

## Factors Affecting Consumer Decision to Buy Online Books

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**Abstract:** Commercial transactions over the Internet or online shopping have been regarded as common by people. People, who formerly were scared and not used to use this online system, now get accustomed to using this technology-based system. This study dealt with online purchase of books among students of Binus University which aims to find the factors that influence student choice as consumers in deciding to purchase books online and the interrelationship between these factors. This study uses quantitative methods with Kendall Tau correlation and this is the nature of non-experimental study with a questionnaire as a means of data collection. The conclusions obtained are only online shop's existence at the internet of factors that affect internet consumers in making purchasing decisions book online and there is no relationship between the three factors tested: the existence, payment system, design and features of online stores to consumers in making purchase decision book online.

**Key words:** online transaction, purchasing decision, buying books

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### INTRODUCTION

Along with the need for practicality in modern system, today's trade is not only done physically or real, but also through the Internet or what is known as online shopping. The online transaction has been regarded as something usual by society. People, who formerly were afraid and not accustomed to using online system, now start to get used to using this technology-based system. Internet-based trading system is principally as simple as physical transaction, which involves buyers and sellers involving payment system. The difference is the transaction process occurs without physical contact (real meetings between buyers and sellers), but goes through electronic system in the virtual world (Internet).

Nowadays, many online sellers sell printed media products through online store. From this thing, the writer conducted a research relating to the purchase of online books among Binus University students. This paper discusses related factors that influence consumer decision in determining a means of books purchasing, whether to buy online or at a physical store. Selection of students as the research object was based on the consideration of the writer regarding age and educational level of students who like buying and reading books, either lectures or simply entertainment like comic books.

The purpose of this study is to find the factors that influence consumer choice in deciding to purchase books online and the relationship between these factors. Whereas, the benefit of this research is to provide suggestions or feedback for online bookstore owners to offer better services to consumers relating to the factors affecting the interests and decision of consumers to buy a book in her/his shop.

Based on the phenomenon occurs at this time, consumers are given the option to choose the transaction system to use. Many things affect consumer choice in selecting goods. They are price, sales location, type of goods, services and features offered by sellers. Online sales system has several advantages in terms of lower prices and extensive sales location coverage compared to the physical system. Yet, if we explore further, the online system has negative sides such as fraud and after sales service that make consumers re-think in using it.

#### **Literature Review:**

The main thing that distinguishes between physical and online transaction system is the physical place or store. Transactions on online marketplace utilize Internet media to run its business through virtual store, whereas conventional market transaction (physical) has physical place to conduct the transaction of goods or services. Based on the two systems, consumers have options to specify the transaction system to use to find the product availability they are looking for in both markets.

Many factors influence consumer choice. Factors derived from consumers themselves also affect their choice in the deal. There are some views leading consumers to purchase some goods through physical market because of the category of the products and the consumers' natural characters. It is closely related to the demographic characteristics of consumers (Chu *et al.*, 2008) and the market level of the products (Venkatesan *et al.*, 2007), in which age and education of consumers to be the decision factor in demographic characteristics. In addition, types of the product and level of the product price become determinant factors of consumer decision in buying the product offline or online.

Besides, the price factor is one of the consumer considerations. Research conducted by Chiao-Yun Connie Chang (2009) found that different price offered by the online market and the physical market influences consumer choice while buying a product. The costs paid must take into account, not only the price of the product itself but also other costs involved in the transaction, such as travel cost depending on the geographical location between buyers and sellers (Forman *et al.*, 2007).

Nevertheless, public trust factor in doing online transaction is also somewhat contributing to the increase in online transaction. It is influenced primarily by the security concern in transaction through Internet media. Safety factor is still a challenge for online stores in running the business, because it is closely related to the consumer trust that will impact on consumer buying interests. Therefore, good communication between sellers and buyers must be well-maintained. So is the system of supply of goods to the shipping logistics section will provide added value in growing the consumer trust (Guo, 2011).

Writer found critical factors affecting the level of trust on student choice as a book consumer through online journal reference. They are (1) presence, which in this case, defines as the presence of an online store, and its existence in performing the function of its business through the Internet, (2) financial transactions, which refer to the choice of payment systems that can be used when purchasing books online, including price comparison from products sold, (3) design and features of online store website that appeal to consumers and interactive features, as well as navigation that allows consumers to search the books to buy before deciding to make a purchase.

The selection of these factors was based on the results of previous studies conducted in general online stores, in which these factors are found as part of success key in attracting and building consumer trust (Sahney, 2008; Behjati and Othaman, 2012).

**Hypothesis:**

Relating to the three factors from the reference articles, writer formulated hypotheses in this research as follows.

H1 :there is relationship between the presence of online stores on the Internet and consumer decision to buy books online.

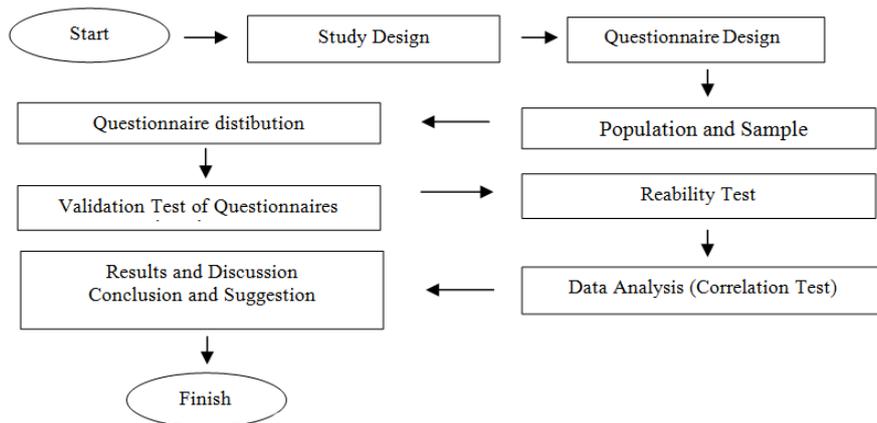
H2 :there is relationship between payment system and consumer decision to buy books online.

H3 :there is relationship between design and features of online stores and consumer decision to buy books online.

H4 :there is relationship between the presence, system payment, design and fatures of online stores and consumer decision to buy books online.

**Methods:**

In conducting the research, writer has made a design of study phases. It is shown as follows.



**Fig. 1:** Design of Study Phases.

**Study Design:**

This study used quantitative method, and the nature of the study was non-experimental. There were three independent variables in this study: (1) independent variable (X1) representing existence, (2) independent variable (X2) representing financial transaction, and (3) independent variables (X3) representing design and features of the website. Meanwhile, dependent variable Y was the variable representing purchase decision.

This study discussed the relationship between purchase decision and factors of presence of online stores on the Internet, financial transaction (payment system), design and features of online stores. Thus, by doing the

research, writer could draw conclusions about which variable is more dominant in influencing consumer decision to buy books online.

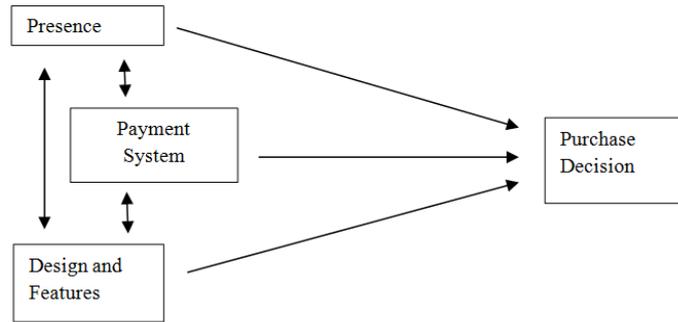


Fig. 2: Study Design.

Population in this research was Binus University students, and the sample was Binus University students, ages between 18 and 25. Sampling technique used was simple random sampling. Place of data collection was library of Binus University, Anggrek campus.

In this study, writer used questionnaires including 3 parts which relate to factors of the existence (presence), system payment, design and features of online stores. Five scales used for respondents' answers were Strongly Agree (weight value of 5), Agree (weight value of 4), Neutral (weight value of 3), Less Agree (weight value of 2), and Strongly Disagree (weight value of 1).

**Validity and Reability:**

Test of validity is used to a questionnaire, if it is valid or not. A questionnaire is valid when the questions are able to disclose something measured by the questionnaire. The measurement of validity level can be done by doing correlation between score of question points and total of variable score with the hypothesis (Sunyoto, 2011):

Ho: score of question points has positive correlation to total of variable score.

Ha: score of question points has negative correlation to total of variable score.

Test to determine significant or not significant is by comparison of r test score and r table for degree of freedom = n-k. If the r test for r every point of the question is positive and more than the r table, the question points are valid.

Definition of reliability is a tool to measure a questionnaire which is an indicator of the variable. Questions are reliable if the answer to the questions is consistent. If the answer is random, it is unreliable (Sunyoto, 2011). Measurement of reliability in this study used one shot or one-off measurement which was performed with a single distributing questionnaires to the respondents, then measuring the correlation between the outcome scores in item scores answer the same questions with the help of SPSS for Windows version 17 with Cronbach Alpha facility. A variable is reliable if it gives the value of Cronbach alpha > 0.60.

**Data Analysis (Correlation Analysis):**

Correlation analysis is ivariate analysis that measures the level of association or relationship between two variables, the independent variable is symbolized by “X” and the dependent variable is symbolized by “Y”, where the relationship between two variables (X and Y) is called ivariate correlation (Sunyoto, 2011).

$$r = \frac{N(\sum XY) - (\sum X \sum Y)}{\sqrt{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)}}$$

Information:

r	Coefficient of correlation of item score of validity (x) and total score (y)	N	Amount of sample
$\sum XY$	Sum of X multiplies Y	$\sum X^2$	Sum of each X score quadrate
$\sum Y^2$	Sum of each Y score quadrate	$\sum X$	Sum of score in X distribution
$\sum Y$	Sum of score in Y distribution		

This study uses hierarchical Kendall Tau correlation (= rk) because the data which are ordinal with abnormal distribution and the difference is not in same condition. This correlation is used because the exact quantitative measurement is difficult.

$$T = rk = \frac{s}{n(n-1)^{1/2}}$$

Information:  
 n total pairs  
 s difference of ranking pairs

For comparison, writer uses hierarchical Carl Spearman correlation (rs) for the same data.

$$R_s = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2-1)}$$

information:  
 di = difference between each pair of rankings  
 n = total of ranking pairs.

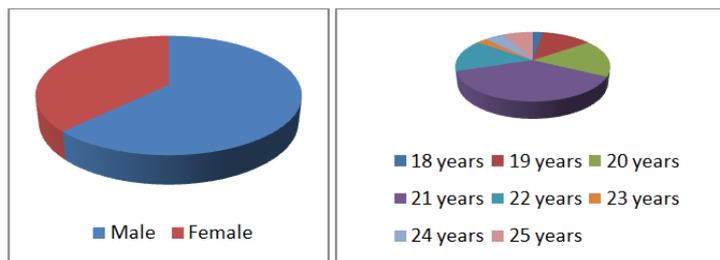
**Limitations of the Study:**

Independent variables discussed were three. They were existence, payment system, designs and features of online stores. Population limited to the students of Binus University with very small sample size.

**RESULTS AND DISCUSSION**

This study aims to determine whether the factors of presence, payment system, design and features of online stores affect consumer decision in making purchasing. Data collection was done by distributing questionnaires among Binus University students. The writer conducted validation, realibility, and correlation test in data analysis.

Random sampling questionnaires were distributed to 40 respondents. From the 40 respondents, the amount of male respondents was 25 students or 62.5%, and the amount of female respondents was 15 students or 37.5%. In terms of age, 18-year old respondent was 1 person or 2.5%, 19-year old respondents were 5 persons or 12.5%, 20-year old respondents were 7 people or 17.5%, 21-year old respondents were 15 persons or 37.5 %, 22-year old respondents were 6 persons or 15%, 23-year old respondent was 1 person or 2.5%, 24-year old respondents were 2 persons or 5%, and 25-year old respondents were 3 people or 7.5%.



**Fig. 3:** Respondents.

**Hypothesis:**

H1 :there is relationship between the presence of online stores on the Internet and consumer decision to buy books online..

H2 :there is relationship between payment system and consumer decision to buy books online.

H3 :there is relationship between design and features of online stores and consumer decision to buy books online.

H4 :there is relationship between the presence, system payment, design and fatures of online stores and consumer decision to buy books online.

Data obtained from the questionnaires were divided into 3 parts in accordance with the representing factors (variables), which are:

Variables representing presence were question number 5, 9, 11, 12, 15

Variables representing financial transaction were question number 2, 3, 6, 7, 13

Variables representing design and features were question number 1, 4, 8, 10, 14

**Test of Validity:**

		r test	r critical	result
Variable of Presence	P5	-0,188	0,312	not valid
	P9	0,423	0,312	Valid
	P11	0,029	0,312	not valid
	P12	0,521	0,312	Valid
	P15	0,012	0,312	not valid
Variable of Payment System	P2	0,433	0,312	Valid
	P3	0,669	0,312	Valid
	P6	0,711	0,312	Valid

	P7	0,387	0,312	Valid
	P13	0,450	0,312	Valid
Variable of Design and Features	P1	0,252	0,312	Not valid
	P4	0,163	0,312	Not valid
	P8	0,260	0,312	Not valid
	P10	0,692	0,312	Valid
	P14	0,439	0,312	Valid

Test of validity was performed using SPSS 17 involving 15 statements in the questionnaire. Test results concluded that the item (statement) number 1, 4, 5, 8, 11, and 15 are declared invalid because the value is less than critical r (0.312) with a significance level of 5%.

**Test of Reability:**

		r test	r critical	Cronbach's Alpha	Result
Variable of Presence	P9	0,564	0,312	0,837	Valid
	P12	0,631	0,312	0,837	Valid
Variable of Payment System	P2	0,535	0,312	0,837	Valid
	P3	0,612	0,312	0,837	Valid
	P6	0,805	0,312	0,837	Valid
	P7	0,409	0,312	0,837	Valid
	P13	0,357	0,312	0,837	Valid
Variable of Design and Features	P10	0,687	0,312	0,837	Valid
	P14	0,445	0,312	0,837	Valid

Test of reliability was performed using SPSS 17 to include the statements of validity test considered valid from the test, as many 9 items. The test results conclude that all items (statements) declared reliable because the value is more than the critical r (0.312) with the value of Alpha 0.837 with a significance level of 5%.

**Test of Correlation:**

Test of hypothesis 1, whether there is relationship between presence of online stores on the Internet to consumer decision to buy books online.

Kendall Tau	Presence - Decision	Coefficient of Correlation	p value
		0,344	0,009
Spearman		0,416	0,008

Because the p value (0.009 and 0.008) < 0.05, writer concludes that there is influence between presence of online stores on the Internet to consumer decision to buy books online. This means H1 is accepted, eventhough with no great impact (coefficient of correlation: 0.344 and 0.416).

Test of hypothesis 2, whether there is relationship between payment systems of online stores to consumer decision to buy books online.

Kendall Tau	Payment System - Decision	Coefficient of Correlation	p value
		0,249	0,56
Spearman		0,316	0,47

Because the p value (0.56 and 0.47) > 0.05, writer concludes that there is no influence between payment systems of online stores to consumer decision to buy books online. This means H2 is rejected.

Test of hypothesis 3, whether there is relationship between design and features of online stores to consumer decision to buy books online.

Kendall Tau	Design and Features - Decision	Coefficient of Correlation	p value
		0,182	0,152
Spearman		0,228	0,156

Because the p value (0.152 and 0.156) > 0.05, writer concludes that there is no influence between design and features factor of online stores to consumer decision to buy books online. This means H3 is rejected.

Test of hypothesis 4, whether there is relationship between presence, payment system, design and features of online stores to consumer decision to buy books online.

Independent Variable	Dependent Variable	Collinearity Statistics VIF
Presence	Decision	1,654
Financial Transaction		1,529
Design and Features		1,905

Because VIF on the three independent variables (presence, payment system, design and features) is smaller than 10 (1,654; 1,529; 1,905 <10), writer concludes that there are no symptoms of multicollinearity. It means there is no relationship between presence, financial transaction, design and features of the online stores as the independent variables to consumer decision to buy books online as the dependent variable. This means H4 is rejected.

#### **Conclusion and Suggestion:**

Based on the main hypothesis formulated as the basis of this study, the writer concluded that the existence of online stores on the Internet is the only factor that influences consumer decision in books purchasing, although the effect is not very significant. It means that the first hypothesis is accepted, while the payment system, design and features of online stores do not effect consumer decision in online books purchasing. That means the first and second hypotheses are not accepted (rejected). Likewise could be said that there is no relationship between the three factors tested – the existence, payment system, and the design as well as the features of online stores to consumers in making decision of online books purchasing.

From the results of the study, students generally chose to buy books online because online stores have the advantage of flexibility in terms of accessing both time and place as long as it connects to the Internet network. Students were not particularly interested in payment system provided even offered payment system is fairly modern with more secure electronic system. Design and features of online stores also did not effect students as consumer eventhough the stores provide interactive features to support consumer trust on her/his shop.

#### **REFERENCES**

- Behjati, Saeed, Siti Norezam Othaman, 2012. "What Drives Consumers' Online Shopping? Conceptual Review Of Online Shopping Attributes Investigated In Previous Studies." *Interdisciplinary Journal Of Contemporary Research In Business*, 3(12): 297-311.
- Chang, Chiao-Yun Connie, 2009. "Does Price Matter? How Price Influences Online Consumer Decision-Making." *Japanese Journal of Administrative Science*, 22(3): 245-254.
- Chu, Junhong, Pradeep Chintagunta and Javoer Cebollada, 2008. "A Comparison of Within-household Price Sensitivity Across Online and Offline Channels." *Marketing Science*, 27(2): 283-99.
- Dholakia, Utpal, M., Barbara M. Kahn, Randy Reeves, Aric Rindfleisch, David Stewart and Earl Taylor, 2010. "Consumer Behavior in a Multichannel, Multimedia Retailing Environment." *Journal of Interactive Marketing*, 24(2): 86-95.
- Forman, C.A. Ghose and Avi Goldfarb. 2007. "Geography and Electronic Commerce: Measuring Convenience, Selection and Price." Working Paper, Pittsburgh, PA: Tepper School of Business, Carnegie Mellon University.
- Guo, Li, 2011. "A Research on Influencing Factors of Consumer Purchasing Behaviors in Cyberspace." *International Journal of Marketing Studies*, 3(3): 182-188.
- Sahney, Sangeeta, 2008. "Critical Success Factors in Online Retail – An Application of Quality Function Deployment And Interpretive Structural Modeling." *International Journal of Business and Information*, 3(1): 144-163.
- Sunyoto, Danang, 2011. *Analisis Regresi dan Uji Hipotesis*. Yogyakarta : Caps.
- Venkatesan, Rajkumar, Kumar Mehta and Ravi Bapna, 2007. "Do Market Characteristics Impact the Relationship between Retailer Characteristics and Online Prices?." *Journal of Retailing*, 83(3): 309-24.
- Zettelmeyer, Florian, Fiona Scott Morton and Jorge Silva-Risso, 2006. "How the Internet Lowers Prices: Evidence from Matched Survey and Automobile Transaction Data," *Journal of Marketing Research*, 43(2): 168-81.