Investigating the Relationships among E-Service Quality, Perceived Value, Satisfaction, and Behavioral Intentions in Taiwanese Online Shopping

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Abstract

As the online shopping market gradually grows in Taiwan, it is important to understand the diversity in various aspects of consumer behavior among Internet users. This paper examines the relationships among e-service quality, perceived value, satisfaction, and behavioral intentions for Taiwanese online shoppers. Based on a sample of 428 undergraduate students, a two-step structural equation modeling procedure is applied to perform an empirical test of the comprehensive model. The testing results show that, for the direct path, electronic service quality has a significant, positive influence on perceived value, satisfaction, and behavioral intentions. Also, perceived value directly influences customer satisfaction and behavioral intentions and satisfaction is an antecedent of behavioral intentions. For the indirect path, electronic service quality has a significant, positive influence on behavioral intentions through satisfaction and perceived value. Perceived value indirectly influences behavioral intentions via satisfaction. Managerial implications of these results are discussed.

Keywords: E-service quality, perceived value, satisfaction, behavioral intention, online shopping, structural equation model.

1. Introduction

As the number of Internet users is growing rapidly and online technologies are improving, more companies are offering their products/services over the Internet. The Internet users are expected to surpass 1.9 billion or 30 percent of the world’s population in 2012 (http://www.idc.com). In 2008, the Taiwanese online shopping market reached a scale of US$ 3.6 billion and the use of Internet is considered as a relevant alternative channel for retailing in Taiwan (MIC, 2007). The Web-based shopping is the extension of traditional relationship between companies and individual consumers.

The Internet has changed people’s consumption habits and provides convenience for searching information in the pre-purchase stage, e.g. using the Internet makes it easier to compare prices and features of different products/services. For consumers, online retailing offers a shopping experience different from physical-based retailing such as convenience, search cost, delivery, and price (Palmer, 2000). Online retail sales continue to grow (Chen and He, 2003). Privacy and security have been identified as the major obstacles preventing Internet users from online shopping, leading to the decrease of consumers’ perceptions of online service quality. To encourage repeat purchases and build customer loyalty, Zeithaml et al. (2002) suggested companies shift the focus of e-business from e-commerce (the

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transaction) to e-service (all cues and encounters that occur before, during, and after the transaction).

In today’s highly competitive marketplace, “customer focus” or “customer inside” becomes the most important strategy for business to obtain customer loyalty and maintain market profitability. Not surprisingly, understanding and satisfying customers’ needs play a crucial role in building long-term relationship with customers. With the proliferation of e-commerce, the issue of understanding how consumers perceive and assess online services or electronic services (e-services) has captured the attention of both business and academic researchers. Reviewing the literature (Cronin et al., 2000; Hellier et al., 2003; Lai, 2004; Varki and Colgate, 2001; Wang et al., 2004) reveals that the investigation of the inter-relationships among the four constructs (service quality, perceived value, customer satisfaction, and behavioral intentions) has been empirically demonstrated in the physical marketplace. There has been little investigation, however, in the virtual service environment.

The major objectives of this study are to investigate the direct and indirect effects among the four constructs in the online shopping environment. The results are expected to offer a number of suggestions that e-retailers can improve the online service quality and enhance the relationships with online shoppers. Our analysis in the next section begins with a brief review of the literature. In the third section, the research methodology is described, followed by presenting the results. The final section gives a summary and a discussion about the findings of the study.

2. Literature Review and Research Hypotheses

2.1 Service Quality in Electronic Channels

Rowley (2006) defines electronic service (e-service) as “deeds, efforts or performances whose delivery is mediated by information technology.” Such e-service includes the service element of e-tailing, customer support and service, and service delivery. Different from the conventional service quality definition, Zeithaml et al. (2002) define e-service quality (e-SQ) as “the extent to which a Website facilitates efficient and effective shopping, purchasing and delivery of products and services.” Accordingly, the context of e-SQ is comprehensive and encompasses all phases of a customer’s interaction with a Website. Online and offline environments present different shopping experiences even when the same products can be purchased (Wolfinbarger and Gilly, 2003). Building on the conceptual model of e-SQ, Parasuraman et al. (2005) created a multiple-item scale for measuring and assessing e-service quality of various Websites by rigorous development processes of conceptualization, construction, refinement, and test. To effectively measure e-service quality, Wolfinbarger and Gilly (2003) developed a scale names .comQ with four factors: Website design, reliability, security/privacy, and customer services. Similar to Wolfinbarger and Gilly’s (2003) work, Lee and Lin (2005) examined e-service quality dimensions and showed that the dimensions of website design, reliability, responsiveness, and trust affect overall service quality. In measuring e-service quality, although SERVQUAL has been widely tested in conventional marketplaces, however, it has been argued that it is improper to directly employ SERVQUAL to measure e-service quality. Service quality delivery through electronic channels reflects different characteristics from physical environments (Parasuraman et al., 2005).

2.2 Perceived Value

Zeithaml (1998) conceptualized service value as a consumer’s overall assessment of the utility of a service based on perceptions of what is received and what is given. Value represents a trade-off between give and get components. The “get” components (benefit) of perceived value include intrinsic attributes (e.g. how the purchase makes one feel) and
extrinsic attributes (e.g. reputation of the product/service), while the “give” components (sacrifice) of perceived value include monetary prices and nonmonetary cost (e.g. time, energy, effort). Lee and Overby (2004) identified two types of online shopping values—utilitarian value and experiential value. Utilitarian value is defined as an overall assessment of functional benefits incorporating the four dimensions—price saving, service, time saving, and merchandise selection. Utilitarian value is relevant for task-specific use of online shopping, e.g. purchase deliberation. Experiential value is defined as an overall representation of experiential benefits from entertainment, escapism, visual appeal, and interactivity involved with online shopping activities. Utilitarian value is relevant for acquiring affective and social stimulation. Internet shopping value invokes different types and all values positively influence customer satisfaction and loyalty (Lee and Overby, 2004). Sheth et al. (1991) proposed a theory of five consumption values of an offering (e.g. functional, social, emotional, conditional and epistemic values) that affect customer choice behavior and they contribute to conceptualizing value. Sheth et al.’s (1991) value classification system covers a variety of situations. However, conditional value (defined as the utility of an alternative in a specific situation) is criticized as a special case of the other four values (Sweeney and Soutar, 2001; Cheng et al., 2009). Cheng et al.’s (2009) study therefore excluded conditional value and investigated the impact of four perceived values (functional, social, emotional, and epistemic) on Taiwanese customers’ intention to use the Internet as a retailing platform.

2.3 Customer Satisfaction

Customer satisfaction is the customer’s assessment of a service in terms of whether that service has met the customer’s needs and expectations (Zeithaml et al., 2006). Customer satisfaction is viewed as a complex determinant with both cognitive and affective components (Oliver, 1997). A number of studies have reported that satisfaction is positively correlated with service quality and is a significant mediator of service quality and behavioral consequences (Cronin et al., 2000; Tam, 2004; Yu et al., 2006; Chang et al., 2009).

2.4 Behavioral Intentions

Intended behavior is closely related to actual behavior and has diagnostic value. Thus, behavioral intentions are important indicators for management to understand whether customers would remain with or defect from the company (Parasuraman et al., 1996). Behavioral intentions are usually measured by repurchase intentions or positive word-of-mouth (Boulding et al., 1993; Parasuraman et al., 2005). To capture the full range of potential behaviors, Parasuraman et al. (1996) present five dimensions of behavioral intentions: loyalty, switch, pay more, external response, and internal response. Behavioral intentions in the context of virtual environment are quite similar to traditional brick-and-mortar stores (Janda et al., 2002).

2.5 Research hypotheses

A review of the literature (Chang et al., 2009; Cronin et al., 2000; Cronin et al., 1997; Fullerton and Taylor, 2002; Hu et al., 2009; Kouthouris and Alexandris, 2005; Tam, 2004) reveals little consistency regarding the direct or indirect effects of the identified three determinants (service quality, perceived value, and satisfaction) on behavioral consequences. Cronin et al. (2000) presented a comprehensive model to investigate the direct effects of these three determinants on behavioral intentions simultaneously and test their model in six U.S. service industries: Fast food, long distance carriers, health care, entertainment, spectator sports, and participation sports. Cronin et al.’s research showed that service quality not only affects service value and satisfaction but also influences behavioral intentions. Chang et al. (2009) tested the interrelationships among the perceived e-service quality, customer satisfaction, and loyalty and examined the moderating effect of customer perceived value on
the relationship between satisfaction and loyalty. Chang et al.’s (2009) study indicated that e-service quality has positive influence on customer satisfaction and then generates customer loyalty.

These arguments suggest that e-service quality is likely to affect perceived value and satisfaction, which leads to our first research hypothesis:

\textit{H1: E-service quality has a positive influence on perceived value and customer satisfaction}

As per the direct effect of perceived value on customer satisfaction, some researches (Lai, 2004; Lee et al., 2005; Patterson and Spreng, 1997) have provided evidences to suggest that perceived value exhibits a strong and significant impact on customer satisfaction. Therefore, our study proposes that:

\textit{H2: Perceived value has a positive influence on customer satisfaction}

Bolton and Drew (1991) argue that perceived value is an antecedent of customers’ behavioral intentions. Satisfied customers will tend to give positive referrals or word-of-mouth communication (Boulding et al., 1993; Chang et al., 2009; Lee et al., 2005; Parasuraman et al., 1996). Cronin et al. (2000) concluded that service quality, service value, and customer satisfaction directly influence behavioral consequences concurrently. These findings provide theoretical basis for our third hypothesis:

\textit{H3: E-service quality, perceived value, and customer satisfaction are positively related to behavioral intentions.}

As per the indirect effect, although some studies (Boulding et al., 1993; Parasuraman et al., 1996) argue a direct effect between service quality and behavioral intentions, most researches indicate that service quality affects behavioral intentions through satisfaction (Cronin et al., 2000; Hu et al., 2009; Yu et al., 2006). While perceived value was found to be an antecedent of behavioral intentions (Bolton and Drew, 1991; Cheng et al., 2009), others (Tam, 2004; Patterson and Spreng, 1997) have shown that the effect of perceived value on behavioral consequences was completely mediated via customer satisfaction. This leads to the fourth hypothesis:

\textit{H4: E-service quality and perceived value have a positive, indirect influence on behavioral intentions through customer satisfaction.}

Based on the industry analyses in the US, Cronin et al.’s (2000) research indicated a significant indirect path showing that service quality positively influences behavioral intentions through service value. However, Hu et al.’s (2009) study, based on the data collected from the customers of selected hotels located in Mauritius, demonstrated that the indirect effect of service quality on behavioral intentions through perceived value is not significant. To examine whether the indirect effect (service quality- perceived value-behavioral intentions) exists in Taiwan’s online retailing market, this study proposes the fifth hypothesis:

\textit{H5: E-service quality has a positive, indirect link to behavioral intentions through perceived value.}
3. Methodology

3.1 Research Context

Taiwan has undergone a significant shift towards online retailing given the large e-infrastructure investments undertaken by the national government. This will change the competitive structure within the online retailing business sector while the customers will have a wide variety of online shopping choices. Thus four famous online retailers (PCHome, PayEasy, Yahoo Kimo, and ET Mall) in Taiwan were chosen for this study. All participants have online shopping experience with the four online retailers and this research investigates their overall attitudes toward the four sites.

3.2 Research Sample

We conducted a month long survey (Nov/16 – Dec/10, 2007) on undergraduate students in a large, public university in southern Taiwan. University students are believed to be important online shoppers and are likely to be a more homogeneous sample group than a sample from the general population (Burns and Lutz, 2006), thus the sample was restricted within the campus. A total of 428 valid samples were used for this study. Table 1 demonstrates the breakdown of the respondents in terms of gender, age, and length of their acquaintance with online shopping. Based on the survey results, 64.8% of them shopped online more than one year. Among the respondents, 30.8% of them are males and 69.2% of them are females. In terms of their age, those under 25 years old accounted for 57.48% (n = 246) of the sample. Those aged between 25 and 34 years old accounted for 33.18% (n = 142) of the sample. Thirty-six students (8.41%) aged between 35 and 44 and four students (0.93%) belonged to the 45 years old and above category. Our survey approached undergraduate students registered on either the daytime regular programs or at the night school programs. Those night school undergraduate students usually work on the daytime and they are much elder than the students registered on the daytime regular programs. That is the reason why 42.52% of the participants were above the age of 25.

Table 1. Demographic Characteristics of the Respondents (N = 428).

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Samples</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>132</td>
<td>30.8</td>
</tr>
<tr>
<td>Female</td>
<td>296</td>
<td>69.2</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 25</td>
<td>246</td>
<td>57.48</td>
</tr>
<tr>
<td>25-34</td>
<td>142</td>
<td>33.18</td>
</tr>
<tr>
<td>35-44</td>
<td>36</td>
<td>8.41</td>
</tr>
<tr>
<td>45 and above</td>
<td>4</td>
<td>0.93</td>
</tr>
<tr>
<td>Length of time of online shopping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 6 months</td>
<td>78</td>
<td>18.2</td>
</tr>
<tr>
<td>6 months to 1 year</td>
<td>73</td>
<td>17.1</td>
</tr>
<tr>
<td>1-3 years</td>
<td>165</td>
<td>38.6</td>
</tr>
<tr>
<td>3-5 years</td>
<td>67</td>
<td>15.7</td>
</tr>
<tr>
<td>5 years and above</td>
<td>45</td>
<td>10.5</td>
</tr>
</tbody>
</table>
3.3 Instrument Development

The questionnaire consisted of five major sections incorporating demographics. Scales measuring e-service quality, perceived value, satisfaction, and behavioral intentions referenced previous studies (Janda et al., 2002; Lee and Lin, 2005; Lee and Overby, 2004; Oliver, 1997; Parasuraman et al., 1996; Parasuraman et al., 2005; Wolfinbarger and Gilly, 2003). The scales had 34 items (e-service quality: 12; perceived value: 12; satisfaction: 4; behavioral intentions: 6) measured on a seven-point Likert scale ranging from strongly disagree (=1) to strongly agree (=7). The questionnaire is in Chinese. To make sure the translation is valid, both back translation and the discussion with domain experts, e.g. marketing professors in Taiwan, were used. The questionnaire was pre-tested among 25 online shoppers (university students) and it found that the questions were well understood.

4. Results

4.1 Reliability and Validity Test

Prior to testing the hypotheses, the measures were subjected to a series of reliability and validity checks. Confirmatory factor analysis (CFA) via the use of AMOS 7.0 is firstly applied to test how well these 34 measures represent the four constructs. The summary statistics, scale performance, and average extracted variances are provided in Table 2. The assessment of all four constructs indicated that the four constructs were perceived to be important ones because their means were approximately 5.0 out of a seven-point scale. Convergent validity can be assessed by the average extracted variances and the average variance extracted statistics from each construct exceeds 0.5 (from 0.781 to 0.902), which satisfies the conventional requirement (Hair et al., 2010).

The Cronbach alpha values for these constructs ranged from 0.874 to 0.948 (see Table 2). These values exceeded 0.70 suggesting adequate reliability (Hair et al., 2010). Overall these tests support the convergent validity and reliability of the constructs.

Table 2. Summary Statistics and Scale Performance.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>Construct Reliability</th>
<th>Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Service Quality (12 items)</td>
<td>5.205</td>
<td>0.948</td>
<td>0.902</td>
</tr>
<tr>
<td>Perceived Value (12 items)</td>
<td>4.950</td>
<td>0.932</td>
<td>0.878</td>
</tr>
<tr>
<td>Customer Satisfaction (4 items)</td>
<td>5.168</td>
<td>0.880</td>
<td>0.796</td>
</tr>
<tr>
<td>Behavioral Intentions (6 items)</td>
<td>5.106</td>
<td>0.874</td>
<td>0.781</td>
</tr>
</tbody>
</table>

4.2 Tests of the Hypotheses

Regarding consumers’ attitudes toward online shopping, we tested the structural model and the results are presented in Figure 1.
To maintain parsimony in the number of measurement items in the model, two indices were formed by averaging the twelve items measuring e-service quality, the twelve items measuring perceived value, the four items measuring customer satisfaction, and the six items measuring behavioral intentions, respectively (Hair et al., 2010). Item reliability refers to the $R^2$ value in the items that are accounted for by the constructs influencing them (Koufteros, 1999; Lu et al., 2006). The $R^2$ values above 0.50 provide evidence of acceptance reliability (Bollen, 1989). An examination of the results shows that all items meet the 0.50 threshold (item reliability ranged from 0.676 to 0.913, see Table 3). An overall $R^2$ value is also calculated for each endogenous variable. The $R^2$ values for structural equations which measure the relative ability of the final structural model to explain variance in the three endogenous variables—perceived value, customer satisfaction, and behavioral intentions—were 0.556, 0.697, and 0.509 respectively (see Table 3). These three $R^2$ values also meet the minimum 0.30 criterion (see Chen (2007), p. 4-48.).

Table 3. $R^2$ for the Proposed Research Model.

<table>
<thead>
<tr>
<th>Construct (Latent variable)</th>
<th>Item (Observed Variable)</th>
<th>$R^2$ (Item Reliability)</th>
<th>$R^2$ (Structural Equations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Service Quality</td>
<td>$X_1$</td>
<td>0.888</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X_2$</td>
<td>0.913</td>
<td></td>
</tr>
<tr>
<td>Perceived Value</td>
<td>$Y_1$</td>
<td>0.876</td>
<td>0.556</td>
</tr>
<tr>
<td></td>
<td>$Y_2$</td>
<td>0.862</td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>$Y_3$</td>
<td>0.853</td>
<td>0.697</td>
</tr>
<tr>
<td></td>
<td>$Y_4$</td>
<td>0.718</td>
<td></td>
</tr>
<tr>
<td>Behavioral Intentions</td>
<td>$Y_5$</td>
<td>0.737</td>
<td>0.509</td>
</tr>
<tr>
<td></td>
<td>$Y_6$</td>
<td>0.676</td>
<td></td>
</tr>
</tbody>
</table>
To assess the overall model fit, this study uses three types of Goodness-of-fit measures: Absolute fit measures, incremental fit measures, and parsimonious fit measures (Hair et al., 2010). The values of GFI, RMR, RMSEA, the absolute fit indices, are 0.976, 0.013, and 0.068, respectively. These values satisfy the GFI (> 0.9), RMR (< 0.05), and RMSEA (<0.08) guideline (Hair et al., 2010). GFI, RMR, and RMSEA are used to assess only the overall model fit (both structural and measurement models collectively), with no adjustment for the degree of “over-fitting” that might occur (Hair et al., 2010). CFI and NFI are incremental fit indices that are relatively insensitive to model complexity. CFI and NFI are used to compare the proposed model to another model specified by the researcher (Hair et al., 2010). The CFI and NFI values are 0.991 and 0.986, respectively, which met the CFI (> 0.95) and NFI (> 0.9) guideline (Hair et al., 2010). Finally, the value of parsimony fit index, AGFI, is 0.937, which also met the AGFI (> 0.8) guideline. Those above-mentioned indices support the model with 38 measures and the sample size (428).

A further evaluation in the structural model indicates that e-service quality has a significant, positive influence on perceived value (standardized coefficient $\beta=0.746$), customer satisfaction, ($\beta=0.208$), and behavioral intentions ($\beta=0.151$). In addition, perceived value has a significant, positive impact on customer satisfaction ($\beta=0.668$) and behavioral intentions ($\beta=0.326$). Customer satisfaction is also proved to have a significant, positive effect on behavioral intentions ($\beta=0.293$). The results of the direct path show the hypotheses H1, H2, and H3 are supported (see Table 4). In the indirect path, results of the analysis provide support for the hypotheses H4 and H5 as well, showing that e-service quality has a significant, indirect influence on behavioral intentions through customer satisfaction ($\beta=0.061$) and perceived value ($\beta=0.243$), and perceived value has a significant, indirect influence on behavioral intentions via customer satisfaction ($\beta=0.196$).

The path estimates of E-SQ (electronic service quality) $\rightarrow$ PV (Perceived Value) ($\beta=0.746$), and PV (Perceived Value) $\rightarrow$ CS (Customer Satisfaction) ($\beta=0.668$), are ranked as the two highest ones in the model.

### Table 4. Path Results of Overall Model.

<table>
<thead>
<tr>
<th>Paths</th>
<th>Standardized Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Paths</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-Service Quality $\rightarrow$ Perceived Value</td>
<td>0.746</td>
<td>0.037</td>
<td>0.000*</td>
</tr>
<tr>
<td>E-Service Quality $\rightarrow$ Customer Satisfaction</td>
<td>0.208</td>
<td>0.060</td>
<td>0.000*</td>
</tr>
<tr>
<td>Perceived Value $\rightarrow$ Customer Satisfaction</td>
<td>0.668</td>
<td>0.068</td>
<td>0.000*</td>
</tr>
<tr>
<td>E-Service Quality $\rightarrow$ Behavioral Intentions</td>
<td>0.151</td>
<td>0.054</td>
<td>0.030*</td>
</tr>
<tr>
<td>Perceived Value $\rightarrow$ Behavioral Intentions</td>
<td>0.326</td>
<td>0.081</td>
<td>0.000*</td>
</tr>
<tr>
<td>Customer Satisfaction $\rightarrow$ Behavioral Intentions</td>
<td>0.293</td>
<td>0.066</td>
<td>0.002*</td>
</tr>
<tr>
<td><strong>Indirect Paths</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-Service Quality $\rightarrow$ Perceived Value $\rightarrow$ Behavioral Intentions</td>
<td>0.243</td>
<td>-</td>
<td>0.000*</td>
</tr>
<tr>
<td>E-Service Quality $\rightarrow$ Customer Satisfaction $\rightarrow$ Behavioral Intentions</td>
<td>0.061</td>
<td>-</td>
<td>0.008*</td>
</tr>
<tr>
<td>Perceived Value $\rightarrow$ Customer Satisfaction $\rightarrow$ Behavioral Intentions</td>
<td>0.196</td>
<td>-</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

Note: * $p < .05$. 
5. Discussion

5.1 Summary

Based on the demographic results described in this study, 64.8% of the student online shoppers have more than one year online shopping experience and the majority of the respondents are female students (males: 30.8%; females: 69.2%). In terms of their age, 57.48% of the respondents are under 25 years old.

Previous studies showed a positive impact of service quality on customer satisfaction (Chang et al., 2009; Cronin et al. 2000; Oliver, 1997) and on perceived value (Cronin et al. 2000). The outcomes of the SEM analysis are consistent with the prior studies.

The results of the SEM analysis also show the positive influence of perceived value on customer satisfaction, which are consistent with the previous research (Lai, 2004; Lee et al., 2005; Patterson and Spreng, 1997).

Regarding the direct, positive effects of service quality, perceived value, and customer satisfaction on behavioral intentions, our empirical results are consistent with the prior studies (Boulding et al., 1993; Cronin et al. 2000; Lee et al., 2005; Parasuraman et al., 1996) as well.

As per the indirect path, this study indicated a mediating role of customer satisfaction between service quality, perceived value and behavioral intentions, which are consistent with some prior studies (Cronin et al., 2000; Hu et al., 2009; Tam, 2004; Patterson and Spreng, 1997; Yu et al., 2006). However, our research results are contrary to Chang et al.’s (2009) study. Chang et al. (2009) collected data through the Internet questionnaire of Chungwa Telecom Co., Ltd in Taiwan and argued that even satisfied customers are unlikely to patronize an e-business, if they feel that they are not getting the best value for their money. Chang et al.’s research supports a moderating effect of perceived value on the relationship between customer satisfaction and customer loyalty (purchase intentions and word of mouth).

Finally, although our research supports the mediating role of perceived value on the relationship between service quality and behavioral intentions, which is consistent with Cronin et al.’s (2000) study, but is contrary to Hu et al.’s (2009) study: the indirect effect of service quality on behavioral intentions through perceived value is not significant in hotels located in Mauritius. Whether perceived value acts as a mediator between service quality and behavioral intentions varies among industries and countries.

5.2 Managerial Implications

From the managerial perspective, our study provides online retailers a theoretical basis that managing successful online retailing should offer excellent e-service quality. To increase the e-service quality, online retailers should improve technical functions of order processing, credit administration, and logistics in order to guarantee the delivery of product on time and customers get exactly what they ordered. In addition, security and privacy are important issues facing online retailers. Therefore, adopting a secure transaction system like VeriSign SSL (Secure Socket Layer) system to increase the safety of online purchasing and making a clear privacy policy regarding the collection and disclosure of information, online comments and personal information, cookie, and browser information are necessary to guarantee online shoppers’ security/privacy. Finally, responsiveness and trust are also key points that require consideration. A quick reply with customers’ inquiries, making a policy of responding to customers as individuals, using helpful, friendly people to answer phones instead of complex phone trees, and really caring about your customers are important to enhance the e-service quality.
Moreover, convincing customers that they are getting high value from the provider is an important objective. Our study shows that perceived value is a contributing factor to satisfaction and behavioral intentions. Offering a wide variety of products/services, carefully evaluating price competition, and making the purchase from the website to be easier and efficient are the means to increase customers’ perceived value. E-service quality is confirmed to be an antecedent of perceived value.

Among the direct paths, the two path estimates of e-service quality on perceived value and perceived value on customer satisfaction are the two highest ones in the model showing that e-service quality is the key factor influencing perceived value and perceived value is the key determinant affecting customer satisfaction. The continuous improvement in e-service quality (security, privacy, responsiveness and trust) will lead to the increase of service value and customers will satisfy when their perceived value (price, entertainment, etc.) is high.

Our study also discovers that satisfaction has a direct and positive impact on behavioral intentions and acts as a mediator between e-service quality, perceived value, and behavioral intentions. Satisfied customers are more likely to purchase repeatedly and say positive word-of-mouth. The managerial implication here is that the online retailer can improve e-service quality and the reflection of improved e-service quality will increase service value, which combined together in making customers satisfied, and then enhance their purchase intentions.

5.3 Limitations and Future Research

There are five limitations in this research. First, our study only considers the online retailing service in Taiwan; therefore, generalizations of the model results will only be established if additional studies consider the proposed approach for other industries and other countries. Secondly, for convenience, we use student samples only. Even students are important online shoppers, other important customers, e.g. young white-collar workers, might be ignored. Thirdly, female students participated more actively in the study and were slightly over-represented in the sample. Fourthly, this study measures students’ overall attitudes toward the four online retailers and does not focus on the specific one. The general opinion might not reflect the actual performance of each online retailer. Finally, our study considers the online shopping in general and does not concentrate on any particular type of online retailer, ignoring the similarities and differences in product category and industry.

Acknowledging these limitations, for future research, we suggest that the findings need to be confirmed by further evidence from a cross-cultural comparison of online shopping behaviors among different countries. In addition, re-investigating the impacts of e-service quality, perceived value, and satisfaction on behavioral intentions through broadening the representativeness of online shoppers and considering the balance of respondents’ gender in Taiwan will generate much more useful information in understanding the relationships among the constructs perceived by Taiwanese online shoppers. Finally, focus on one specific online retailer, narrow down the range of product or industry and test the fit of this proposed framework.

References


Appendix

CONSTRUCT MEASURES

E-Service Quality (Adapted from: Wolfinbarger and Gilly, 2003; Lee and Lin, 2005)
- I get what I ordered from this online retailer
- This online retailer provides in-depth information of the product/service
- My order was delivered by the time promised by this online retailer
- Transactions with this online retailer are error-free
- I feel safe in my transaction with this online retailer
- This online retailer has adequate security features
- I feel like my privacy is protected at this online retailer
- I think this online retailer answers inquiries quickly
- I think this online retailer gives prompt services
- I believe this online retailer is always willing to help customers
- I think this online retailer shows a sincere interest in solving problems.
- I feel that I can trust this online retailer

Perceived Value (Adapted from Lee and Overby, 2004)
- Overall, I am happy with this online retailer’s price
- Making a purchase from this online retailer makes life easier
- I received excellent service from this online retailer
- The price of the products/services I purchased from this online retailer is at the right level, given the quality
- Making a purchase from this online retailer is an efficient way to manage my time
- This online retailer offers a wide selection of products/services, which meets my needs
- This online retailer does not just sell products/services – it entertains me
- This online retailer is aesthetically appealing
- Making a purchase with this online retailer absorbs me
- Shopping from this online retailer helps me forget about the day’s problems
- I enjoy giving other users of this online retailer advice or aid
- I shop from this online retailer for the pure enjoyment of it

Customer Satisfaction (Adapted from: Oliver, 1997; Janda, Trocchia, and Gwinner, 2002)
- Based on all of my experience with this online retailer, I feel very satisfied
- Overall, I am satisfied with the decision to purchase from this online retailer
- My choice to do business with this online retailer was a wise one
- I feel very pleasant about my decision concerning this online retailer

Behavioral Intentions (Adapted from: Parasuraman, Zeithaml, and Berry, 1996; Parasuraman, Zeithaml, and Malhotra, 2005)
- Say positive things about this online retailer to other people
- Recommend this online retailer to someone who seeks my advice
- Encourage friends and relatives to do business with this online retailer
- Consider this online retailer to be my first choice if I buy the same product/service again
- Do more business with this online retailer in the next few years
- Continue to do business with this online retailer if its prices increase somewhat