AN EMPIRICAL STUDY OF INTERNET STORE CUSTOMER POST-SHOPPING SATISFACTION

Ming Wang and Adam S. Huarng
California State University, Los Angeles
mwang3@calstatela.edu

ABSTRACT

This paper was to study customer online evaluations for multiple Internet stores on an agent web site. Through the investigation, key determinants affecting customer satisfaction were identified. The correlation between each factor and overall satisfaction rating for each merchant was measured. Content analysis was used to exam online comments made by customers on a software agent Web site which links with multiple Internet stores. The study revealed there were more positive reviews than negative reviews on the selected agent Web site for online shoppers. The primary determinant in positive reviews was to receive the merchandise as ordered on time. The primary determinant in negative reviews was customer service. Eight out of nine identified factors, were significantly correlated to overall rating. Some implications as well as future research directions were provided.

Keyword: E-commerce, Software Agent, Internet Shopping, Post-shopping Satisfaction

1. INTRODUCTION

The recent development of software agent web sites has offered the online customer a great shopping environment. They provide online customers a great variety of products and comparative prices on a product from each of the Internet stores linked to the agent web site. To help customers understand the online store better, the agent web site displays multiple customer online post-shopping evaluations on each linked Internet store. This provides customers an opportunity to choose the Internet store they think they will trust and feel comfortable with to conduct their online shopping.

The focus of this paper was to study customer online post-shopping evaluation including both text reviews and overall star ratings on multiple Internet stores on an agent web site. The study analyzes and categorizes these customer reviews, identifies key determinants of online shopper post-shopping evaluation, and investigates how these key determinants affect their overall star ratings. The following research questions were asked in this study:

1. Are most online customers satisfied with shopping on the software agent web site?
2. What are the key determinants that affect Internet store post-shopping ratings?
3. What are the primary determinants of positive online customer evaluation?
4. What are the primary determinants of negative online customer evaluation?
5. How are these determinants correlated to an overall Internet store rating?

2. CONCEPTUAL BACKGROUND

Researchers in the marketing have studied consumer buying patterns and trends for years. Post-purchase behavior is generally recognized as one of the important factors in consumer buying decisions process. During the purchase phase, the consumer will ask: "Will I like this?" or "Is this a good deal?" After the purchase, these questions become: "Do I like this?" or "Did I get a good deal?"   During the post purchase phase, consumer experience some level of satisfaction or dissatisfaction (Spreng, et. al. 1996). According to La Barbera and Mazursky (1983), satisfaction is a function of the extent to which the customer's perception of the product's performance meets her expectation. When product performance meets her expectation, she will be satisfied with the purchase and more likely to purchase the product again. It is very important to satisfy consumer by enhancing store's relationship with them. A satisfied customer will tell three people about their experience, but a dissatisfied customer will complain to thirty people. The level of perceived satisfaction and dissatisfaction is presumed to have influence on the consumer's attitude, intention and complaint behavior (Bearden and Teel, 1983). Taylor (1974) also indicated that consumers tend to regard information obtained by "word of mouth" as more objective and possibly more accurate. Therefore, consumer comments can be a powerful influence on the purchase decision of others (McGaughey and Mason, 1998).

Like traditional stores, online stores also need to build strong relationship with their customers. With the use of Internet technology, software agent web sites actually have more advantages and potential than traditional stores. The agent web site is able to offer a very efficient way to collect and publish consumers' feedback. The comments from previous customers could be a valuable asset to both the software agent Web site and customers. Not only do the oncoming online customers care about the price of the product, but more importantly they need good service so that they will receive the product as ordered on time. However, very little research has been done to analyze and identify the key determinants that affect those comments. The impact of the research will help the agent web site with their online evaluation questionnaire design and also will help an individual online store to understand customer's purchase behavior and to improve service quality and customer retention.

3. METHODOLOGY

Content analysis is the methodology used in this study. According to Krippendroff (1980), the term content analysis is about 70 years old. Researchers have used this approach to the analysis of documents and texts that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner. To categorize customers' comments, it is suggested to use previously created categories as often as possible if they fit the framework of the study (Easwar 1993). However, since this approach to analyzing customers' online comments has not been done before, new categories were developed for this purpose.

3.1 Instrument Development

A pretest was conducted prior to this study to develop key determinants (categories) for content analysis. This was completed using data from five online stores in a popular agent Web site. This agent Web site provides customers with comparative prices for a product from multiple

online stores and invites customers to write an evaluation for each online store that they have purchase experience with. Each customer evaluation has two parts: comments and overall evaluation rating. The comments are in text format with a limitation of 500 characters. Overall ratings are displayed by giving the number of stars. The number of stars is on a scale of 1 to 5, with 1 star being the worst and 5 stars being the best.

The unit of analysis is word and theme. The word is the smallest element or unit used in content analysis. Its use generally results in a frequency distribution of specified words or terms. The theme is a more useful unit to count. In its simplest form, a theme is a simple sentence. The theme is used as unit of analysis if the specified word is not found. The combination of both word and theme is used as a content unit. A checklist was created from the analysis of the five online stores' customer comments during the pretest. The checklist consists of 9 distinctive items. Online shoppers have mentioned at least one of these 9 items in their online comments. There are listed as follows:

1. General feeling on the web site design
2. Competitive price of the product
3. Merchandise availability
4. Merchandise condition
5. On-time delivery
6. Merchandise return policy
7. Customer servic e availability
8. E- mail confirmation on customer order
9. Promotion activities

3.2 Data Collection

From the same software agent Web site, a sample pool of 419 online stores was identified. Each of them has various numbers of comments ranging up to 364. Stores with less than 30 customer comments were eliminated from the study. The final data set consists of 106 customer text comments and 106 star ratings over 53 Internet stores. One store has two customer reviews and two corresponding ratings.

4. DATA ANALYSIS

The data analysis in each text review was based on the data recorded on the checklist. The results of data analysis were reported separately and in tabulated forms. The findings will provide answers to the research questions.

Table 1 presents a frequency distribution of 106 overall star ratings classified by customers' post-shopping satisfaction level. This exhibit lists the frequency of occurrence of each classification of rate. The total number of given ratings was 106. The percent of the total has been computed by dividing the number in each level by the total number of ratings.

Table 1. Overall Rating Classified by Satisfaction Level

Level of Satisfaction (Overall Rating)	Number of Overall Rates at Satisfaction Level	Percent of Total
Very Satisfied	53	50.0
Somewhat Satisfied	9	8.5
Neutral	0	0.0
Somewhat Dissatisfied	3	2.8
Very dissatisfied	41	38.7
Total Reviews	106	100.0

Table 2 shows a frequency of distribution of the number of times each factor has occurred in sixty-two positive reviews. Relative frequency is computed as the number of occurrences of each factor divided by 62 positive reviews.

Table 2. Occurrences of Factors in Positive Reviews

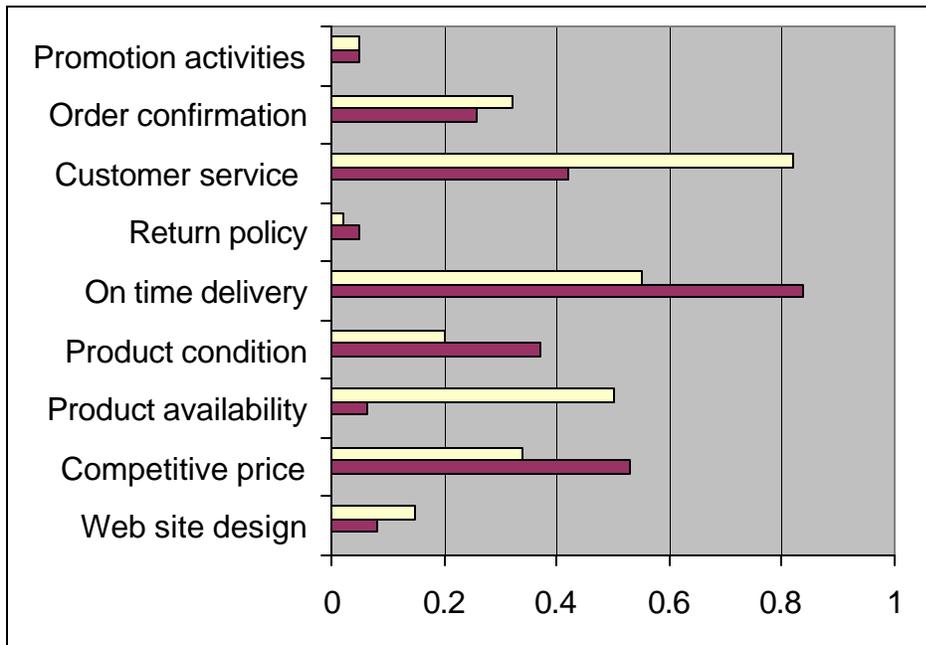| Factors in Positive Reviews	Number of Times Factors Occurred	Relative Frequency
Web site design	5	.08
Competitive price	34	.55
Product availability	4	.06
Product condition	23	.37
On-time delivery	52	.84
Return policy	3	.05
Customer service	26	.42
Order confirmation	16	.26
Promotion activities	3	.05

Table 3 shows a frequency of distribution of the number of times each factor has occurred in forty-four negative reviews. Relative frequency is computed as the number of occurrences of each factor divided by 44 negative reviews.

Table 3. Occurrences of Factors in Negative Reviews

Factors in Negative Reviews	Number of Times Factors Occurred	Relative Frequency
Web site design	7	.16
Competitive price	15	.34

Merchandise availability	22	.50
Merchandise condition	9	.20
On-time delivery	24	.55
Return policy	1	.02
Customer service	36	.82
Order confirmation	14	.32
Promotion activities	2	.05

Figure 1. Occurrences of Factors in Both Positive and Negative Reviews

The upper bar shows the relative frequency of the number of times each factor has occurred in negative reviews. The lower bar shows that in positive reviews.

Table 4 shows the correlation between each of the nine factors and overrating in all customer reviews. The nonparametric Spearman correlation was used to test the association between the overall rating of satisfaction and the nine determinants.

Table 4. Correlation Between each Factor and Overall Satisfaction Rating

----

Identified Determinants	Occurrences in Total Reviews	Percent of Total N = 106	Correlation Coefficient
Web site design	12	.11	.657[*]
Competitive price	49	.46	.887[**]

Merchandise availability	26	.26	.737**
Merchandise condition	32	.30	.798**
On-time delivery	76	.71	.881**
Return policy	4	.04	1.00**
Alive Customer service	62	.59	.895**
Order confirmation	30	.28	.538**
Promotion activities	5	.05	.612

----

* $p < .05$ ** $p < .01$

5. CONCLUSION

1. 58.5% of the total ratings were either very satisfied or somewhat satisfied. 41.5% of the total were either very dissatisfied or somewhat dissatisfied. There was no presentation of neutral evaluation. The indication was that those customers who wrote online evaluation were strongly opinioned. The customers who remained neutral might not be motivated to rate the online store. Further research needs to be done on the portion of these customers.

2. Nine factors were identified in the customer text comments. There was a difference between the primary determinants of positive reviews and that of negative reviews. Figure 1 visually illustrates the frequency occurrences of each factor in both positive reviews and negative reviews comparatively. The satisfied customers showed their primary concern was to receive products as ordered on time with a competitive price without any hidden charge, then customer support. Whereas the primary concern of unsatisfied customers was customer service via phone or e-mail, availability of merchandise in stock and delivery of merchandise as ordered on time. This reflected that most dissatisfied customers might have been irritated by either unfriendly or insufficient customer services.

3. The nonparametric Spearman coefficients indicate the correlation between each determinant to overall satisfaction rating. Except promotional activities, all of the eight determinants are significantly ($p < 0.05$) related to satisfaction rating.
.

6. IMPLICATION

1.   Well-trained live customer service people are vital to the existence of Internet-based store. They are there to solve the problem of miscommunication between the web site and online shoppers.

2.   It is important for an Internet-based store to keep its promised competitive price on the web site to its customers. In the negative reviews customers pointed out the customer service of some Internet stores don't recognize their prices on their web site, or try to sell accessories with extra prices, or charge extra for insurance, service or shipping fees. This really turns away customers.

3.   The availability of merchandise should be displayed on the store's web site. Many complaints from the customers indicated that their orders were not received after the charge

had been placed on their credit card account for a long time. The cause of the delay might be because of poor inventory management by the store.

4. The research results are also valuable for the design of online customer satisfaction surveys. The significant determinants in Table 4 can be used in the online evaluation questionnaire to measure online customer post-shopping satisfaction. The questionnaire survey will save customers time and will possibly generate more comprehensive customer feedbacks.

REFERENCES

Bearden, W. and Teel, J. (1983). Selected determinants of consumer satisfaction and complaint reports. Journal of Marketing Research, 20, 21-8.

Easwar, I.. (1993). Anatomy of green advertising. Advances in Consumer Research, 20, 494 – 501.

Krippendorff, K. (1980). Content analysis: an introduction to its methodology. Newbery Park, CA: Sage.

La Barbera, P. and Mazursky (1983). A longitudinal assessment of consumer satisfaction / dissatisfaction. Journal of Marketing Research, 20, 393 – 404.

Milliman, R. E. and Decker, P. (1990). The use of post-purchase communication to reduce dissonance. The Journal of Business Communication, 27(2) 159 – 171.

McGaughey, R. and Mason, K. (1998). The Internet as a marketing tool. Journal of Marketing Theory and Practice, 6(3), 1-11.

Spreng R., MacKenzie, S., and Olshavsky, H. (1996). A reexamination of the determinants of consumer satisfaction, Journal of Marketing, 60, 15-32.

Taylor, J. W. (1974). The role of risk in consumer behavior. Journal of Marketing, 38, 389 – 398.