An Empirical Study of Factors Influencing Behavioral Outcomes within Online Retailing Service Contexts

Dr. Hsiu-Lan Wu, Fortune Institute of Technology, Taiwan

ABSTRACT

Motivated by the growing interest in online commerce, the author develops a research model examining the relationships among online service quality, customer satisfaction, perceived value and behavioral outcomes toward online retailing services. The empirical results of this study validate research hypotheses and confirm five of the six hypotheses. One hypothesis that tested the relationship between perceived value and behavioral outcomes was not confirmed. However, this study found that service quality and perceived value are significant factors affecting consumers’ satisfaction level, which in turn affects behavioral outcomes. The findings expand existing theory since they provide insights into the basic understanding of online service quality and the role of perceived value within in online retailing context—an important concept in marketing but under researched. In order to provide better services for customers, service providers need to invest in online service quality design and evaluation, and at the same time, enhance the perceived value associated with online services.

INTRODUCTION

Online retailing, or e-tailing, is an Internet-based business which delivers products and services over the Web: a storefront in cyberspace, where customers can shop from their home (Ahn, Ryu, and Han, 2007). As online retailing proliferates, researchers and practitioners are increasingly concerned with the issue of understanding and managing online service. Although there is considerable body of research about customer service attitudes relevant to physical stores, it remains unknown how those same consumer attitudes transfer to online retailing. Understanding how online retailing is performed and designed, as well as evaluating the service from the consumers’ perspective can develop the customer loyalty that drives profitability.

Many studies have investigated the relationship between online service quality and customer satisfaction. However, most studies have given little or no attention to perceived value. This study therefore decided to explore customer satisfaction and behavioral outcomes from customers’ perceptions of online service quality and value in the online retailing setting. Hopefully it could provide online retailers with understanding more fully how to meet customer needs.

CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

Based on the previous studies, the research model was developed, which included four constructs—online service quality, perceived value, customer satisfaction and behavioral outcomes in online retailing setting. The conceptual model which integrates the hypothesized relationships (Hypotheses 1-6) appears in Figure1. Arrows in the model indicate causal directions.
Online Service Quality

Since Parasuraman, Zeithaml and Berry (1988) introduced a 22-item scale, called SERVQUAL, for measuring service quality, the model has been widely adopted across industries. A number of researchers have criticized the SERVQUAL approach (Carman, 1990; Cronin and Taylor, 1992; Teas, 1993). Carman (1990) suggested that in specific service situations, it may be necessary to delete or modify some of the SERVQUAL dimensions or even introduce new ones.

McKinney et al. (2002) defined Web information quality as the customers’ perception of the quality of information presented on a website and Web system quality as the customers’ perception of website’s performance in information retrieval and delivery. Information quality captures the perceptions of consumer regarding the characteristics of the website content as accuracy, comprehensiveness, reliability, relevance, and usefulness (Saeed et al., 2003). And system quality captures the user’s perception regarding the effectiveness of system attributes. Navigation, interface layout, download speed, digital seal, and value-added mechanisms are some factors that constitute the notion of the system quality (Liao and Cheung, 2001).

The key to retaining the customers of online retailing is improved service quality (Reichheld and Schefter 2000). Several studies have modeled service quality as an antecedent to behavioral outcomes and found a significant link (Bitner, 1990; Boulding et al., 1993; Zeithaml et al., 1996). The following hypothesis can be formulated:

$H_1$: Online service quality is positively related to behavioral outcomes.

Satisfaction

The general marketing literature suggests that service quality and satisfaction are distinct constructs, but a new research model shows that the relationship between the two is non-recursive. The distinction appears to revolve around the arguments that (1) service quality is a form of attitude representing a long-run overall evaluation, whereas (2) satisfaction represents a more short-term, transaction-specific measure (Taylor and Cronin, 1994). Satisfaction is also defined as pleasurable fulfillment (Oliver, 1993). Overall satisfaction is defined as an affective state representing an emotional reaction to the entire Web site search experience (Spreng et al., 1996).

Numerous studies validate the relationship between service quality and satisfaction in online retailing (Mckinney et al., 2002; Szymanski and Hise, 2000; Zeithaml et al., 2002; Zhang and Prybutok, 2005). Szymanski and Hise (2000) found that aspects associated with product information and website design are important determinants in forming customer satisfaction. Mckinney et.al (2002) posits that Web-customer satisfaction has two distinctive
sources-satisfaction with the quality of website’s information content and satisfaction with the website’s system performance in delivering information. Zhang and Prybutok (2005) contended that online service quality affects satisfaction because service quality on the Internet is part of the consumer shopping experience and affects overall satisfaction level. After reviewing existing research on service and the Internet, Zeithaml et al. (2002) conclude that service quality leads to satisfaction. The research hypothesis therefore can be posited as follows:

**H2: Online service quality is positively related to customer satisfaction.**

Satisfaction would result in a number of important outcomes, including increased market share, profitability, customer retention, purchase intentions, and benefits associated with positive word-of-mouth effects. Organizations that focus on customer satisfaction are able to build loyal clients. The positive influence of consumer satisfaction on loyalty has been widely supported in marketing literature (e.g., Chitturi et al., 2008; Cronin et al., 2000; Fornell et al., 1996). Highly satisfied consumers are less prone to overtures from competition. High satisfaction can raise the likelihood of the consumer recommending the service and increase the repurchase intention (Cronin et al., 2000; Fornell et al., 1996). Satisfaction can be viewed as the key to building and retaining a loyal base of long-term website users. Website users can be motivated when their needs are satisfied, or when their satisfaction lies in the content of the activity (website use) itself. On the other hand, user dissatisfaction may lead to unfavorable consequences, such as negative word-of-mouth, less repatronage or switching to alternative service providers. Hence, even in the online services context, satisfied customers are more likely to indulge in word-of-mouth and report greater repatronage intention. After the initial use of the website, if its benefits do not meet users’ expectations, that system will not satisfy users and will eventually be deserted by them. The following hypothesis that satisfaction is related to behavioral outcomes is established.

**H3: Customer satisfaction with online services will have an impact on behavioral outcomes.**

**Perceived Value**

Perhaps customers do not always consume the best quality service and they might instead purchase on the basis of their assessment of the value of a service. Perceived value is the consequence of a mental weighing of perceived benefits versus sacrifices. Service quality has typically been modeled as the sole antecedent to customers satisfaction, and the notion of benefit-sacrifice trade-off in service evaluation has not received due attention. However, the role of perceived value in consumption contexts is important to investigate.

Zeithaml (1988) provided evidence supporting an influential role of value in customers’ purchase decision making. According to the means-end model proposed by Zeithaml (1988), perceived value is a direct antecedent of a purchase decision and a direct consequence of perceived service quality. Cronin and Taylor (1992) contended that marketers need to consider value to enhance the predictive power of service quality.

Satisfaction is influenced by the value of the services that customers have received (Heskett et al., 1994). The ACSI (American Customer Satisfaction Index) model in Fornell et al.’s (1996) study supported a positive influence of perceived value on customer satisfaction. Cronin et al. (2000) further argued that perceived value is a significant predictor of satisfaction.

Bojanic (1996) demonstrated the relationship among perceived value, price, quality and satisfaction, and noted that price and quality determine perceived value, which correlates positively with satisfaction. Oh (1999) conducted an experimental study of the hotel industry, exploring the relationships among service quality, value and satisfaction. He found that service quality is an antecedent of perceived value and value is significantly related to satisfaction and repurchase intentions. Thus, the following hypotheses can be formulated:

**H4: Online service quality is positively related to perceived value.**

**H5: Perceived value is positively related to customer satisfaction.**

**H6: Perceived value is positively related to behavioral outcomes.**

**METHODOLOGY**

**Sample Design**

The measures were developed via successive stages of scale development. All of the items were measured on 7-point Likert-type (1=very disagree strongly and 7= very agree strongly) and semantic differential scales (see
Appendix). The survey was administered to undergraduate students at two different universities in the southwestern region of Taiwan. Students with experience in shopping through the Internet participated in this study, 150 questionnaires were handout and 133 usable responses were obtained. Among the 133 respondents, 52.7% were males and 47.3% were females. These respondents had over 4 years experience in using the Internet and were also knowledgeable about search engines and about how to search for information on the Internet.

Results

AMOS version 4.0 was used for all the structural equation modeling analyses, using maximum likelihood estimation. A confirmatory factor analysis was run for the measurement model including the four latent constructs. Evidence of reliability is detailed in Table 1 and results of the proposed model fitting are shown in Table 2. The proposed model was fitted to test six hypothesized relationships. Model fit was examined based on the following goodness of fit criteria: Root Mean Square Error of Approximation (RMSEA), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), and Comparative Fit Index (CFI). In general, above 0.900 for GFI, AGFI, and CFI and less than 0.050 for RMSEA indicate a good model fit (Hair et al., 1998). Altogether, the fit indices for this model are considered not bad: CFI= 0.857, GFI = 0.722, AGFI= 0.657, and RMSEA= 0.105. The model also had a chi-square value of 548.993 (d.f. = 224, p = 0.000), but the chi-square ratio value of 2.451 suggested a good model fit. All relationships proposed were significant, as detailed in Table 3. Service quality was found to influence behavioral intentions (β= 0.600 , p < 0.001) in H1, and influence satisfaction (β= 0.476, p < 0.001) in H2, and influence value (β= 0.607, p < 0.001) in H4. Satisfaction had positive impact on behavioral outcomes (β= 0.675, p < 0.001) in H2. Perceived value was found to exert a positive influence on satisfaction (β= 0.515, p < 0.001)in H3. But in hypothesis 6, perceived value has no significantly influence on behavioral outcomes(β= -0.111, p =0.474 >0.05).

Table 1: Correlations, Construct Reliabilities, Means and Standard Deviations

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Correlations</th>
<th>Construct Reliability</th>
<th>Mean</th>
<th>Standard Deviation(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Quality(SQ)</td>
<td>SQ 1.000</td>
<td>PV 0.663</td>
<td>CS 0.827</td>
<td>BO 0.874</td>
</tr>
<tr>
<td>Perceived Value(PV)</td>
<td>0.663</td>
<td>1.000</td>
<td>0.801</td>
<td>0.911</td>
</tr>
<tr>
<td>Customer Satisfaction(CS)</td>
<td>0.827</td>
<td>0.801</td>
<td>1.000</td>
<td>0.855</td>
</tr>
<tr>
<td>Behavioral Outcomes(BO)</td>
<td>0.874</td>
<td>0.911</td>
<td>0.855</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note: Construct reliability was calculated as suggested by Hair et al. (1998). Construct reliability = (Sum of standardized loadings)²/(Sum of standardized loadings)² + Sum of indicator measurement error

Table 2: A Structural Model: Standardized Coefficient Estimates and Fit Indices

<table>
<thead>
<tr>
<th>Index</th>
<th>Relationship</th>
<th>β</th>
<th>t-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>SQ → BO</td>
<td>0.600</td>
<td>5.462***</td>
<td>H1 is supported</td>
</tr>
<tr>
<td>H2</td>
<td>SQ → CS</td>
<td>0.476</td>
<td>5.868***</td>
<td>H2 is supported</td>
</tr>
<tr>
<td>H3</td>
<td>CS → BO</td>
<td>0.675</td>
<td>7.312***</td>
<td>H3 is supported</td>
</tr>
<tr>
<td>H4</td>
<td>SQ → PV</td>
<td>0.607</td>
<td>4.394***</td>
<td>H4 is supported</td>
</tr>
<tr>
<td>H5</td>
<td>PV → CS</td>
<td>0.515</td>
<td>7.094***</td>
<td>H5 is supported</td>
</tr>
<tr>
<td>H6</td>
<td>PV → BO</td>
<td>-0.111</td>
<td>-0.716</td>
<td>H6 is not supported</td>
</tr>
</tbody>
</table>

Goodness-of-fit indices

<table>
<thead>
<tr>
<th>N</th>
<th>133</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square(df)</td>
<td>548.993*** ( 224 )</td>
</tr>
<tr>
<td>Discrepancy/df</td>
<td>2.451</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation(RMSEA)</td>
<td>0.105</td>
</tr>
<tr>
<td>Goodness-of-Fit Index(GFI)</td>
<td>0.722</td>
</tr>
<tr>
<td>Adjusted Goodness-of-Fit Index</td>
<td>0.657</td>
</tr>
<tr>
<td>Comparative Fit Index(CFI)</td>
<td>0.809</td>
</tr>
</tbody>
</table>

Note: *p < .050, ***p < .001
CONCLUSIONS

The findings suggest that service providers need to understand customer satisfaction and behavioral outcomes from the customers’ perspective. This study makes a unique contribution by positioning the online service quality and perceived value as independent variables in the model illustrating their influence on customer satisfaction and behavioral outcomes. It also expands current knowledge by establishing a relationship between online service quality and satisfaction. A confirmatory factor analysis showed that service quality and satisfaction were, in this case, distinct, and structural equation modeling showed that they have different antecedents and consequents. In recent years, even though numerous marketing studies have been conducted on the relationship among service quality, satisfaction, and behavioral outcomes, perceived value has largely been neglected in the related research. This study had empirically demonstrated a positive relationship between perceived value and satisfaction. Findings from this study lent empirical support to the assertion that enhancing service quality is clearly not the only means of increasing customer satisfaction; perceived value is essential.

As with all research, this study has some limitations. The findings obtained from this study should be used cautiously in attempting to generalize them to a broader population group. However, it may be appropriate to generalize the findings to other Web consumers of similar age.

ACKNOWLEDGEMENT

This work is supported in part by the National Science Council, Taiwan under Grant No. NSC 97-2410-H-268-003-

REFERENCE


**APPENDIX**

**The Survey Instrument**

**Online Service Quality**

Q1. The information presented on the website was sufficient for me to make a purchase decision.

Q2. It is easy to navigate on this website.

Q3. The website is very appealing.

Q4. The vendor gives prompt service to customers.

Q5. The website is quickly up to date.

Q6. The website keeps personal information secure from exposure.

Q7. The website provides follow-up service to users.

**Perceived value**

V1. I save money shopping online compared to the regular stores.

V2. I feel valuable for the amount of money being paid in this online shopping.

V3. Online shopping is worth what I have spent, including the search, psychological and time costs.

**Behavioral Outcomes**

B1. In the future, I will use this website when I have a need.

B2. I will use this website rather than other websites for purchasing product.

B3. I will recommend others to use this website.

**Satisfaction**

S1. I am satisfied with my previous online shopping experience.

S2. I had a pleasurable experience with my previous online shopping.

S3. Overall I am satisfied with my previous online shopping experience.

Note: Respondents were asked to indicate their agreement/disagreement with each of statements (1=strongly agree, 7= strongly disagree).