The Influence of Perceived Risk toward Online Purchase Intention (Case Study: Students of Bengkalis State Polytechnic)

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ARTICLE INFO
Received: 1 November 2021
Accepted: 16 November 2021
Published: 7 Desember 2021

ABSTRACT
In this globalization era business competition cannot be avoided. As a result, competition arises in offering quality products at prices that are able to compete in the market. The current phenomenon that is interesting among young people is online shopping. Online shopping is an online trading activity or transaction that takes into account the ease, convenience, conformity and the price offered to consumers as well as the risks that can arise when shopping online. The purpose of this research is to study and try to investigate and also clarify how consumer students of Bengkalis State Polytechnic perceived risk toward online purchase intention.

The results obtained have shown that all the formulated hypothesis is proven to have positive and significant influence. Based in hypothesis testing which is conducted, showing that there is a influence between the perceived risk toward online purchase intention. Based on the results of the study showed that the calculated value of each independent variable is 8.652 for perceived risk, while the value of t table is 1.964 (t count > t table) means that the perceived risk variable significantly influences the online purchase intention. While the results of the analysis of the coefficient of determination obtained a value of 0.441 or 44.1%, which means the effect of the independent variable (perceived risk) on the dependent variable (online purchase intention) of 0.441, this shows that the contribution of the independent variables amounted to 44.1% while the remaining 55.9% is influenced by other factors not examined in this study.

Keywords: Perceived Risk, Online Shopping, Purchase Intention

1. Introduction

In the current era, the development of information technology is increasingly developing to provide an unlimited world business network. The use of the internet is not only to obtain information, but can also be used as a means to conduct trade transactions with new market places and a wide world business network that is not limited in time and place. Many new things that come with the existence of the internet, one of which is the purchase or shopping of goods and online services. Online shopping is already become one of the activities popular on the internet (Keisidou et al., 2011) and the number continues to rise (Hill and Beatty, 2011). This, making online store more popular, is in demand and adopted as a place for trading or buying and selling of goods on a internet network (Keisidou et al, 2011) in Natalia Sri Endah Kurniawati and friend (2017). Online shopping has become an alternative choice of how to purchase goods and services to meet individual needs.

In Indonesia e-commerce business has developed rapidly so that some consumer behavior has changed, one of which is the habit of shopping in shopping centers or stores, now began to switch to using online media or people in Indonesia began to be interested and interested in using existing e-commerce services. Things happening at this time can support consumers' buying interest to buy a product through online media. Armstrong & Kotler (2012) in Anders Ly and Friends, 2017, claim that purchase intention is formed before the consumer makes the final purchase decision whereas, it can be defined as the individual’s cognitive representation of their readiness to perform a specific behaviour and it is considered as the most proximal determinant of the actual behaviour (Yadav & Pathak, 2017).

Intention to buy is one of consumer behavior in purchasing decisions which all decisions depend on their behavior. If they are interested in a product, then there will be a connection with the purchase intention, especially online. So, in this research one of our research is shopping or purchasing online. Online purchasing is a transaction that occurs when online shopping or e-commerce is a transaction.
process that is done through the media or intermediaries in the form of online buying and selling sites or social networks that provide goods or services that are traded. Now online shopping has become an interest in buying some people, because of the convenience provided, many people assume that online shopping is one means to find items that are needed such as daily necessities, hobbies, and more.

Internet penetration in Indonesia in January 2019 has reached 56 percent. That is, 56 percent of the total population in Indonesia has been reached by the internet. Despite an increase of 13 percent from a year earlier, the internet penetration rate in Indonesia is still classified as the lowest compared to other Southeast Asian countries. However, when compared to a survey conducted by the Indonesian Internet Service Providers Association (APJII) in early 2018, internet penetration in Indonesia has increased. The number of internet user population increases in Indonesia on reached 17.3 million compared to last year, up 13 percent. In this case, Indonesia is ranked fourth below India (up 97.8 million), China (up 50.6 million) and the United States (up 25.3 million).

The number of online shoppers in Indonesia has continued to increase over the past few years. In 2018, the number of online shopper is estimated to reach 11.9 percent of the total population in Indonesia. In 2016, the number of online shoppers reached 9.6 percent of the population and increased to 10.7 percent in 2017. Based on the events described above, it appears that the increase in the number of internet users is directly proportional to the number of online shopping transactions. Although the number of online purchases in Indonesia is increasing, it is also not free from problems caused by each online store related to their business activities or transactions. The following are some cases experienced by consumers of one of the online shops in Indonesia:

1. Risky Kartadikaria on July 8, 2015, experienced a problem with online shopping related to the mismatch of products purchased and received. The product purchased by Risky Kartadikaria is an Asus Zenfone 6 smartphone, but the product received is two boxes of Kispray's fragrance.
2. The fraud was committed by a woman named Bela (39) in May 2018.

The above case explains that online shopping has some disadvantages in online shopping. In the context of online transactions, consumers will tend to see the risks that may arise from transactions that will be done, because it does not meet directly between buyers and sellers, in online shopping will bring up different risk perceptions and will be felt by everyone.

According to Firdayanti (2012) in Rosian Anwar and Wijaya Adidarma, 2016 that risk perception is a way for consumers to perceive the possibility of loss that will be obtained from their decision due to the uncertainty of the thing decided. These concerns usually occurs in the form of the risk of losing money, factors for product delivery, the quality of the product itself and nonconformity product. This fact would greatly affect the interest of consumers to shop through online media. It is also due to the perceived risks to be faced in this process, it will be a consideration for the consumers before making a purchase. Said that, if the risk perception of consumers in online shopping is low, then consumers have no doubt in buying something through online. Thus, this will make consumers feel confident that by online shopping they will not get problems, such as losing money or product incompatibility. Therefore, it is important for the company's e-commerce minimize the consumers risk level consumers in online shopping so that in turn it can influence the purchase intention of the online product.

In this study, the object of research is Students of Bengkalis State Polytechnic who have or frequently do online shopping. According to my observation, Students of Bengkalis State Polytechnic do online shopping with the aim of buying a product is unavailable in Bengkalis or as a habit of meet their needs through online shopping. In conducting online shopping transactions, students of Bengkalis State Polytechnic often use platforms provided by e-commerce such as Shoppe, Lazada, Tokopedia and others and through social media like facebook, instagram, twitter and whatsapp. Then, products that are usually purchased by students are clothing, makeup tools, the shoes, high heels, veil, softlens and others. However, there are some students who suffer losses or get negative impacts from online transactions such as product incompatibility, long delivery time, and have experienced fraud. So, they are more careful in shopping online by giving considerations before making a purchase decision.

The reason for using the student consumers of Bengkalis State Polytechnic is because it has a large contribution towards online shopping and according to the Indonesian Internet Service Providers Association (APJII), explained, students get the highest position as the most frequent internet accessor. In this case, students are also made as the main target or object for the development of a number of online shops in Indonesia.

Based on the problems and phenomena that often occur in the current era of online trade transactions, the researcher is interested in conducting research and want to know their views on the risks of online shopping that will be accepted by consumers, especially students with title: "The Influence of Perceived Risk toward Online Purchase Intention (Case Study: Students of Bengkalis State Polytechnic)".

Uma Sekaran in his book Business Research (1992) in Sugiyono, (2018: 60), suggests that the framework of thinking is a conceptual model of how theories are related to various factors that have been identified as important problems. According to Sugiyono (2018: 60), research relating to two or more variables, hypotheses in the form of comparisons or relationships are usually formulated. Therefore, in order to formulate research hypotheses in the form of relationships and comparisons, it is necessary to put forward a framework of thought.
In this study, the researcher proposes a framework that has two variables, namely the independent variable (Perceived Risk (X)), the dependent variable (Online Shopping Purchase Intention (Y)) which will produce a hypothetical relationship between the two variables.

![Framework](image)

### 2. Research Method

The population in this study are the students of Bengkalis State Polytechnic who have experience and ever done online shopping or as the active online shopping perpetrators. From the calculation by using Slovin, the minimum amount of sample is 95.6. To simplify the calculation, the amount of samples is rounded up to 100 students of Bengkalis State Polytechnic who have experience and ever done online shopping or as the active online shopping perpetrators from eight majors, because given the population size was too large, the time constraints and limitations of the research staff. In this study, researchers used snowball sampling techniques in sampling to took sample of students of Bengkalis State Polytechnic who have experience and ever done online shopping or as the active online shopping perpetrators. In this study, researchers used a collection technique based on the technique that is a questionnaire (questionnaire), interview and library Study Techniques.

In this study, researchers used an associative hypothesis. The associative hypothesis in Sugiyono (2018: 69) is a temporary answer to the formulation of associative problems, namely asking about the relationship between two or more variables. There is also a hypothesis in this study is:

1. Research hypothesis: “There is a positive and significant influence between perceived risk toward purchase intention in online shopping”
2. Statistical Hypothesis:
   - H0 : Perceived Risk does not influence the Online Shopping Purchase Intention
   - H1 : Perceived Risk has a positive and significant influence toward Online Shopping Purchase Intention

### 3. Result and Discussion

#### 3.1 Characteristic of Respondents

Respondent characteristics are used to determine the diversity of respondents based on gender, age, semester, study program, and income per month. This is expected to provide a fairly clear picture of the condition of the respondent and its relation to the problem and purpose of the research.

![Figure 2 Respondents Based on Gender](image)

Based on the gender characteristics of the respondents in Figure 2, it can be seen that 66 male respondents with a percentage of 68% and 32 female respondents with a percentage of 32%. That is because women prefer shopping and are easily attracted to unique things compared to men who are usually less interested in shopping online or prefer shopping conventionally.

![Figure 3 Respondents Based on Study Program](image)
Figure 3 shows the diversity of respondents with the highest number of International Business Administration study programs by 30% and followed by the Public Financial Accounting study program by 13%. To see more the number of respondents based on the study program can also be seen in Table 4.2 below:

<table>
<thead>
<tr>
<th>No</th>
<th>Study Program</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>International Business Administration</td>
<td>30</td>
<td>30%</td>
</tr>
<tr>
<td>2</td>
<td>Public Financial Accounting</td>
<td>13</td>
<td>13%</td>
</tr>
<tr>
<td>3</td>
<td>Business Administration</td>
<td>9</td>
<td>9%</td>
</tr>
<tr>
<td>4</td>
<td>Business English</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>5</td>
<td>Civil Engineering</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>6</td>
<td>Road and Bridge Design Techniques</td>
<td>7</td>
<td>7%</td>
</tr>
<tr>
<td>7</td>
<td>Mechanical Engineering</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>8</td>
<td>Mechanical Engineering Production and Maintenance</td>
<td>7</td>
<td>7%</td>
</tr>
<tr>
<td>9</td>
<td>Technical Information</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>10</td>
<td>Software Engineering Techniques</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>11</td>
<td>Electrical Engineering</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>12</td>
<td>Electricity Engineering</td>
<td>8</td>
<td>8%</td>
</tr>
<tr>
<td>13</td>
<td>Shipping Techniques</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>14</td>
<td>Nautica</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>15</td>
<td>Management and commercial Shipping</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Data Processed of Google Form, 2020

Based on Table 1, which shows the distribution of questionnaires with the characteristics of respondents based on the study program has different proportions. That is because, the method of distributing questionnaires is done online and randomly with a focus on the student consumers of Bengkalis State Polytechnic. So that, in this study, the most respondents from the International Business Administration study program were 30 respondents who were also identified as business majors and students who were identical with women and at least were from the Nautica study program of 1 respondent.

Based on the semester characteristics of the respondents in Figure 4, shows that the highest number of respondents who responded to the researcher questionnaire was from semester 8 at 34%, followed by semester 6 at 28%, then semester 4 at 27% and least from semester 2 at 11%.

Based on the age characteristics of the respondents in Figure 5, it shows that respondents who were aged between 17-20 years were 45 with a percentage of 45%, and respondents aged between 21-25 years were 55 with a percentage of 55%, this is because the subjects in the study conducted is a student of Bengkalis State Polytechnic whose questionnaires were distributed mostly responded by students aged between 15-20 years and between 21-25 years.
2. The value of the average (mean) more substantial than the standard deviation is 27.09 at a standard deviation of 4.742. The value of the average (mean) more substantial than the standard deviation is 27.09 > 4.742, thus indicating that the results are good, because the standard deviation is a reflection of low deviations, the data distribution that occurs shows normal results and does not occur biased. As well as Online Purchase Intention variable has a minimum value of 32, a maximum value of 63, and an average value of 47.84 at a standard deviation of 6.346. The value of the average (mean) more substantial than the standard deviation is 47.84 > 6.346, then the data spread that occurs shows normal results and does not occur biased. Total respondents were 100 respondents.

As for the result of the validity test through compares r count values with r table, that use values of r count amounted to 0.726 and use values r table of 0.195 means 0.726 > 0.195, so the first item has the suitability or invalid. Likewise for the next item, all items totaling 21 items have the value of rcount > r table, so that all items have a match or valid. Reliability Test. In this study, the result of the reliability testing that is Cronbach’s Alpha value based on variable. The result of the reliability testing with variable has consistency or reliable, because the Croanbach alpha numeric value is greater than 0.6. So, on the Table 4.6 shows that the result testing with items in this study also has consistency or reliable, because the Croanbach alpha numeric value is greater than 0.6.

3.2 Test Classic Assumptions

The classic assumption test aims to determine the condition of the data used in this study by going through several classical assumption tests. The classic assumption test in this study consists of tests of normality, heteroscedasticity, autocorrelation as follows:

1. Normality test

   Umar (2011: 182) defines the normality test as follows: “The normality test is to find out whether the dependent variable, independent or both are normally distributed, close to normal or not”. In this study, the normality test was carried out using the Kolmogrovsmirnov test. In this study, the normality test was carried out using the Kolmogrovsmirnov test. The results of the test are that all research variables have a significance value greater than 0.05 (sign 0.200 > 0.05), so it can be concluded that the research data is normally distributed.

2. Heteroscedasticity Test

   Heteroscedasticity test results indicate that all research variables have a significance value greater than 0.05 (sign 0.06 > 0.05), so it can be concluded that the regression model in this study did not occur heteroscedasticity.

3. Autocorrelation Test

   The results of the autocorrelation test through testing of the Durbin Watson test value. In this study, explained that the value of Durbin-Watson amounted to 2.053, value DL at 1.654 and the value of DU at 1.6944. So, DU <DW <(4 - DU) means that there is no autocorrelation.

3.3 Simple Linear Regression Analysis Test

   The results of the correlation regression analysis test are the significance value or sign 2 tailed for the independent and dependent variables is 0.000, then have a relationship or correlation. The form of the relationship between these variables is positive because the Pearson correlation value for both variables is 0.664. So, the independent variable to the dependent variable has a correlation with the degree of strong correlation. So, it can be concluded that the lower the risk perception, the higher the online purchase intention. The main point in simple linear regression analysis is the simple linear regression equation. Meanwhile, the equation of the results of a simple regression analysis is:

   \[ Y = a + bx \]

   \[ Y = 23.753 + 0.889X \]

   Online Purchase Intention =23.753 + 0.889 Perceived Risk

   From the simple linear regression equation, the following decisions can be interpreted and taken:

   a. A constant of 23.753 states that if the independent variable has a value of 0 (zero), then the variable y stands at 23.753.
b. The perceived risk (X) regression coefficient of 0.889 states that if the perceived risk variable increases by 1% then the online purchase intention variable will increase by 0.889. Means it can be concluded that the variable perceived risk affects the online purchase intention.

In this study explained that use values of significance of 0.000, then 0.000 < 0.05. In addition, t values of 8.652 and t value table of 1.98397, then 8.652 > 1.98397 or t > t table. So, H0 is rejected because there is a significant influence between the independent. The coefficient of determination test (R2) is used to measure how far the model's ability to explain the variation of independent variables to the dependent variable or to determine the percentage of influence exerted simultaneously. In this study the coefficient of determination test (R2) uses the R-Squared value that shows the magnitude of the correlation or relationship (R) of 0.664, from the output obtained R-Squared value of 0.441. KD = R2 x 100% = 0.441 x 100% = 44.1%

The R-value which represents the correlation between the observed values and predicted values of dependent variables. R-square is called the coefficient of determination and it gives the adequacy of the model. Here the value of R-square is 0.441 that means the independent variable in the model can predict 44.1% of the variance in dependent variable or the variation of the independent variable used in the research model is able to explain 44.1% of the dependent variable that is online purchase intention while the remaining 55.9% is influenced or explained by other variables outside the model this research.

4. Conclusion

Based on the result of research and discussion, the conclusion in this study are as follow: The perceived risk variable affects the online purchase intention variable and has a positive and significant influence on the online purchase intention. The magnitude of the influence of the perceived risk variable on the online purchase intention variable is 44.1%.

Based on the above conclusions, the researchers suggested something to note:
1. With a positive and significant influence between the variables perceived risk to the variable online purchase intention. It is expected that this research can provide input and policies related to efforts to attract consumer purchase intention by taking into a count the arising risk from each transaction.
2. Considering that there is a positive and significant influence between perceived risk on online purchase intention, therefore the perpetrators of online shopping should always consider the risk aspects before doing online shopping.
3. The perceived risk in an interesting aspect in the online shopping system, therefore, it is very possible for subsequent researchers to be able to develop related topics in further research.

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