

# The Factors Affecting on the User's Repurchase Intention in Chinese Internet Shopping Malls

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## 요 약

정보통신 인프라의 확대 및 인터넷 사용자 수의 급속한 증가에 따라 중국 인터넷 쇼핑몰 시장은 방대한 잠재수요를 가진 새로운 시장으로 급부상하고 있다. 본 연구의 주목적은 중국 인터넷 쇼핑몰 이용자들을 대상으로 한 실증분석을 통해 인터넷 쇼핑몰 이용자의 재구매의도에 영향을 미칠 것으로 예상되는 중요한 특성요인을 도출해 보고자 하였다. 연구목적의 효과적인 달성을 위한 이론적 토대로서 정보시스템성공모델 관련 선행연구에 대한 종합적 고찰 결과를 토대로 인터넷 쇼핑몰의 정보품질, 시스템품질, 서비스품질, 고객만족, 재구매의도 등의 여섯 가지 요인을 포함한 연구모델을 구축하였고, 이들 변수들 간의 상호 영향관계에 관한 가설을 수립하였다. 중국 인터넷 쇼핑몰 이용자 204명을 대상으로 한 설문조사 결과를 이용하여 공분산구조모델 분석을 통한 연구가설 검정을 실시하였다.

본 연구의 실증분석 결과를 요약해 보면 다음과 같다.

첫째, 중국 인터넷 쇼핑몰의 정보품질과 서비스품질이 고객만족에 긍정적인 영향을 미치는 반면 시스템품질은 별다른 영향을 미치지 못하는 것으로 밝혀졌다. 둘째, 인터넷 쇼핑몰 고객의 만족은 재구매의도에 긍정적인 영향을 미치는 것으로 밝혀졌다. 이상의 가설검정 결과를 토대로 본 연구에서는 연구의 시사점과 한계점 및 향후 연구방향에 관하여 논하였다.

**Key Words :** 중국 인터넷 쇼핑몰, 정보시스템품질, 고객만족, 재구매의도

## **I . Introduction**

According to the survey report released by iResearch in January, 2010, the market scale of Chinese Internet shopping malls increased to 248.35 billion CNY yuan which was 93.7 percent over the figure of last year. Internet shopping mall market was one of the fastest growing and relative less affected areas in China under the background of global economic crisis in 2009. In addition, the number of Internet shopping mall users in China had already reached at 100 million CNY yuan which took a growth of 37.5% compared to the data of last year. This number was also confirmed to account for 28.2 percent of total netizens in China(CNNIC, 2009). Thus, In tandem with the expansion of Chinese information and communication infrastructure as well as rapid increase in number of users, it's promising that Chinese Internet shopping mall market has enormous potential for future growth.

Notwithstanding, beside the apparent growth in Internet shopping mall market, drastic competition, profitability controversy, customer loss and other uncertainties are also undertaken potentially. In recently, China has became Korea's largest trading, investing and visiting partner, thus, in order to enter into China market successful, a careful planned strategy should be developed in advance, consequently, there is a pressing need for close analysis on the characteristic of China's market as well as use of Internet shopping malls.

In this study, the important factors which

are proposed to influence Internet shopping mall user's repurchase intention are delineated through an empirical study based on a survey target of Chinese users.

The results of this study could be served as a strategic implication for Korean industry practitioners to attain user's satisfaction and continuous use no matter whether they are conducting business in China or planning to advance their business in China.

## **II . Literature Review**

### **1. Information System(IS) Success Model**

Although a lot of researches have carried out research concerning evaluation of Information system performance from diverse perspectives already, it still remains as an important study field that many researches are joining and undergoing.

In DeLone & McLean(1992)'s research, system quality and information quality were assumed as two important factors affecting the degree of user's satisfaction and final use. Moreover, system quality and information quality were also proposed to ultimately influence individual impact and organizational impact indirectly through user's satisfaction and use.

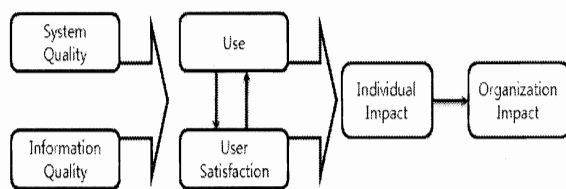


Figure 1. DeLone & McLean's IS Success Model

More than merely extending DeLone & McLean(1992)'s research, Pitt et al.(1995) suggested that there is another factor – service factor should also be considered. Hence, besides system quality and information quality factors, evaluation on service quality was added and analyzed in their research at the same time. Based on their empirical testing, all the three quality factors –information quality, system quality and service quality, are all confirmed to have positive influence on user's IS use and satisfaction.

In addition, other studies such as Seddon & Kiew(1994), Myers et al.(1997), Van Dyke et al.(1997) also discussed on the issue of performance evaluation after importing information systems.

DeLone & McLean(2003) presented a modified information performance evaluation model which could be furtherly applied to evaluate the performance of e-commerce system to. In our study, system quality, information quality and service quality are employed as important factors influencing user's satisfaction and system use.

Internet shopping malls or other web-based information systems are platforms through which information searching, purchasing, payment and other various services can be fulfilled. According

to the findings presented in previous studies, information quality, system quality, service quality are set as critical factors which can significantly influence the performance of Internet shopping malls.

## 2. User's Satisfaction and Repurchase Intention

User's satisfaction is the degree to which user's expectation of a product or service is met or exceeded based on an overall evaluation of user experience, user's satisfaction can be measured by an evaluation of some influencing factors. Based on the understanding of user's satisfaction, an expansion of market share and promotion of customer value can be achieved through the maintenance of existing customers as well as the creation of new customers. The concept of user satisfaction is defined from a variety of perspectives, Kotler(2000) defined user satisfaction as an overall feeling – satisfaction or dissatisfaction originating from a comparison of user's prior expectations and perceived experiences. Repurchase intention is an important factor that decides business success or failure, however, under the network environment, it's more difficult to maintain local customers since entry and departure becomes much easier. On the other hand, satisfied or dissatisfied experiences can be formed after user's purchasing activities, based on such experience, a variety of other behaviors, such as continuously purchase or not, recommend to people around or not etc., will be decided

subsequently.

IS user satisfaction refers to the degree to which user's demand can be met when using information systems(Ives et al., 1983), according to their opinion, information system which can cater for user's diverse requirements is considered to be a successful information system, such system can attract continuous use.

III. Empirical Research Design

1. Research Model and Hypothesis Formation

Based on the review of previous literatures concerning IS evaluation, user satisfaction and repurchase intention, our research model is developed and shown in Figure 2.

As we can see from the research model, information quality, system quality and service quality are set as three determining factors that could affect the degree of user's satisfaction. Among it, user's satisfaction and repurchase intention are also included as dependent variables.

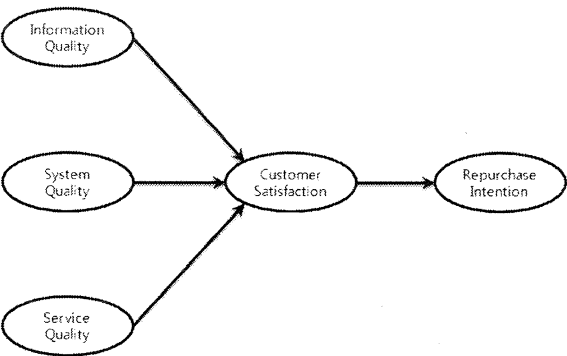


Figure 2. Conceptual Research Model

Based on above review, the hypotheses on mutual relationships between each variable are established as follows:

- H1. Information quality of Internet shopping malls has positive(+) impact on user's satisfaction.
- H2. System quality of Internet shopping malls has positive(+) impact on user's satisfaction.
- H3. Service quality of Internet shopping malls has positive(+) impact on user's satisfaction.
- H4. User's satisfaction of Internet shopping malls have positive(+) impact on repurchase intention.

2. Measurement of Research Variables

In order to assess the performance of Internet shopping malls and clarify the influencing factors of user's satisfaction and repurchase intention, all research variables are defined as follows in Table 1. Deriving from existing literature, although each variable demonstrates appropriate validity and reliability, it is also modified and supplemented so as to fit the actual state of Internet shopping malls in this study. All of the constructs used in our study are followed by a seven point scale anchored by '1 = very low' to '7 = very high' likert-scales.

Table 1. Operational Definition of Research Variables and Related References

Variables	Operational Definitions	Items	Related References
Information Quality	The overall quality of information relating to products and services provided by Internet shopping malls	5	DeLone & McLean(1994)
System Quality	The overall quality of Internet shopping system itself	5	Liu & Arnett (2000)
Service Quality	The degree of various services support established at an Internet shopping mall	6	Pitt et al. (1995)
User Satisfaction	The overall degree of customer's satisfaction at the product or service provided by an Internet shopping mall	4	Zeithaml et al. (1996)
Repurchase Intention	Whether constantly or repetitive use an Internet shopping mall in the future or not.	4	Zeithaml et al. (1996)

### 3. Data collection and General Information of Samples

The main objective of our study is to delineate the factors that affect Chinese user's satisfaction and repurchase intention of Internet shopping malls. To achieve our purpose, a survey was conducted with Chinese users who had transaction experiences in local Internet shopping malls. It takes appropriate one month to gather the questionnaires and 220 samples were collected finally. After carefully reviewing, 16 questionnaires were eliminated because of dishonest and invalidated answers and other reasons. Finally 204 copies were adopted in our empirical testing which would render support for the robustness and generalizability of the research model and hypotheses.

The general information of samples collected from survey are analyzed and

shown in Table 2.

Table 2.General Information of Samples

Divisions		Frequency	Percent(%)
Gender	Male	79	38.7
	Female	125	61.3
Age	Less than 19 years	2	1.0
	19-25 years old	163	79.9
	25-30 years old	37	18.1
	30-35 years old	2	1.0
Educational Background	High School	7	3.4
	In College	128	62.7
	Undergraduate	36	17.6
	Post-graduate	33	16.3
Average Monthly Income	Less than1,000 yuan	134	65.7
	1,000-3,000 yuan	45	22.1
	3,000-5,000 yuan	22	10.7
	More than 5,000 yuan	3	1.5
Overall		204	100.0

## IV. Analysis Results and Discussion

### 1. Measurement of Research Model

In order to test the hypotheses, a two-step analysis, which tests measurement and structure model sequentially, was performed in our study (Anderson & Gerbing, 1988). The relationships among variables can be examined by an analysis of covariance structure model, in order to do this, Amos ver 5.0 is employed as our statistical tool.

The confirmatory factor analysis on measurement items in each construct was performed and result could be referred in Table 3. As we can see from table 3, the

value of fit of each constructs is above the satisfactory level as a whole.

Table 3. Results of Construct's Confirmatory Factor Analysis

Constructs	Items	$\chi^2$	d.f	GFI	AGFI	RMR	NFI
System Quality	5	25.184	5	.953	.858	.099	.933
Information Quality	5	3.279	5	.994	.981	.028	.992
Service Quality	6	34.586	9	.946	.873	.078	.928
User Satisfaction	4	7.820	2	.982	.911	.037	.983
Repurchase Intention	4	8.436	2	.979	.893	.058	.978

Next, additionally, endogenous variables, namely customer satisfaction, repurchase intention, as well as exogenous variable, namely information quality, system quality and service quality, are put into a secondary confirmatory factor analysis. The results of confirmatory factor analysis on exogenous variables and endogenous variables are presented in Table 4 and Table 5 respectively.

Table 4. Results of Confirmatory Factor Analysis on Exogenous Variables

Constructs	Items	Factor Loadings	Standard Error	t-Value	p	Concept Reliability	AVE
System Quality	xt1	.558	.136	6.655	.000	0.867	0.572
	xt2	.693	.155	7.885	.000		
	xt3	.824	.156	8.796	.000		
	xt4	.761	.148	8.309	.000		
	xt5	.615	-	-	-		
Information Quality	qb1	.756	.123	9.713	.000	0.889	0.615
	qb2	.770	.119	9.958	.000		
	qb3	.803	.127	10.255	.000		
	qb4	.719	.118	9.342	.000		
	qb5	.688	-	-	-		

Service Quality	fw1	.632	.114	8.207	.000	0.863	0.514
	fw2	.680	.105	8.618	.000		
	fw3	.664	.107	8.654	.000		
	fw4	.781	.111	10.014	.000		
	fw5	.788	.115	9.951	.000		
	fw6	.680	-	-	-		
Fit Indices	$\chi^2=137.692$ , $df=92$ , $\chi^2/df=1.497$ , $p=0.001$ , $RMR=0.095$ , $GFI=0.923$ , $AGFI=0.885$ , $NFI=0.918$ , $CFI=0.971$						

Table 5. Results of Confirmatory Factor Analysis on Endogenous Variables

Constructs	Items	Factor Loading	Standard Error	t-Value	p	Construct Reliability	AVE
User Satisfaction	my1	.776	.094	11.518	.000	0.852	0.510
	my2	.859	.082	12.942	.000		
	my3	.837	.084	12.578	.000		
	my4	.776	-	-	-		
Repurchase Intention	gm1	.744	.096	9.680	.000	0.843	0.573
	gm2	.869	.084	13.014	.000		
	gm3	.754	.093	11.180	.000		
	gm4	.794	-	-	-		
Fit Indices	$\chi^2=46.545$ , $df=18$ , $\chi^2/df=2.586$ , $p=0.000$ , $RMR=0.066$ , $GFI=0.950$ , $AGFI=0.899$ , $NFI=0.954$ , $CFI=0.971$						

According to the analysis results, p-value of  $\chi^2$  is not satisfied well with the recommended criteria.  $\chi^2/df$ , GFI, AGFI, RMR, NFI, CFI and other indicators surpass the recommended criteria for acceptance and have attained satisfactory level. p-value is lower than statistical significance level of 0.05 thus ensuring the convergence validity and discriminant validity.

In addition, according to the value of AVE (Average Variance Extracted) which is calculated to determine whether criteria for each configuration concept can represent its research unit, all reliability values of research units in our research model are confirmed to be higher than standard value of 0.7 and AVE value is also confirmed to

be higher than standard value of 0.5, these facts represent the appropriateness of measurement model in our research (Hair et al., 1995)

## 2. Structural Model Analysis

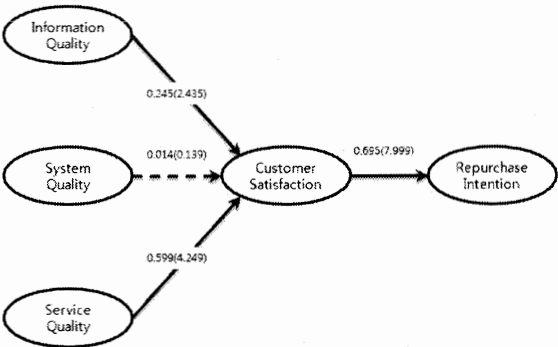
In the view of above analysis on research model, structure model analysis was performed to delineate the factors which can affect Chinese user’s satisfactions at Internet shopping malls as well as repurchase intention. Goodness of fit was analyzed before testing hypotheses and analysis results can be referred in Table 6.

Table 6. Test of Structure Model’s Goodness of Fit

Divisions	Absolute Goodness of Fit Index				
	$\chi^2(p,df)$	$\chi^2/df$	GFI	RMR	RMSEA
Recommended Acceptance Criteria	-	$\leq 2.0$	$\geq 0.9$	$\leq 0.05$	$\leq 0.08$
Analysis Results	274.968 (0.004,215 )	1.279	0.907	0.102	0.037
Divisions	Incremental Goodness of Fit Index			Parsimonious Goodness of Fit Index	
	AGFI	NFI	CFI	PGFI	PNFI
Recommended Acceptance Criteria	$\geq 0.8$	$\geq 0.9$	$\geq 0.9$	$\geq 0.6$	$\geq 0.6$
Analysis Results	0.870	0.912	0.979	0.650	0.710

According to the test results of goodness of fit of our proposed research model, the value of RMR(0.102) doesn’t meet the recommended accepting standard very much. The value of  $\chi^2/df$ (1.279) is less than the recommended acceptance criteria

of 3, other goodness of fit indexes well satisfy the recommended accepting criteria thus validating an overall convincing research model as well as a generally good fit of structure model.



Notice 1) standardized path coefficient(t value)  
 Notice 2) solid : accepted path( $p<0.05$ )  
 dashed : denied path( $p<0.05$ )

Figure 3. Result of Structural Model Testing

Table 7. Results of Hypothesis Testing

Hypot hesis	Hypothesized Paths	Dire ction	Stand. Path Coe.	Stand Error	t- Value	Accept or Not
H1	Information Quality → User Satisfaction	+	0.245	0.122	2.435* *	Accept
H2	System Quality → User Satisfaction	+	0.014	0.125	0.139	Denied
H3	Service Quality → User Satisfaction	+	0.599	0.163	4.249* *	Accept
H4	User Satisfaction → Repurchase Intention	+	0.695	0.076	7.999* *	Accept

Notice) \*:  $p<0.05$ , \*\*:  $p<0.01$

After performing goodness of fit analysis, structure model test which is utilized to verify proposed hypotheses was performed and results are shown in Figure 3. and Table 7. In order to examine the statistical significance of path coefficients, t-test was conducted. The result of t-test greater than

2 obtains a p-value lower than significance level of 0.05 thus dismissing corresponding null hypothesis.

## V. Conclusion

In order to understand features of Chinese Internet shopping malls which show rapid growth in recent years, we examined the casual relationships between three attributes of Internet shopping mall - information quality, service quality, system quality and customer satisfaction, repurchase intention with a target of Chinese Internet shopping mall users. By doing this, our research could provide significant implications for industry practitioners.

The findings of our study are summarized as follows.

First, service quality and information quality of Internet shopping malls are proved to have positive impacts on Chinese Internet shopping mall users whereas system quality's effect isn't verified. Based on this view, whether accurate information and premium service is well set in place should be taken into account on a priority basis.

Second, the degree of user's satisfaction at Internet shopping malls was found to positively affect repurchase intention. Consistent with most previous studies, the findings of our research reconfirmed the importance of user's satisfaction to repurchase intention's formation.

According to the results of this study, we should try to provide a high level of product-related information and premium

service so as to enhance user's satisfaction and then ensure an ongoing repurchase as well as greater value.

However, our study is not absent from the following limitations.

First, questionnaire survey should be conducted randomly in a broader sampling size so as to generalize the findings of this research, in addition, all levels of society should be reflected in survey sampling. However, only convenient sampling method was adopted in this research due to the limit of data collection process. Therefore, random sampling considering all ranks and classes is required in future research so as to increase the representation of our research findings.

Second, only three constructs, namely information quality, system quality and service quality, were used as influencing factors of user's satisfaction and repurchase intention in this research. Hence, additional factors can be added into research model through a more extensive review of literature in future research.

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