

The Role of the Perceived Risk to Purchase Decision (For Consumers Who Use Online Shopping Technology)

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Abstract— Online shopping is a recent phenomenon is a trend for the future of shopping method. The high enthusiastic consumer through online shopping method is inseparable from the perceived risk that consumer will face. Consumers' perceived risk has been considered as a fundamental concern of the purchase decision process. This research aims to know the relationship between the perceived risk and the purchase decision on online shop consumer. The total participants in this research are 385 people. This research was using accidental sampling and snowball sampling. The results of this research show that there is a negative and significant relationship ($r = -0,517^{**}$, $p = 0000 < 0.05$) between perceived risk with purchase decisions on online shop consumers. This research also found that all dimensions of perceived risk have negative and significant relationships with the purchase decision. As the result of data concluded that the increase of perceived risk by consumers when shopping online would result in lowering the purchasing decision of the consumers to shop online.

Keywords: *online shopping, purchase, perceived risk*

I. INTRODUCTION

The high number of enthusiasts of online shop consumers is inseparable from the risks or perceived risks that consumers have [1]. The purchasing process when shopping online has a similar basic concept when shopping conventionally or offline, which is based on five stages of shopping [2]. The five stages are problem identification, information search, alternative evaluation, purchasing decision, and post-purchase behavior [3], but the difference is systematics when making the shopping process, and this systematic difference in spending will distinguish the perceived risk

in the purchase decision offline with purchase decision online for consumers [1]. In consumers in the context of traditional or offline buying and selling, consumers can face to face with the seller directly. But, online transactions have unique characteristics or characteristics, such as an impersonal and remote online market environment, not seeing and touching goods or services that want to be bought directly, and also uncertainty with the use of open network infrastructure for transactions [4].

In a study conducted by Masoud [1] in Jordan explaining the impact or relevance of perceived risk on online shopping interest. The results of Masoud's study [1] explain that four dimensions of perceived risk are related and two dimensions that are not related to online shopping interest. The four related dimensions are financial risk, product risk, delivery risk, and information security risk negatively related to someone's interest in shopping online. The other two dimensions which are not related, namely perceived time risk, and perceived social risk do not have an association with consumers to shop online.

Based on the research problem formulation that has been mentioned, this study aims to find out and test the relationship between perceived risk and purchase decision on online shop consumers and find out what dimensions of perceived risk are related to purchase decisions in online shop consumers in Indonesia.

II. RESEARCH METHODS

A. Participant

The population that is considered the most representative of this research is the online shop consumer, the age of participants is limited to 15 to 39 years and has done at least twice online shopping

activities. The number of samples used was 385 people with a margin of error of 5%. The sampling technique used in this study is non-probability sampling). Non-probability sampling techniques, which are used in this study are accidental sampling and snowball sampling.

B. General Description of Research Participants

The participants in this study amounted to 385 people consisting of 82 male, and 303 participants who were the majority of them were female. Age of Participants who have participated in this study, ranging in age from 15 years to 27 years. Of all participants, the highest frequency of age was 21-year-old participants with a standard deviation of 1,867. Then the results of the analysis of participant data based on the level of SES obtained the frequency of participants' SES with a low frequency of 142 people, medium 127 people, and a height of 116 people.

III. MEASUREMENT

This study uses two variables. The first variable is the purchase decision as the dependent variable. The second variable is perceived risk, as an independent variable.

A. Measurement of Purchase Decision

The purchase decision variable is measured by adapting the online shopping measurement tool based on the research of Javadi et al., [5]; Almousa [6]; Martin and Camarero [7], Kim et al., [8]; and Forsythe et al., [9], the researcher then adapted this measure, which was tested again by expert judgment and also faces validity by participants who had the appropriate criteria in this study. This measuring instrument is used to see the interest of participants in the online shopping process or prefer to shop offline. There are eight items in this measure. For each item statement, participants were asked to state the level of compatibility based on a 5-point rating scale.

B. Measurement of Perceived Risk

In this study, the measure of perceived risk refers to the six dimensions of perceived risk in online shopping according to Masoud [1]. Masoud adapted from several studies related to perceived risk in online shopping, namely research by Javadi et al., [5]; Almousa [6]; Forsythe et al., [9]; Hajun et al., (2004); Alkailani and Kumar [11]; Zhang et al., [12]; Li and Zhang ; Tasi and Yeh [13]; Martin and Camarero [7]. These dimensions

include financial risk, product risk, time risk, delivery risk, social risk, and information security risk. For each item, participants were asked to state the level of approval based on a 5- point rating scale, namely STS = Strongly Disagree, TS = Disagree, R = Doubtful, S = Agree, SS = Strongly Agree.

IV. RESULTS AND DISCUSSION

A. Description of Participants Based on the Main Reasons to Choose Shopping Online

In this study, the researcher gave several statements that represented the reasons for the participants choosing to shop online. Among them are more practical, more detailed information, more diverse choices, more discounts / cheaper, more suitable for lifestyle, and products sold online are rarely found in traditional/offline shopping. Among the six reasons, the highest reason for 48.5% or 187 participants said that the main reason they shop online is more practical, and at the second highest level, 21.9% or 82 participants said the reason they shop online is a product that sold online is rarely found in traditional/offline shopping.

B. Overview of Purchase Decision at Consumer Online Shop

To obtain the results of the purchase decision, the researcher processed the data using descriptive statistical analysis. Based on the results of data processing, obtained the purchase decision picture on online shop consumers. The average purchase decision value is $M = 3.055$ and $SD = 0.645$. The minimum purchase decision continuum scale is 1, and the maximum is 5. The average value of the purchase decision score on online shop consumers tends to be slightly higher than the midpoint value of the measuring instrument, namely 3.0, but to ensure the results better, the researcher uses the one- sample test. The results obtained are significance values ($0.096 = p > 0.05$). This means that the participants have more interest in shopping online on average or on average compared to shopping offline.

C. Overview of Perceived Risk in Ohop Online Consumers

To obtain a description of perceived risk, the researcher processed the data using descriptive statistical analysis. Based on the results of data processing, the results of the perceived risk in online shop consumers are obtained.

The overall average value of perceived risk is $M = 3.0175$ and $SD = 0.36697$. The minimum continuum perceived risk scale is 1, and the maximum is 5. The average value of perceived risk scores on online shop consumers tends to be slightly higher than the midpoint value of the measuring instrument, namely 3.0, but to ensure these results better, researchers use the one-sample method test. The results obtained are significance values ($0.350 = p > 0.05$). This means that the participants assess perceived risk when shopping online is still in the middle stage, or the average is viewed from various dimensions.

Table 1
An overview of the dimensions of perceived risk

Dimensi Perceived Risk	Mean	SD
Product Risk	3,466	0,476
Social Risk	3,099	0,915
Delivery Risk	2,994	0,538
Time Risk	2,928	0,572
Financial Risk	2,881	0,542
Information Security Risk	2,733	0,569

Based on the results of the descriptive analysis above, it is known that product risk is a risk factor that is considered the riskiest compared to other dimensions.

D. Test the correlation of Perceived Risk with Purchase Decision.

Based on the results of the normality test, the distribution of data on the purchase decision variable is not normal (see Appendix 8). Based on this, the researcher used the Spearman correlation test to test the correlation between perceived risk variables and the purchase decision variable. Overall, the two variables have a negative and significant relationship ($r = -0.517, p = 0.000 < 0.05$). It can be concluded that the higher the perceived risk, the online consumer purchase decision will decrease, and vice versa the lower the perceived risk, the higher the purchase decision of consumers to shop online.

E. Test the correlation of the Dimensions of Perceived Risk with the Purchase decision

Table 2

Correlation Test Results of Perceived Risk Dimensions with Variable Purchase Decision

Dimensi Perceived Risk	Purchase decision	
	r	Sig.
Product Risk	-0,443**	0,000
Time Risk	-0,400**	0,000
Financial Risk	-0,317**	0,000
Social Risk	-0,299**	0,000
Information Security Risk	-0,254**	0,000
Delivery Risk	-0,155**	0,002

Note * $p < 0.05$. ** $p < 0.01$

Based on the results of the correlation test, the dimensions performed, product risk is the dimension that has the highest value ($r = -0.444, p = 0,000 < 0.05$). Then the time risk dimension ($r = -0,400, p = 0,000 < 0,05$) which has the second highest value.

F. Additional Analysis

In order to better understand the purchase decision behavior and perceived risk, the researcher carried out additional analysis of several variables that were considered to be related to purchasing decision and perceived risk behaviors, including age, gender, and level of SES.

Table 3

Variabel	1	2	3	4
1. Perceived Risk	1			
2. Purchase Decision	-0,517**	1		
3. SES	0,017	0,031	1	
4. Usia	-0,074	0,163**	0,067	1

Correlation Test Results of Perceived Risk Variables, Variables Purchase decision, Age, and SES.

Note n = 385, * $p < 0.05$, ** $p < 0.01$.

From the results of the analysis above, it was found that age has a negative and significant relationship to perceived risk. This can be interpreted that the older the consumer, the lower perceived risk is. Meanwhile, there is no

relationship between age range, SES level, with purchase decision behavior and perceived risk.

V. CONCLUSION

In this study, several statements were given to participants about the main reasons participants chose to shop online. These statements include online shopping more practical, more detailed information, more diverse choices, more discounts or cheaper, more suitable for lifestyle, and products sold online are rarely found in traditional/offline shopping. Among the six reasons, out of a total of 385 participants, the highest reason for 48.5% or 190 participants said that the main reason for their online shopping was more practical, and at the second highest level, 21.9% or 82 participants said their reasons online shopping is a product that is sold online rarely found in traditional or offline shopping.

The null hypothesis (H₀) is rejected. Based on these results it can be concluded that there is a negative and significant relationship between perceived risk and purchase decision variables on online shop consumers. In this study, it is known that all dimensions of perceived risk, which amount to 6 dimensions, are significantly negatively related to the purchase decision variable. Next, the dimensions of perceived risk are sequentially from the lowest correlation value to the highest correlation value. These dimensions are; delivery risk, information security risk, social risk, financial risk, time risk, and product risk. The highest correlation value lies in the product risk dimension ($r = -0,443 **$, $p = 0,000 < 0,05$). This can be interpreted from the six aspects of risk that online shop consumers are very worried about are product risks.

VI. DISCUSSION

In the main analysis in this study by using a Spearman test, it was found that all dimensions of perceived risk have a negative and significant relationship with the purchase decision of online shop consumers. This means that the higher the perception of consumer uncertainty regarding the risk of loss from online shopping will reduce a person's decision to shop online. This is supported by Bauer's statement [8] as a study of consumer behavior patterns when making the buying

process. According to Bauer [8] in situations of making purchases, consumers perceive a certain degree of risk in choosing a product. Added by Bergeron, et al., [1] in the scope when shopping online or referred to as an online environment that is very different from the scope of offline or traditional shopping, making shopping risks different and even increasing, such as the difficulty of evaluating the quality of products to be purchased is only from pictures, non-face-to-face transaction processes even with the money first process, and the transaction process involves many information security risk factors in other words involving consumer personal information, such as telephone numbers, e-mail addresses, and home address.

Correspondingly, Verhagen, Meents, and Tan [9] explain the practice, consumer buying behavior is the result of a combination of decision-making processes, which are influenced by many factors. Some of these factors, such as culture, social influence, and personal experience of consumers who can influence transaction online.

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