

# Consumer online shopping attitudes and behavior; The Effect of Information Quality and System Quality Towards Purchasing Intention

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**Abstract** - *Internet retailing is one of the growing businesses in the world. With this fact in mind, the purpose of this study is to give references on what factors affect the success of online store environment. This study will test whether system quality, information quality and online store environment will affect purchasing intention. Later on this study will also test whether purchasing intention will affect decision making. Data were collected from 100 students that are studying overseas and domestic. Using maximum likelihood model and convenience sample techniques. To test the hypotheses we use SEM (Structural Equation Modeling). The result shows that system quality, information quality, and online store environment do not influence purchasing intention. While purchasing intention does affect decision making greatly. Although according to empirical result, system quality, information quality and online store environment do not affect purchasing intention, online store owner should still consider these factors.*

**Keywords:** *system quality, information quality, purchasing intention, SPSS*

## I. Introduction

Electronic commerce has become one of the essential characteristics since the invention of internet. According to UCLA Center for Communication Policy (2001), online shopping has become the third most famous popular activity behind email and or instant messaging and web browsing. Lately it is even more popular than entertainment and news, which are two commonly thought activities when surfing the internet. According to *DetikNet*, with the number of internet users reaching to 45 million users and the number of internet users increasing and would spread to the entire archipelago, electronic commerce and e-marketing seems to be an interesting matchup. However the Indonesian internet users who were rarely engaged in online transaction were far from reaching its full potential.

Online shopping itself refers to the process of purchasing product or services from the internet. In online shopping process, customer can surf the

internet and search need-related information. They evaluate alternatives and choose one product that fits their criteria the best. Finally a transaction is conducted and after sales services is provided. All this activities are done with little amount of money compared to brick and mortar store which will cost more. However, preferences to online shopping are influenced by many factors. Case, Burns and Dick (2001) stated that “internet knowledge, income and education level are especially powerful predictors of internet purchase among university students”

There have been studies focusing on online shopping behavior and what influence them in recent years. Most of the studies attempted to find the factors influencing online shopping behavior. Previous research tried different perspectives to focus on different factors influencing online shopping behavior. Case in point, Schubert and Selz (1999) stated that the quality factors of electronic commerce sites in terms of information, agreement and settlement phases influence online shopping behavior. Ho and Wu (1999) stated that there are parallel relationships between online shopping behavior and five categories of factors. Those five categories are e-stores logistics, product characteristic, websites’ technological characteristic, information characteristic, and homepage presentation.

These studies have all made important contribution in our effort to understand deeper the dynamics of online shopping. However, these studies are mostly conducted in outside of Indonesia, i.e. they’re not really applicable to Indonesian market. Hence, the objective of this journal is to find what factors influencing online shopping behavior by using existing literature. In doing so, this journal try to test and replicate existing theories.

## II. Review of Related Literature

### **Information Quality and System Quality**

According to DeLone and McLean (2003), information quality refers to the quality of

information that an information system provides. In the context of online stores, information quality can be defined as the customers' general perception of collective content quality of online store. Previous studies found that information quality affect factor that related to online store success, such as user satisfaction, intention to use and system usage (DeLone and McLean 2004). According to Wang (2008), information quality positively affects the users' perceive value which, in turn, leads to enhancing users' intention to reuse an online store system. Information is one of the key element of e-commerce system. According to Lin and Lee (2006), information quality positively influence the users' intention to participate in virtual community, in this case is online store.

The second feature of online quality is the quality of the system serving that information. System quality refers to the measurement of the information processing system (DeLone and McLean, 1992). In this case the information processing system is the company's online presence. Some researchers refer to system quality as the ease of finding the information on the system (Keevil, 1998). The failure of an online system will cause a user to "mouse-click away" resulting in non-use (Molla and Licker, 2001). Thus, system quality contains traditional system quality attributes such as reliability, accuracy, flexibility, response time and ease of use (DeLone and McLean, 1992) as well as the more encompassing concept of seamless site performance (Molla and Licker, 2001).

From this discussion, it would be proposed 2 hypotheses:

H1: System quality is positively impacted with online purchasing intention.

H2: Information quality is positively impacted with online purchasing intention.

### III. Research Methodology

#### 3.1 Measures

The researcher used a closed scale questionnaire, taken from DeLone and McLean (2003). (Using 5 point Likert scale):

#### 3.2 Sample and Data

The study was conducted among students of Universitas Pelita Harapan Surabaya. In total, there are more than 600 students ranging from six departments, however this study only distribute 100 questionnaires. This study use UPHS student because it was easy to access

#### 3.3 Data Source

Data used in conducting this study is primary data, in which they were obtained directly from object of study. Primary data was collected directly by researchers to answer research problem of the study. Primary data can be obtained through distributing questionnaire to 100 students of UPHS

students. Method of survey, questionnaire will be given directly in controlled environment.

#### 3.4 Hypothesis Testing

Validity will be used as well to measure if the indicators of the research will really be able to measure the concept. As the author will use SPSS 16.00 as the software to analyze the research data, technique that will be use is Bivariate Pearson. Bivariate Pearson will analyze by correlating each item score with total score it will show that the items are able to support in measuring the concept. Indicator are considered valid when the value of its coefficient is greater than 0.4. Table 1 shows that all indicator have coefficient value greater than 0.4 hence it is valid

**Table 1**  
**Component Matrix<sup>a</sup>**

	Component
	1
X1	.601
X2	.509
X3	.645
X4	.546
X5	.758
X6	.507
X7	.571
X8	.485
X9	.599
X10	.539
X11	.779
X12	.757
X13	.858
X14	.805
X15	.835
X16	.711
Y1	.537
Y2	.678
Y3	.585
Y4	.659

Extraction Method:  
Principal Component  
Analysis.

a. 1 components  
extracted.

#### 3.5 Reliability testing

**Table 2**  
**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.925	.928	20

Reliability test is a test of consistency in data acquired and whether it is dependable and can be used for further testing. In measuring reliability test, one way is to use Cronbach's Alpha. If the data has Cronbach's Alpha on standardized items greater than 0.06 then it can be considered as reliable (Hair *et al*, 2006). The table above shows value of standardized Cronbach's Alpha greater than 0.06, hence it is reliable.

### 3.6 Model Summary

**Table 3  
Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.748 <sup>a</sup>	.559	.550	.226865

a. Predictors: (Constant), IQ, SQ

b. Dependent Variable: PI

Table 3 shows the model summary. In regression, the R2 coefficient of determination is a statistical measure of how well the regression line approximates the real data points. Adjusted R2 is a modification of R2 that adjusts for the number of

explanatory terms in a model. From Table 6, 55% variance of purchasing intention is influence by other variable beside system quality and information quality 55% variance of purchasing intention is influence by system quality and information quality.

Table 4 shows the result of the correlation test and table descriptive statistics explain the priority ranking of different variable in UPHS

According to Table 5, we found the following results in terms of our research hypotheses at a significant level of 5 percent.

- There is a significant relationship between system quality towards purchasing intentions
- There is significant relationship between information quality towards purchasing intentions

According to Table 5, adjusted R Square coefficient is greater than beta of each variable, hence it is better for company to implement good information quality and system quality to ensure purchasing decision rather than implement one only.

**Table 4  
ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6.335	2	3.168	61.545	.000 <sup>a</sup>
Residual	4.992	97	.051		
Total	11.328	99			

a. Predictors: (Constant), IQ, SQ

b. Dependent Variable: PI

**Table 5  
Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.546	.324		4.772	.000
SQ	.390	.106	.382	3.670	.000
IQ	.279	.070	.414	3.977	.000

a. Dependent Variable: PI

#### IV. Conclusion

##### Theoretical implication

This study shows through empirical result that system quality, information quality plays a significant relationship towards purchasing

intention. This means that the study conducted by Sharkey et al (2010) is true for this study. The hypothesis testing of Sharkey et al (2010) concluded that system quality and information quality do affect purchasing intention

### Practical Implication

The result of this study clearly demonstrates that system quality; information quality has a significant role in purchasing intention. The result of this study may encourage online store owner to pay attention to information quality because beneficial information can ease customers' effort in comparing products. Lastly, online store system should be monitored and maintained regularly because it is correlated with purchasing intention

### Limitation and future research

Quality is a critical area for commercial enterprise. In terms of e-commerce success, businesses need to understand the impact usability has on potential customers, the satisfaction users experience with various aspects of the web site and crucially, what factors will influence users to transact on their website.

Most obvious limitation of this study is time constraint. With limited time (less than 2 months) to work, we can only distribute our questionnaire to 100 students. Should there be more time to conduct our study, we can improve our study by distributing questionnaire to more respondents.

Another potential limitation is using a sample that mainly consisted of college students, which raises the concern of generalization. Such a sample is acceptable in online research because college students are not dissimilar to general online population and they are often the targeted market for e-commerce (Han and Ocker, 2002; Abdinnour-Helm et al., 2005). For example, perception and tolerance of challenge using computers and the internet differs across various online populations (Rettie, 2001). By including a more diverse sample, future studies will be able to investigate questions related to individual characteristics.

It can be concluded that system quality, information quality has significant relationship towards purchasing intention. However, our sample is relatively small (100) and concentrated on local student. If this study use varied respondent as sample, obviously the result will be different.

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