

Trust, Risk, Perceived Usefulness, and Ease of Use on Intention to Online Shopping Behavior

Aprilivianto, Dyah Sugandini, Mohamad Irhas Effendi
Universitas Pembangunan Nasional Veteran Yogyakarta

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Abstract: This study aims to analyze the influence of trust, risk perception, perceived usefulness, and perceived ease of use together with buying interest online. This research is a quantitative study with an active student population in the Special Region of Yogyakarta University. The sampling technique uses a purposive sampling method with a sample size of 200 people. Data collection techniques using a questionnaire that has been tested for validity and reliability. The data analysis technique used is the Multiple Linear Regression. The results of this study indicate that trust, risk perception, perceived usefulness, and perceived ease of use have a significant effect on the intention to buy online shop.

1 INTRODUCTION

Today, advances in technology and information are experiencing very rapid development. The internet has become one of the media facilities for social interaction that is widely used today. The internet connects one person to another, providing information, as a means of entertainment, and as a means of communication. But not only that, now the internet raises a new phenomenon in the process of buying and selling goods and services. Only by opening a website, buyers can already see the products offered. The ease of accessing the internet gave birth to e-commerce, which has now become a choice in shopping (Internet World Stats, 2018).

According to Internet World Stats (2018), in an article with the headline Internet Statistics Growth seen a significant increase in the growth of internet users in the last five years, wherein December 2014, there were 3.079 billion users, equivalent to 42.4% of the human population. In December 2015, there were 3.366 billion users, equivalent to 46.4% of the human population. This number continues to increase until, in June 2018, there were 4,208 billion active internet users where this number has touched 55.1% or more than half of the total human population living on Earth.

In Indonesia alone, the number of internet users continues to increase from year to year. Based on data from the results of a survey conducted by the Indonesian Internet Service Providers Association (APJII) in 2017, the number of internet users in

Indonesia reached 54.68% of the total population of Indonesia. The composition of internet users in Indonesia is 51.43 percent male and 48.57 percent female. Whereas, based on age, it is dominated by internet users in the productive age range of 19-34 years, which is equal to 49.52%. Buying and selling applications online become one of the services that are often used by internet users in Indonesia. 32.19% of services accessed by the people of Indonesia are for purchasing goods, and 8.12% selling goods online.

Along with the increasing use of the internet and technology, several electronic media have emerged that use it for business activities, which became known as Electronic Commerce or e-commerce. Sugandini et al. (2018a) revealed that e-commerce refers to the use of the internet and websites to conduct business transactions between organizations and individuals. In Indonesia, e-commerce is experiencing very rapid growth and is causing Indonesian people to become interested and interested in using e-commerce services.

One of the most important variables in conducting online transactions is trust. According to Koufaris & Hampton-sosa (2004), consumer trust in e-commerce is one of the key variables in buying and selling online (Sugandini et al., 2018b). Trust has become the most important element in the success of e-commerce. E-commerce companies must build high trust in consumers to be interested in making transactions through their sites. With the trust of consumers in e-commerce companies, it is

expected to increase buying interest in e-commerce companies.

Online buying interest is also influenced by the perceived risk perceived by consumers. Kim et al. (2008) define risk perception as consumer beliefs about the potential for uncertain negative outcomes from online transactions. According to Engel et al., (1995), the greater the risk perception, the greater the possibility of consumer involvement in purchases. If the realized risk is very high, the consumer has a choice whether to avoid buying and using it altogether or minimize the risk through the search and evaluation of pre-purchase alternatives.

In addition to the problem of trust and risk perception, the use of information systems is an important problem faced by e-commerce users. One theory related to the use of information systems is the TAM (Technology Acceptance Model). According to Andryanto (2016) and Sugandini et al., (2018a), TAM is an information systems theory designed to explain how users understand and use information technology. Also, TAM considers the adoption of technology by the user to be determined by two perceptions, namely the perceived usefulness and perceived ease of use. Perceived usefulness to the context of online shopping refers to the extent to which consumers feel that shopping at web-based stores will enhance their shopping experience (Wen et al., 2011). The definition shows that perceived usefulness will influence the decision-making process.

The main reasons why people shop or do not shop online are the factors of trust (trust) on the shopping site in question, and the ease of applying the shopping site (Mayer et al., 1995). Ease of use is the extent to which consumers feel the ease of interaction with e-commerce websites and can receive product information that they need (Wen et al., 2011; Cho & Sagynov (2015). Based on the explanations described in this background, this study aims to analyze the influence of trust, risk perception, perceived usefulness, and perceived ease of use on online buying interest (sugandini et al., 2018a).

2 LITERATURE REVIEW

2.1 Intention to Online Shopping Behavior

Kinnear and Taylor (1995) define consumer intention to buy as a component of consumer behavior in consuming behavior, respondents' tendency to act before buying decisions are correct

The purchase intention is an impetus that arises in a person to buy goods or services in order to meet their needs (McCarthy, 2002; Cho & Sagynov (2015). Schiffman and Kanuk (2004) explain that external influences, awareness of needs, the introduction of products, and alternative evaluations are things that can lead to consumer buying interest.

2.2 Trust

According to Mowen and Minor (1997), consumer trust is all knowledge owned by consumers and all conclusions made by consumers about objects, attributes, and benefits. Ba and Pavlou (2002) define trust as an assessment of one's relationship with others who will carry out certain transactions by expectations in an environment that is full of uncertainty. This definition includes two important attributes of trust: (1) expectations of trust include the possibility of mutually beneficial results, (2) uncertain environment indicates that the delegation of authority from one party to another may have an adverse effect on the deposit (Ba and Pavlou, 2002).

In the context of the e-commerce environment, the role of trust is more important than the traditional business due to the increased uncertainty caused by the distance factor and impersonal other (Wen et al., 2011; Cho & Sagynov (2015). The success of the transaction on the internet to be influenced by the presence of variable trust (Pavlou, 2003; Sugandini et al., 2018a; 2018b) Customer trust is the basis of consumers in making a purchase, especially in shopping online, Koufaris and Hampton Sosa (2004) state that consumer trust in e-commerce is one of the key factors in buying and selling. Online. Faith has become the most important element in the success of e-commerce. Therefore, there must be mutual trust between seller and buyer (Gefen, 2002; Sugandini et al., 2018b). With trust will grow the interest of consumers to make buying and selling activities online (Suh et al., 2015)

H1: Trust affects of intention to online shopping behavior

2.3 Perceived Risk

Perceived Risk is defined by Olglethorpe (1994) as consumers' perceptions of uncertainty and negative consequences that may be received from the purchase of a product or service. Mowen and Minor (1997) define perceived risk as a negative overall consumer perception of several actions based on an assessment of negative results and the likelihood that the results will occur. This definition includes two main concepts: the negative outcome of a decision and the probability that the outcome will

occur (Sugandini et al., 2018b). Kim et al. (2008) define perceived risk as consumer beliefs about the potential for uncertain negative outcomes from transactions online. Kim et al. (2008) and Sugandini et al. (2018a) state that consumers pay attention to the risks faced when intending to conduct transactions online so that it will negatively affect consumers' intention to online shopping behavior.

H2: Perception of risk effects of intention to online shopping behavior

2.4 Perceived Usefulness

Davis's(1989) and Venkatesh and Davis (2000) define Perceived Usefulness (the perception of benefits) as a level where someone believes that the use of a particular system will improve the work performance of that person). Perceived Usefulness (PU) refers to a measure where someone believes that using a particular system can improve the performance of his work. Perceived usefulness of having an important role in shaping the attitude toward using (the attitude in use) and behavioral intention to use (use of interest). According to Kim et al., (2008); Cho & Sagynov (2015); Hasan, Harun, Shaffran, Rashid (2015), perceived usefulness are consumer beliefs about the extent to which it will be better than transactions online with certain websites. According to Adams et al. (1992), most of the acceptance of information system users are driven by perceived usefulness/benefits. The perceived usefulness can be considered as a subjective probability that the application of new technology will improve the way the user completes the given task (Davis, 1989; Sugandini et al., 2018a).

H3: Perceived usefulness effects of intention to online shopping behavior.

2.5 Perception of Ease of Use

Davis (1989) defines perceived ease of use as "the degree to which people believe that using a particular system would be free of effort." Ease of use is defined as a level or condition in which a person believes that the use of a particular system will be free of effort. Ease of use refers to the user's perception of the process towards the end of transaction online, and ease is how easy it is to use the internet as a means of buying and selling online (Monuwe et al., 2004). According to Wen et al., (2011); Cho & Sagynov (2015); Hasan, Harun, Shaffran, Rashid (2015) perceived ease of use is the extent to which consumers feel the ease of interaction with e-commerce websites and can receive product information that they need. The

intensity of use and interaction between the user (user) with the system can also show the ease of use (Adams et al., 1992).

H4: Perceived ease of use affects the intention of online shopping behavior.

3 RESEARCH METHOD

This study was included in the quantitative research. Which is based on the philosophy of positivism? This study with student respondents in the Special Region of Yogyakarta. The sampling technique used is Non-Probability Sampling. Non Probability Sampling with criteria for students who have shopped online. Assessment of respondents uses a Likert scale with intervals of 1-5. Data Analysis Techniques used in this study are Multiple Linear Regression. F-test, according to Ghozali (2011), is used to indicate whether all independent variables included in the research model have an influence simultaneously or together on the dependent variable. This decision is made based on a comparison of the calculated F value by looking at the level of significance, then comparing it with a predetermined significance level (5% or 0.05).

4 RESULTS

4.1 Characteristics of Respondents

The characteristics of respondents observed in this study include gender, age, majors, income/allowance per month, and many online shopping transactions. A description of the characteristics of respondents is presented as follows in table 1.

Table. 1 Characteristic of Respondents

Gender	Percentage (%)
Men	56%
Women	44%
Age	
19 to 20 Years	7%
21 to 22 Years	52%
23 to 24 Years	41%
Origin of: UGM	30%
UPN	42%
UIN	11%
UNY	17%
Allowance Per Month	
<Rp 1,000,000	35%
Rp 1,000,000 to Rp 2,000,000	46%

> Rp 2,000,000	19%
Amount of online shopping	
1 time	33%
2 to 3 times	46%
4 to 5 times	7%
> 5 times	14%

4.2 Multiple Linear Regression Analysis

The results of testing multiple linear Regression models for variables that affect intention to online shopping behavior can be seen in table 2.

Table 2. Results of Regression

MODEL	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-0.742	2.245	-	0.330	0.740
Trust (X1)	0.435	0.117	0.454	3.720	0.000
Risk (X2)	0.194	0.083	0.144	2.345	0.021
PU	0.359	0.105	0.412	3.417	0.001
PEU (X4)	0,287	0,117	0,148	2,459	0,016

Dependent variable: Intention to online shopping behavior

From the results of the regression analysis we can find out the multiple regression equation as follows:

$$Y = -0.742 + 0.435X1 + (-0.194) X2 + 0,359X3 + 0,287X4$$

Based on various parameters in the regression regarding the variables of trust, risk perception, perceived usefulness, and perceived ease of use that affect intention to online shopping behavior.

a. F- test

The test aims to determine the effect of all variables, including variables of trust, risk perception, perceived usefulness, and perceived ease use effects of intention to online shopping behavior. The level of significance for this study was set at 0.05 (5%).

Table 3. F-test

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	1015,125	4	253,781	46,577	0,000b
	Residual	517,625	95	5,449		
	Total	1532,750	99			

Dependent Variable: Purchase Interest

Based on Table 3, it can be seen that the F value is 46.577, with a significance of 0,000. Therefore the significance value is smaller than 0.05 (0,000 <

0.05). The regression model of interest onshore data is accepted.

b. Test The coefficient of determination (R²)

The coefficient of determination (R²) is used to determine how far the model's ability to explain variations in the dependent variable. Test results R²shown by Table 4.

Table 4. Test Results from the coefficient of determination (R²)

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.814	0.662	0.648	2.334

Based on Table 4 can be seen the value of the coefficient of determination (Adjusted R-square) of 0.648. This means that 64.8% of the variation in buying interest can be explained by the four independent variables consisting of trust, perceived risk, perceived usefulness, and perceived ease of use while the remaining 35.2% is explained by other causes or influenced by other variables outside the independent variable under study.

5 DISCUSSION

The results of this study indicate that trust has a positive and significant effect on intention of online shopping behavior. According to Pavlou (2003), the success of large internet transactions is influenced by the variable of trust. In transactions e-commerce, the role of trust is more important compared to traditional business because it is not met in person. Consumers will tend to choose sites that they trust to minimize the potential risk. The results of this study are in line with research conducted by Suh et al. (2015), which states that trust influences online buying interest.

5.1 Perceived Risk and Intention to Online Shopping Behavior

The results of this study indicate that perceived risk has a negative and significant effect on buying interest online. Gefen (2002) shows that consumers with low-risk perceptions are more likely to engage in purchasing activities than consumers with high-risk perceptions. Kim et al. (2008) also show that perceived risk is an important barrier for consumers online when they buy products or services on the Internet. The results of this study are in line with

research conducted by Ariffin et al. (2015), which shows that the perceived risk of consumers influences intention to buy.

5.2 Perceived Usefulness and Intention to Online Shopping Behavior

The results of this study indicate that the perceived usefulness has a positive and significant effect on buying interest online. Kim et al. (2008) state that internet consumers make purchases on websites because of perceived usefulness (for example, increased comfort, cost savings, time savings, increased variety of products to choose compared to traditional shopping). The results of this study are in line with research conducted by Hasan et al. (2015), which shows that the perceived usefulness affects the online buying interest.

5.3 Perceived Ease of Use and Intention to Online Shopping Behavior

The results of this study indicate that the perceived ease of use has a positive and significant effect on buying interest online. Davis (1989) defines the ease of use as a level or condition where someone believes that the use of a particular system will be free of effort. The ease of applying shopping sites is one of the reasons why people make purchases online (Mayer et al., 1995). The results of this study also support research conducted by Hasan et al. (2015).

6 CONCLUSIONS

Based on the results of the analysis and testing of hypotheses on online consumers in the Special Region of Yogyakarta, it can be concluded as follows: Trust, perceived risk, perceived usefulness, and perceived ease of use together have a significant effect on the intention to online shopping behavior. Trust has a positive and significant effect on intention of online shopping behavior. Risk perception has a negative and significant effect on intention of online shopping behavior. Perceived usefulness has a positive and significant effect on the intention of online shopping behavior. Perceived ease of use has a positive and significant effect on the intention of online shopping behavior.

7 SUGGESTION

The trust variable is known to have a dominant influence because it has the Standards Coefficients Beta's highest value of 0.454. So it is better to increase online consumer trust that can be done by minimizing the possibility of fraud that can be detrimental to consumers such as improving security systems, improving after-sales service, and making sure the product matches what is displayed on the site. Online consumer trust about the accuracy of fulfilling promises and commitments has the lowest average value of the item (3.43), so online shopping users should improve their systems and services, such as securing transactions, speeding up the delivery process, receiving complaints from consumers, and disconnecting sellers who cheated. This is because trust is the basis for consumers to make a purchase, especially in shopping online. The perceived risk with transaction security to protect consumer privacy and to guarantee further improved to avoid the possibility of fraud. Online sellers are expected to provide clear and complete information about products, sellers, after-sales services, and all matters relating to online transactions.

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REFERENCES

- Adams, DA, Nelson, RR, & Todd, PA (1992). "Perceives Usefulness, Ease of Use, and Usage of Information Technology: A Replication." *MIS Quarterly*. Vol. 16 No. 2
- Andryanto, R (2016). "The Influence of Trust, Perception of Benefits, and Perception of Ease of Use on Interest in Buying in Online Stores (Empirical Study Made on Olx.Co.Id in Yogyakarta)." *Thesis*. Faculty of Economics. Yogyakarta State University
- Ba, S., & Pavlou, PA (2002). "Evidence of the Effect of Building Trust Technology in Electronic Markets:

- Price Premium and Buyer Behavior." *MIS Quarterly*. 26(3):243-268. DOI: 10.2307/4132332
- Cho, Y. C. & Sagynov, E. (2015). "Exploring Factors That Affect Usefulness, Ease of Use, Trust, and Purchase Intention In The Online Environment." *International Journal of Management & Information Systems*. First Quarter of 2015. Volume 19, Number 1.
- Davis, F. D. (1986). "Technology Acceptance Model for Empirically Testing New End-User Information System Theory and Results." *Dissertation*. Massachusetts Institute of Technology (MIT).
- Davis, F. D. (1989). "Perceived Usefulness, Perceived ease of use of Information Technology." *Management Information System Quarterly*. Sep 1989; 13, 3; *ABI/INFORM Global* pg. 319.
- Gefen, D. (2000). "E-commerce: the role of familiarity and trust." *Omega*,(28) 725 -737
- Gefen, D. (2002). "Customer loyalty in E-commerce." *Journal of the association for information systems*, Volume 3, pp. 27-51
- Ghozali, I. (2011). *Multivariate Analysis Application with SPSS Program*. Issue 5. Semarang: Diponegoro University.
- Hasan, H, Harun, A & Rashid, MSZ (2015). "Factors Influencing Online Purchase Intention In Online Brands." *International Journal of Business Management & Research (IJBMR)*. Vol. 5, Issue 5.
- Kim, D.J., Ferrin, D.L, & Rao, H.R. (2008). "A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents." *Decision Support Systems*. 44, (2), 544-564.
- Koufaris, M., Hampton-Sosa, W. (2004). "The development of initial trust in an online company by new customers." *Information and Management*, 41, 377-397.
- Mayer, R.C., Davis, J.H, Schoorman, F. D. (1995). "An Integrative Model of Organizational Trust." *Academy of Management Review*. Vol. 20. No. 3, 709-734
- Mowen, John C & Minor, M. (1997). *Consumer Behavior*. 5th. Prentice Hall; Subsequent edition (July 24, 1997)
- Pavlou, P. A. (2003). "Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk With the Technology Acceptance Model." *International Journal of Electronic Commerce*. 59, (4), 69-103.
- Schiffman, L., & Kanuk, L. L. (2004). *Consumer Behavior*. 8th.(1000-01-01) [Paperback] (View amazon detail page) ASIN: B009TUK8HW
- Sugandini D., Sudiarto., Surjanti, J., Maroah, S., & Muafi. (2018a). "Intention to delay: The context of technology adoption based on android," *International Journal of Civil Engineering and Technology*, Vol 9, Issue 3, p. 736-746.
- Sugandini D., Purwoko., Pambudi, A., Resmi, S., Reniati., Muafi., & Kusumawati, R.A (2018b). "The Role of Uncertainty, Perceived Easy of Use, and Perceived Usefulness Towards the Technology Adoption," *International Journal of Civil Engineering and Technology*, Vol 9, Issue 4, p. 660-669.
- Venkatesh, V., & Davis, F. D. (2000). "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies." *Management Science*. 46(2):186-204. DOI:10.1287/mnsc.46.2.186.11926
- Wen, Chao., Prybutok, V. R., & Xu, C. (2011). "An integrated model for customer online repurchase intention". faculty research & Creative Activity. Paper 8. http://thekeep.eiu.edu/business_fac/8
-
- Indonesian Internet Service Providers Association. (2017). Indonesian Internet User Penetration Survey 2017. Accessed from <https://apjii.or.id> on October 23, 2018.
- Internet World Stats. (2017). Internet Growth Statistics. Accessed from <https://www.internetworldstats.com> on October 23, 2018
- iPrice. (2018). Map of Indonesian E-Commerce. Accessed from <https://iprice.co.id> on October 25, 2018.