showed that customer interface quality have direct effect of customer e-loyalty and e-satisfaction with regard to H1. Eventually, H3 is proved.

Goodness of Fit (GoF) is used to measure the overall modelling fit (Tenenhaus et al., 2005), and is defined as the geometric mean of average communality and the average of $R^2$ endogenous LVs (Chin, 2010). The formula to calculate GoF is represented in the following chart. The recommended value of $GoF_{small}= 0.1$, $GoF_{medium}= 0.25$, and $GoF_{large}= 0.36$ (Akter, D’Ambra & Ray, 2011). In current study, GoF value was 0.575 ($R^2 = 0.707$, average AVE = 0.661) for customer e-loyalty and 0.624 ($R^2 = 0.660$, average AVE = 0.893) for customer e-satisfaction. These figures show that GoF values for both customer e-loyalty and e-satisfaction exceeded the largest cut-off value of 0.36. This is therefore to conclude that the proposed model of this study has accurate prediction capability.

$$GoF = \sqrt{AVE \times R^2}$$

<table>
<thead>
<tr>
<th>H</th>
<th>Relationship</th>
<th>Coefficient e-loyalty</th>
<th>Coefficient e-sat</th>
<th>t-value e-loyalty</th>
<th>t-value e-sat</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>CIQ → e-loyalty and e-satisfaction</td>
<td>0.603</td>
<td>0.426</td>
<td>15.314</td>
<td>9.882</td>
<td>YES</td>
</tr>
<tr>
<td>H2</td>
<td>TWORTH → e-loyalty and e-satisfaction</td>
<td>0.281</td>
<td>0.435</td>
<td>6.929</td>
<td>9.698</td>
<td>YES</td>
</tr>
<tr>
<td>H3</td>
<td>CIQ → trustworthiness → loyalty and e-satisfaction</td>
<td>0.781</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>YES</td>
</tr>
</tbody>
</table>

Note: t-value >1.96 (p < 0.05*); t-value >2.58 (p < 0.01**)
4.1 Discussion

This study examines the effect of customer interface quality and trustworthiness on customer e-loyalty and e-satisfaction. From the results of simultaneous analysis, customer interface quality (convenience, character, interactivity, and customization) and trustworthiness related positively to customer e-loyalty and e-satisfaction in the context of Malaysia. The findings of this study proved the importance of interface itself to build up the strong online social network. As such, it is able to create and achieve success of the potential B2B or B2C market in this turbulent e-marketplace. In consistence with this, Lee (2001) highlighted that a website should enact as a promotion channel and also as an online network building to collect the information from customer in the competitive online marketing community (Tsao, 2005). Moreover, the results of this study was consistent with the findings of Mehta (2005), and Chung and Shin (2008) that convenience plays a prominent role as a motivator for the Internet shopping (Constantinides, 2004). As stated in the literature reviewing, online consumers have few impediments, such as, no time limit, no traffic matters, and no queues during the process of transactions via the Internet (Surjadjaja, Ghosh, & Antony, 2003) and also have the convenience of credit cards rather than using cash (Li, Ward, & Zhang, 2010).

Furthermore, the survey of Catalog Age’s consumer shopping behaviour found that 67 percent of the consumers were concerned with the convenience factors of online shopping (Kau, Tang, & Ghose, 2003). In the current study, majority of the respondents were 26 to 30 years old and considered as the technology savvy group because this age group people intent to use up-to-date technology (e.g., smart phone, iPhone, and iPad). Besides, this millionaire generation prefer to use the Internet to make purchases rather than to visit the traditional retailers. Thereby, these customers can save time because of ease of access, fast search, quick transaction, and destination convenience. Consequently, as revealed by Alreck and Settle (2002), using the Internet saves time and encourages e-buyers to purchase more (Bosnjak, Galesic, & Tuten, 2007).

Additionally, providing good customized information supports the interactions between service providers and e-customers and provide e-entertainment to customers (Fiore & Jin, 2003). E-service providers, who offer various interactive services to online customers, such as providing downloadable software, electronic form inquiry, toll-free calls, and customer feedback or comments, convince e-customers to feel it is convenient to use the online services (Lim & Dubinsky, 2004). In addition, it enhances customers’ knowledge of the e-retailer (Srinivasan et al., 2002) and encourage them to browse and persuade more e-customers to participate in e-purchasing (Gehrke & Turban, 1999).
Despite direct impact, as expected, the indirect findings disclosed that there was an indirect effect of customer interface quality on customer e-loyalty and e-satisfaction through trustworthiness. The reasons for this may be that the quality of interface itself naturally builds trust over time (Egger, 2001) and drives customer e-loyalty and e-satisfaction. For instance, the quality of website interactivity, has been found to enhance trust (Klein, 2001; Steuer, 2003), and increase the level of pleasure and excitement (Ballantine & Fortin, 2010). As noted by Lynch, Kent, and Srinivasan (2001), trustworthiness is an important mechanism to encourage and persuade e-consumers to shop and repurchase from the same website (Ponirin et al., 2009). Hence, to conclude, trust plays an important role in shaping people’s perceptions and behaviours (Setó-Pamies, 2012). According to Morrison and Firmstone (2000), trust reduces the levels of uncertainty, manages and overcomes the different risks on Internet (Setó-Pamies, 2012).

4.2 Implications

In terms of theory building, this study helps to develop a parsimonious model to examine customer e-loyalty and e-satisfaction among Malaysian Internet users. With this examination of customer interface quality and trustworthiness, it forms a knowledge base for future researchers who wish to explore the influences on Internet user behaviour in Malaysia. Specifically, these findings could enrich the body of knowledge of Malaysian online consumer behaviour, online consumer choice, and online buying behaviour in terms of preferences and frequency of visits to a particular website.

In addition to theoretical implication, the findings of the present study also provided important practical insights to Malaysians e-retailers, e-marketers, web-designers, and e-service providers. As reflected in the literature review of this study, marketing academicians and professionals continue to seek the most up-to-date and significant antecedents of customer e-loyalty and e-satisfaction. In detail, this substantial body of knowledge enables Malaysian e-retailers to understand and address the key factors of e-commerce that help them retain existing consumers and capture new e-consumers. In other words, these findings form the basis for an e-business to improve their existing website in design and technical aspects. Moreover, an ongoing issue for e-retailers and e-shoppers is the lack of direct interaction. E-customers cannot physically touch the products or question a sales person face-to-face. In this case, the attribute of trustworthiness plays an extremely influential role in the online shopping environment. From an academic perspective, future researchers now would have more knowledge on Malaysian consumer attitudes and intention behaviours towards the web technology.
4.3 Limitations

One of the most important limitation in our research is regarding the study sample. Majority of respondents for this study were chosen from three selected areas in Malaysia. All those selected for our study, have different perceptions on technology use, such as online purchasing, from those who were not selected. As perceptions towards technology use change over the time, the findings of the study were limited to the Internet buyers only and limited to these specific locations. Another limitation with the sample is that the study sample lacked diversity. The survey concentrated on the urban area only. Third limitation is projected by the size of the sample taken. Although the sample size of 395 respondents is acceptable, there is a need to maximize it to generate stronger generalizations. Also, this study did not control the differences across products and services categories. The last constraint concerns the quality of data because of the way of questionnaires answered by the respondents. Due to the limitations of this study, there are several recommendations for further research to enhance the outcome of future studies on customer e-loyalty and customer e-satisfaction.

5. Conclusion and Future Recommendation

To conclude, in the competitive Internet environment, Malaysian online retailers should design an interactive customer interface to create an online and an offline competitive advantage. Likewise, with online shopping gaining more attention and momentum, these pertinent antecedents ultimately benefit those e-marketers and e-designers who develop new online marketing strategies and tactics to persuade more Malaysians to shop online. Additionally, academicians and practitioners who continue to enrich their knowledge of customer e-loyalty and e-satisfaction predictors are in a stronger position to develop a more comprehensive online marketing strategy model, of customer e-loyalty and e-satisfaction in the Malaysian Internet shopping context.

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