

A Study on the Influence of Korea Internet Shopping Mall's Customer Satisfaction Factor to Chinese Internet Shoppers

- 한국 인터넷 쇼핑몰의 고객만족요인이 중국 고객에 미치는 영향에 관한 연구 -

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Abstract

1990년대, 인터넷기술은 이미 사회발전 중에서 매우 중요한 역할을 하였다. 이에 따라 인터넷쇼핑도 신속한 발전을 전개하였다. 인터넷쇼핑이 이처럼 빨리 발전할 수 있는 것은 주요하게 선택의 범위가 넓고, 경쟁력이 있는 가격, 대량의 정보 및 제품 그리고 빠른 배송 등 편리성에 있다. 중국 E-business의 발전에 따라 중국의 인터넷쇼핑 사이트의 수량도 대폭 증가하였다. 인터넷쇼핑의 고객 만족도에 있어서 많은 학자들의 중시를 일으켰다. 종사자들은 인터넷쇼핑중의 고객만족도가 다른 시기에 비해 보다 중요하다는 것을 인식하였다. 고객의 요구가 점점 높으므로 보다 빠르고 보다 완벽하고, 보다 싼 것으로 만족감을 느낀다. 인터넷쇼핑의 고객의 수요를 사전에 요해함으로써 그들의 만족도를 높이는 것이 매우 중요하다. 본 논문의 주요 목적은 중국 인터넷쇼핑몰의 고객만족 요인을 측정하는 것이다.

Keywords: Internet shopping, customer satisfaction factor, Chinese users

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1. Introduction

The explosive growth of Internet usage and electronic shopping in China underscores the importance of this emerging business environment in both marketing and technological terms. Internet shopping is a rapidly growing and competitive distribution medium in which customer satisfaction will be a major success factor in the development and maintenance of this new retailing environment.

1.1 Internet users and online shopping market in China

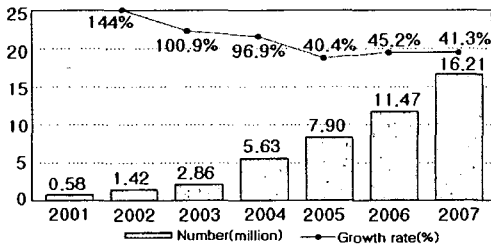
- (1) Total Internet users: 123.00 million : Male 58.8%, Female 41.2%
- (2) General information of the Internet users.

<Table 1.1> Chinese Internet users by age

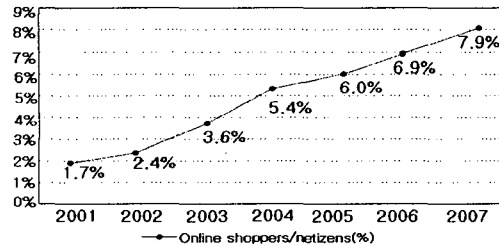
~18	18~24	25~30	31~35	36~40	41~50	51~60	60~
14.9%	38.9%	18.4%	10.1%	7.5%	7.0%	2.4%	0.8%

<Table 1.2> Chinese Internet users by educational degree

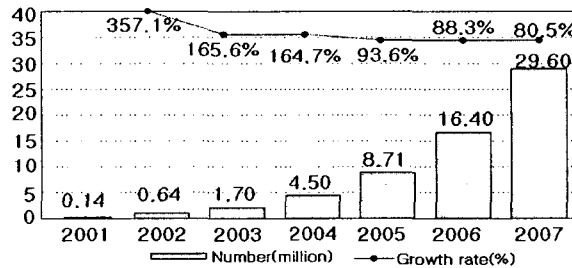
Under High School	High School	College Diploma	Bachelor Degree	Master Degree	Doctor Degree
17.8%	31.6%	23.0%	24.7%	2.3%	0.6%



<Figure 1.1> Number of China online shoppers



<Figure 1.2> Percentage of online shoppers among Netizens



<Figure1.3> Size of China online shopping market

(3) Online shopping web sites that users have visited/purchased

Survey results show that China online shoppers mainly visit/purchase at Joyo, Dangdang, Bol. In addition, online shopping mall run by some famous portals (163, Sohu, Sina, Tom) are also popular.

1.2 Statement of the problem and the purpose of the study

A study by Korganokar & Wolin (1999) found that only a very small fraction of the 2.5 trillion spent on shopping in 1997 actually came from online spending. This shows that only a small fraction of those with online capabilities are currently online shoppers. Hence, it is imperative that marketers understand the depth of consumer acceptance or their intentions for this medium of retailing. Most current online shopping services fail to deliver a satisfying shopping experience, and, until they do, they are unlikely to attract many consumers away from traditional retail channels (Reda, 1995). Many consumers still do not feel comfortable giving out their credit card number over the Internet one survey revealed that only about 44% of Internet shoppers use credit cards to make their purchases ("Internet Shopping", 1996). Until now, there are few Internet shopping malls' customer satisfaction papers in China. As the developing of China's Internet shopping, the study filed of Internet shopping in China should also be emphasized. From the above, it is evident that the need exists to gauge the satisfaction of consumers with regard to shopping online.

A better understanding of the customer satisfaction factors can benefit business. The discovery and verification of the determinants of satisfaction factors with online shopping can guide firms in developing strategies, which can improve and solidify their relationship with customers, thereby enhancing company image and increasing sales. Another purpose for investigating China online shopping's customer satisfaction factors are to gain an understanding of how it influences

subsequent purchase intentions in order to explain and predict future online shopping behavior. Despite the volumes of research dedicated to product and service satisfaction, little empirical research has focused on investigating the factors of customer satisfaction with electronic shopping on the Internet in China. Due to the increased significance and utilization of online shopping as an available shopping medium for consumers and the lack of theoretical research in this area, it seems highly relevant to conduct an empirical study in this area.

2. Theoretical Background

2.1 E-commerce and customer satisfaction

The key to success for e-commerce lies in knowing customers. Thus, much e-commerce research has been done regarding customer behavior, value and satisfaction. Customer satisfaction is defined as the result of a cognitive and affective evaluation, where some comparison standard is compared to the actually perceived performance. If the perceived performance is less than expected, customers will be dissatisfied. On the other hand, if the perceived performance exceeds expectations, customers will be satisfied.

Among the study of e-satisfaction, Ho and Wu suggested several antecedents of customer satisfaction while shopping in an online environment including logistical support, technological characteristics, information characteristics, site presentation, and product characteristics.

In a similar study of e-satisfaction, Szymanski and Hise found that convenience, site design, and financial security were dominant factors in determining consumer satisfaction. Furthermore, satisfaction has been studied during information search, and in specific retail settings.

2.2 Summary of literature review

Hereunder are some outcomes from the Internet shopping mall's customer satisfaction studies in Korea.

<Table 2.1> Empirical Internet shopping satisfaction studies

Author	Objective	Outcome
Eun-Jeong Cho (2003)	A study on the determinants of customer satisfaction in Internet shopping malls	"The factors influencing customer satisfaction were product, price, place and system quality."
Tae-Yong Kim (2004)	A study on the factors influencing the satisfaction, repurchasing intention on Internet shopping mall by mall type	"The factors shopping site design, shopping information, various products, delivery and shopping mall's reliability influence customer satisfaction."
Woo-Young Choi (2004)	The influence of Internet shopping malls service quality of customers satisfaction	"This study analyzed that Internet shopping malls service quality (information, product transaction, web service design, communication, security) of customer satisfaction."
Sang-Bum Woo(2002)	A study on the factors having influence on purchasing intention on the special Internet shopping mall	"The results of this study are: the biggest factor affecting consumer's purchasing intention is the information, and then is the service, the design and the color of the Internet shopping mall."
Choong-Ryul Lee (2003)	The analysis on consumer satisfaction factors and buying intention on Internet shopping mall	"Five factors -product information offer, merchandising, convenience of order method, dangerousness of Settlement method, after service - are focused"
Yongseok Chun (2000)	A study on the determinations of customer satisfaction in online and offline retail store	The factors are trust, community, service quality, reliability, shopping site's design, and information.

From above previous studies, we can know that the factors that most researchers studied were focused on product, information, Internet shopping site's system, delivery and customer service, etc, in Korea after 2000.

Now there are many Korean Internet shopping mall companies have their branch companies in China. Therefore, it is very important for those companies to know the customer satisfaction factor of Chinese customer.

This research will focus on above five factors to analyze if they have any influence to the customer satisfaction of Internet shopping in China.

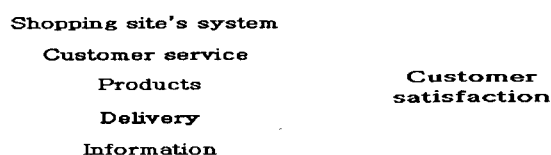
3. Research framework and hypotheses

In order to target online users, a Web-based survey was employed. Twenty-seven statements were used to group respondents with similar shopping satisfaction factor. The statements related to shopping site's system, customer service, products, delivery, and information. The questionnaire, using a Five-point Likert scale, was employed to collect data for the constructs of the research model. Respondents were asked to mark their answers to each of the questions using the 1 to 5 Likert type scaled on which the anchor for 1 was "strongly disagree" and for 5 "strongly agree". Data were collected from May to June in 2006. A total of 417 persons clicked through to the end of the questionnaire. Of the number of consumers that clicked through, only 83 responses were unusable. Sample size differed for some questions because some respondents chose not to answer the entire questionnaire. The calculated response rate was 80%, and the usable responses were 334.

Based on the review of the literature on the factors related to the customer satisfaction for the Internet shopping, the following hypotheses are presented:

- H1: Shopping site system is a very important factor to influence customer satisfaction.
- H2: Customer service is a very important factor to influence customer satisfaction.
- H3: Products is a very important factor to influence customer satisfaction.
- H4: Delivery is a very important factor to influence customer satisfaction.
- H5: Information is a very important factor to influence customer satisfaction.

The model of this study is based on the literature review of Internet shopping mall's customer satisfaction factors from 2000 years. Although there are some additional constructs, such as enjoyment, trust, privacy risk, I think the basic factors from the literature review are valid enough for the purpose of this study.



<Figure 3.1> Research model

4. Data Analysis And Produce

The research model was analyzed using SPSS 10.0 program. Data analysis proceeded into 4 stages in this study. First, reliability analysis will be proceeded to all of the variables. Second, all the variables will be reduced into five factors (predictors) by factor analysis. Third, multiple linear regression analysis will be proceeded to test the research model. Forth is the hypothesis testing result.

<Table 4.1> Profile of respondents

Measure	Item	Frequency	Percentage (%)
Gender	Male	247	74
	Female	87	26
	Total	334	
Age	Below 15	2	0.60
	16~20	50	14.97
	21~25	230	68.86
	26~30	35	10.48
	31~35	14	4.19
	36~45	3	0.90
	Over 46	0	0
Education level	High school or under	7	2.10
	Attended college	27	8.08
	College graduate	262	78.44
	Postgraduate	28	8.38
	PHD or more	10	2.99
Hours to visit Internet shopping site	1 hour or less	153	45.81
	1~5 hours	97	29.04
	6~10 hours	40	11.98
	11~30 hours	20	5.99
	31~50 hours	13	3.89
	Over 51 hours	11	3.29
Shopped times online	None	84	25.15
	1~3 times	129	38.62
	4~5 times	57	17.07
	6~8 times	25	7.49
	9~15 times	19	5.69
	Over 15 times	20	5.99
Income each week	Under 500RMB	177	52.99
	500~1000RMB	49	14.67
	1000~2000RMB	49	14.67
	2000~3000RMB	25	7.49
	3000~5000RMB	15	4.49
	5000~8000RMB	3	0.90
	Over 5000RMB	16	4.79

4.1 Reliability analysis

In order to ensure that the variables were internally consistent, reliability assessment was carried out using Cronbach's alpha. As <Table 4.2> shows, all Cronbach's alpha values were greater than 0.7, satisfying a minimum requirement of 0.6.

<Table 4.2> Reliability analysis results of the independent variables

Variable	Cronbach's alpha (<i>a</i>)
Site's system	0.7945
Customer service	0.7585
Products	0.8359
Delivery	0.8328
Information	0.7729

4.2 Factor analysis

To verify the content validity of measures, factor analysis was performed. The purpose of the factor analysis in this study was to perform the validity and to reduce the independent variables. As <Table 4.3> shows, items were loaded for five factors at around 0.5 or more factor loading value and emerged with no-cross construct loadings above 0.5. All factor loading values were greater than 0.5, satisfying a minimum construct validity requirement of 0.5.

<Table 4.3> Factor analysis on research variables

Survey NO.	1	2	3	4	5
	Site	Customer service	Product	Delivery	Information
SS1	.875				
SS2	.864				
SS3	.757				
SS4	.741				
SS5	.684				
SV1		.818			
SV2		.780			
SV3		.740			
SV4		.627			
SV5		.608			
PT1			.952		
PT2			.947		
PT3			.830		
DL1				.840	
DL2				.829	
DL3				.752	
IF1					.608
IF2					.596
IF3					.583

After factor analysis, the 19 independent variables were grouped into five factors, factor 1 is shopping site's system, factor 2 is customer service, factor 3 is product, factor 4 is delivery and factor 5 is information.

4.3 Multiple linear regression analysis

Multiple regression is an extension of linear regression. This technique is used when one is interested in the linear relationship between a set of independent variables and one dependent variable.

In multiple regression the independent variable's are sometimes referred to as predictor variables and the dependent variable as the criterion variable.

In this paper, the predictor variables for multiple linear regression are shopping site's system, customer service, product, delivery and information, and the dependent variable is customer satisfaction.

4.3.1 Multiple linear regression analysis results from SPSS 10.0

(1) Model testing

Here under are the test for the predictors' goodness of fit of the regression model and the regression equation.

<Table 4.4> Output of model testing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.639	.409	.401	.61

In the above <Table 4.4>, the R^2 is 0.409. This suggests that 41% of the variance in the dependent variable is shared by the predictor variable therefore 59% is not shared.

Thus, there is 41% goodness of fit of the model produced by the regression equation.

(2) Hypotheses' linear relationship testing

<Table 4.5> ANOVA output of hypotheses testing

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.235	5	19.395	52.249	.000
	Residual	114.739	329	.371		
	Total	191.974	334			

In <Table 4.5>, ANOVA(analysis of variance) tests the hypothesis that there is linear relationship between the predictors and the dependent variable. "F" is the ratio of the mean square for regression to the mean square for the residual.

In <Table 4.5>, when all predictors are entered, the significance level associated with the observed value of "F" is 0.000($52.249 \geq 0.000$).

Thus, the hypothesis can be accepted and we may conclude that there is a significant linear relationship between the set of independent viable and the dependent variable.

(3) Regression coefficients analysis

<Table 4.6> Regression coefficients analysis for full model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std.Error	Beta		
1	(Constant)	3.233	.219		14.762	.000
	1	.374	.081	.477	4.617	.000
	2	.268	.067	.342	4.001	.001
	3	.170	.075	.217	2.267	.008
	4	.077	.086	.098	.895	.016
	5	-.027	.065	-.034	-.415	.438

a. Dependent Variable: CS

<Table 4.6> displays the values of the coefficients in the regression equation and measures the probability that a linear relationship exists between each predictor variable and the dependent variable.

In this table 'B' is the slope of the line. 'Std. Error' is the standard error of 'B'.

'Beta' is the standardized regression coefficient. 'Sig.' is the significance level for the test of the hypothesis that the value of a coefficient is zero in the population.

The 'Sig.' value ($p\text{-value} \leq 0.05$) for information is greater than 0.05 ($0.438 \geq 0.05$). Therefore, the hypothesis that there is linear relationship between this predictor and attractiveness can be rejected. As a result, the variable IF should be removed.

4.3.2 Summary

Multiple regression is used to examine the relationship between a set of two or more independent variables and one dependent variable. It provides the information necessary to make predictions of the dependent variables based on several independent variables. To do so, the multiple regression equation is extended to:

$$y = a + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k$$

y = attractiveness

a = the value of the intercept

β_1 = the slope (weighting) of the first variable

β_2 = the slope (weighting) of the second variable

β_k = the slope of the k th variable

The resulting regression equation of this research is

$$y = a + \beta_1 \text{site's system} + \beta_2 \text{customer satisfaction} + \beta_3 \text{products} + \beta_4 \text{delivery}$$

$$y = 3.233 + 0.374(\text{site's system}) + 0.268(\text{customer satisfaction}) + 0.17(\text{products}) + 0.077(\text{delivery})$$

4.4 Hypothesis testing result

In the multiple linear regression analysis, R^2 is 0.409. Thus, there is 41% goodness of fit of the model produced by the regression equation. F-value is 52.249. Thus, the hypothesis can be accepted and we may conclude that there is a significant linear relationship between the set of independent variable and the dependent variable.

So, 'Sig.' ($p\text{-value} \leq 0.05$) is the significance level for the test of the hypothesis. The result of hypothesis testing is reported in <Table 4.7>.

<Table 4.7> Hypothesis testing result

Hypothesis	Independent Variable	Depended Variable	P-value	Hypothesis supported
H1	Site's system	Customer Satisfaction	.000	Accepted
H2	Customer service		.001	Accepted
H3	Products		.008	Accepted
H4	Delivery		.016	Accepted
H5	Information		.438	Rejected

5. Conclusions and Limitations

5.1 Summary of results

This study explores the customer satisfaction factors of Chinese Internet shopping mall. Survey was employed online, and there were 417 people clicked the questionnaire and 343 responses were usable.

Based on the review of the literature on the factors related to the customer satisfaction for the Internet shopping, this paper gave out five customer satisfaction factors, Internet shopping site's system, customer service, products, delivery and information.

The data analysis results show that shopping site's system, customer service, product, and delivery are very important factors that influence the Chinese Internet shopping mall's customer satisfaction, but the factor of information do not really influence Chinese Internet shopping mall's customer satisfaction.

The results mean that the users of an Internet shopping mall consider the Web site not merely as an information system but also as a virtual store which provides the full stages of purchasing process of finding, ordering, and receiving.

These findings may be important for marketing managers because they can provide guidelines for planning Internet strategies to develop customer satisfaction and maintain customer loyalty.

In summary, this study provides empirical support for the factors that influence satisfaction with an Internet shopping experience.

5.2 Limitations and methodological problems

Although this study provides meaningful implications for Chinese Internet shopping, it has some limitations and thus has further research issues.

First, all external variables are based on the perceived satisfaction of users, which are subjective and may be influenced by each user's individual characteristics such as web site skills, sensitiveness to price and level of demanding for delivery time.

Second, although the results show that the Chinese Internet shopping's customer satisfaction factors that affect the user's beliefs in Chinese Internet shopping malls, it is important to realize that other factors may also play an important role in user beliefs.

Examples of such factors include peer influence, computer experience, and innovation characteristics.

Further research should enhance the search for antecedents affecting the user beliefs.

Third, this study focuses on the China online shopping mall domain.

Forth, the sample utilized by this study consists of individuals who visited the www.happycampus.com.cn and www.zipsurvey.com and filed out the Internet survey questionnaire.

Therefore, the individuals in this sample may be more active Internet users than general Internet users.

Fifth, this study focuses on the Internet users of Chinese.

Therefore, there is the possibility that my sample is not representative of all Internet users.

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APPENDIX: Survey Questionnaires

This is a research questionnaire for study on Internet shopping mall's customer satisfaction factor in China. Your answers will only be used as academic research. Please take your time to answer the questions and make sure you have answer all completely. Thank you.

Best regards,

Student: Cui Ranhong, Ma Hengguo

Advisor: Dr. Kim Chang-Eun

Industrial Engineering Department, Myongji University

①Strongly disagree ②Disagree ③Average ④Agree ⑤Strongly agree

N O.	Question					
1	The shopping site has an appropriate style of design for shopping	①	②	③	④	⑤
2	The web site has an easy navigation to information	①	②	③	④	⑤
3	I can use (the shopping site) when I want to use it	①	②	③	④	⑤
4	The shopping site keeps transactions secure from exposure	①	②	③	④	⑤
5	The shopping site supports personal travel in navigation	①	②	③	④	⑤
6	The shopping site provides complete and detailed information	①	②	③	④	⑤
7	The shopping site has sufficient contents which I expect to find	①	②	③	④	⑤
8	The shopping site provides accurate information	①	②	③	④	⑤
9	The shopping site anticipates and responds promptly to user request	①	②	③	④	⑤
10	The shopping site can be depended on to provide whatever is promised	①	②	③	④	⑤
11	The shopping site instills confidence in users and reduces uncertainty	①	②	③	④	⑤
12	The shopping site understands and adapts to the user's specific needs	①	②	③	④	⑤
13	The shopping site provides follow-up service to users	①	②	③	④	⑤
14	The shopping site delivers the right product which was ordered	①	②	③	④	⑤
15	The shopping site delivers products with safely packaged	①	②	③	④	⑤
16	The shopping site delivers products as promised time	①	②	③	④	⑤
17	The shopping site deals products with high quality	①	②	③	④	⑤
18	The shopping site deals various products	①	②	③	④	⑤
19	The price of the products in the shopping sites are cheap and good	①	②	③	④	⑤
20	The shopping on the shopping site is satisfied and reliable	①	②	③	④	⑤

Hereunder are the questions about your general information.

1. Your gender?

① Male

② Female

2. Your age?

3. The Internet shopping sites that you always visit?

4. Your education level?

① Middle school or
under

④ College graduate

② High school or under

⑤ Postgraduate

③ Attended college

⑥ PHD or more

5. Where do you use the Internet?

6. How long do you visit Internet shopping site each week?

① 1 hour or less

④ 11~30 hours

② 1~5 hours

⑤ 31~50 hours

③ 6~10 hours

⑥ Over 51 hours

7. How many times have you shopped online one year?

① None

④ 6~8 times

② 1~3 times

⑤ 9~15 times

③ 4~5 times

⑥ Over 15 times

8. Your income each week?

① Under 500RMB

⑤ 3000~5000RMB

② 500~1000RMB

⑥ 5000~8000RMB

③ 1000~2000RMB

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