

Analysis of the Influence of Perceived Risk in E-commerce on Online Purchase Intention in Batam City Communities

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Article Info	Abstract
Received : 2021-05-06 Accepted : 2023-05-30 Published : 2023-05-31	This study was conducted to determine the effect of perceived risk on online purchase intention in Batam city by purchasing goods through marketplace platforms such as: Tokopedia, Shoppe, Lazada, Bukalapak, Blibli. The technique of collecting data is carried out using non-probability sampling with judgmental sampling method. The respondent's data were collected as many as 320 data by distributing questionnaires to the Batam city community. Samples in this study were the Batam city people who had purchased goods or visited 5 marketplaces namely Tokopedia, Shoppe, Lazada, Bukalapak, Blibli. After collecting data in accordance with the required data, the data processing is carried out in the next stage to determine the results of this study using SPSS software. The results of the data testing conducted, it can be concluded that the financial risk, time risk, and psychological risk variables have a significant effect on the online purchase intention variable. Meanwhile, the variable product risk, security risk, and social risk do not have a significant effect on online purchase intention.
Key words: financial risk; product risk; security risk; time risk; social risk; psychological risk	

INTRODUCTION

The very rapid development of technology in today's modern era makes it very easy for us to carry out our activities and activities, at first reading news from printed newspapers, magazines or tabloids. But at this time in the digital era the innovation provided makes it easier for us to get news which is certainly packaged in a more attractive and easy-to-access form, this makes digital media platforms a trend and is widely used in daily activities such as e-commerce (Tokopedia, Zalora, Shopee) social media (Twitter, Instagram, Facebook), online newspapers (tempo.co, detik.com, cnn.co.id), the use of digital media is also inseparable from internet use, developments in technology, and internet services that are getting easier to get.

Due to the rapid development of technology, a factor that has led to an increase in internet users in Indonesia, the Indonesian Internet Service Providers Association (APJII) conducted research on internet users in Indonesia for the past 19 years based on the results of a survey conducted showing the development of internet users. Very rapidly, in 1998 internet users in Indonesia reached 500 thousand users, the development of users in 2017 has exceeded 140 million users. This is also supported by the development of active internet users in 2016, ranging between 132.7 million and an increase of 7.9% in 2017, making internet users reach 142.3 million users, where the number of users reached 54.69% of total population throughout Indonesia (Bohang, 2018).

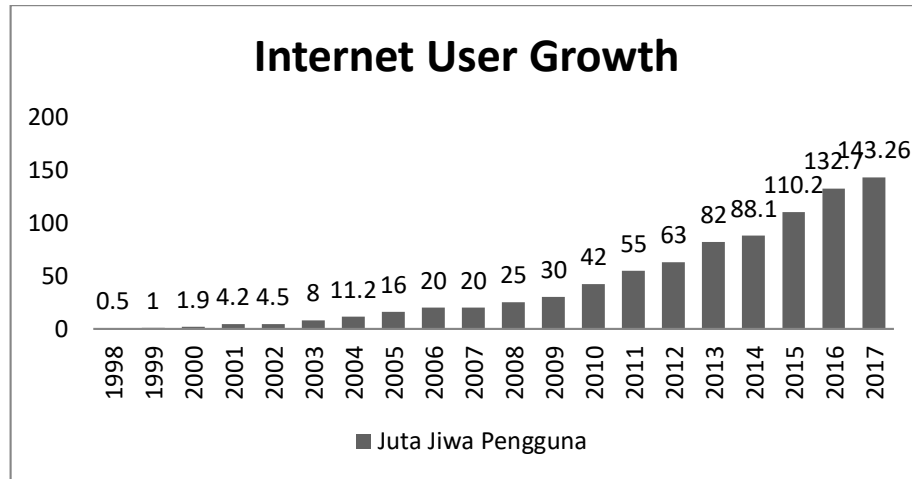


Figure 1. Data of internet users in Indonesia (APJII, 2017)

The large number of internet users has its own advantages for business people because it brings new market share to people who have businesses to expand market coverage and expand through online media. By running a business in e-commerce, the dissemination of information on a product that is very fast, wide and that attracts the attention of customers because it provides easy service to customers, promotes brands, and improves efficiency and effectiveness in providing services to customers (Luiz Et Al Moutinho, 2015).

With the development of internet users, technology and the level of online transactions that are increasingly used and in demand by the public, this is certainly a new business opportunity and has triggered the emergence of many online platforms. One form of the existing online platform is the marketplace, in Indonesia we can see the many existing market places, such as Tokopedia, Shoppe, Lazada, Bukalapak, and so on. Based on the results of the data released by DailySocialID (2018), the first Top 5 market places in Indonesia are Tokopedia with 111,464,100 monthly visitors, in second place is Bukalapak with 85,138,900 monthly visitors, and so on. This is certainly a very good opportunity for business development in Indonesia, because with the help of the marketplace, business actors can market existing products and services with an online system, which makes coverage only.

This research is important as it can help businesses to understand consumer behavior, develop effective marketing strategies, improve the online shopping experience, and capitalize on the growing e-commerce industry.

There are still several gaps from previous research such as most research on perceived risk in e-commerce has focused on general online shopping behavior, with little attention paid to the influence of perceived risk on purchase intention for specific product categories. Different product categories may have different perceived risks associated with them, and thus may require different strategies to address these concerns. Overemphasis on negative aspects of perceived risk: Most research on perceived risk in e-commerce has focused on the negative aspects of risk, such as concerns about product quality or security issues. However, there is a need to investigate the potential positive effects of perceived risk, such as the role it may play in enhancing the perceived value of a product or service.

LITERATURE REVIEW

Theoretical basis

Online Purchase Intention

Online purchase intention itself originally came from Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA) which were adopted into the Technology Adoption Model (TAM) (Kamalul et al., 2018). Willingness and desire to buy products or services and the desire to use the product or service are driven by several factors that become choices in making considerations such as the price offered is relatively cheap compared to prices for similar products, the quality of the product offered or the uses and advantages of these products and

products that are certainly products that are already well known to the public (Kotler Philip & Keller, 2016).

Hypothesis Development

Relationship between Financial Risk and Online Purchase Intention

Financial risk or better known as financial risk according to (Gautam & Sharma, 2019) is a risk that is often associated with material losses that occur as a result of purchasing a product or service and can also be caused by misuse of confidential financial information. Meanwhile, according to (Cho et al., 2018) financial risk is the possibility of an individual not getting maximum results from buying and selling of goods because prices do not match the value of the goods or services, or in other words the goods or services purchased earlier not worth the money spent by consumers. Financial risk is also often associated with buying interest in a product or service, because consumers tend to worry if they don't get the value they use for the money (Cho et al., 2018), this is also supported by the theory presented by Thakur & Srivastava. (2017) which states that the condition of the product is not suitable or an error in purchasing goods or services that can result in financial losses so that consumers avoid buying goods online to minimize financial confusion.

H₁: Financial Risk will have a significant and positive effect on Online Purchase Intention.

Relationship between Product Risk and Online Purchase Intention

Kamalul et al., (2018) explain about product risk, product risk is the risk associated with consumer fear if the product or service purchased is not what is desired, this risk generally occurs when consumers cannot evaluate the goods or services. properly and accurately before making a transaction. The product risk criteria faced by consumers can be in the form of the first item received has defects, the second item obtained from the purchase is deemed not in accordance with what was ordered previously and the last is that it is very difficult to assess and inspect the items you want to buy online in detail due to limited information. the website or online shop can be provided (Panwar, 2018).

H₂: Product Risk will have a significant positive effect on Online Purchase Intention.

Relationship between Security Risk and Online Purchase Intention

Consumers get all information about quality, specifications and so on through the seller's website, but it cannot be denied that information and personal data security is very fragile with the existence of the internet, this is better known as the security risk faced by consumers today, potential consumers and even previous consumers (Kamalul et al., 2018). Various studies have tested and obtained evidence of a relationship between security risk and consumer purchase interest, one of which is a study previously studied by (Marriott & Williams, 2018) which states that security risk is proven to have a significant negative relationship, which means that the higher the level security risk, the level of online purchase intention will be lower.

H₃: Security Risk has a significant positive effect on Online Purchase Intention.

Relationship between Time Risk and Online Purchase Intention

Time is a risk which also has an influence on consumers' desire to buy a product that we know as time risk, which is the risk that includes consumer experience when doing online shopping in spending time managing website navigation and / or entering orders and time periods for receiving goods (Kamalul et al. al., 2018). Kamalul(2018) also explained that time risk does not only include time wasted when looking for a product or service but also when the item has been purchased, then it does not match what the consumer wants then the consumer has to return the item so that the consumer must return it. spend even more time looking for replacement items.

H₄: Time Risk has a significant positive effect on Online Purchase Intention.

Relationship between Social Risk and Online Purchase Intention

Social risk or social risk is one of the important risks in understanding the behavior pattern of buying interest in goods and services, according to (Kamalul et al., 2018) social risk refers to the risk that consumers may experience when buying a product and the purchase is not approved by relatives and closest relatives of the consumer. This can discourage the consumer's purchase intention when the consumer feels that he is exposed to a risk that the purchase that the consumer will make may not be approved or liked by the individual's family and relatives.

Meanwhile, according to (Gautam & Sharma, 2019), social risk is associated with consumer feelings when buying certain products and it turns out that the environment around these buyers makes them feel uncomfortable of the goods they buy because it is not what they expected.

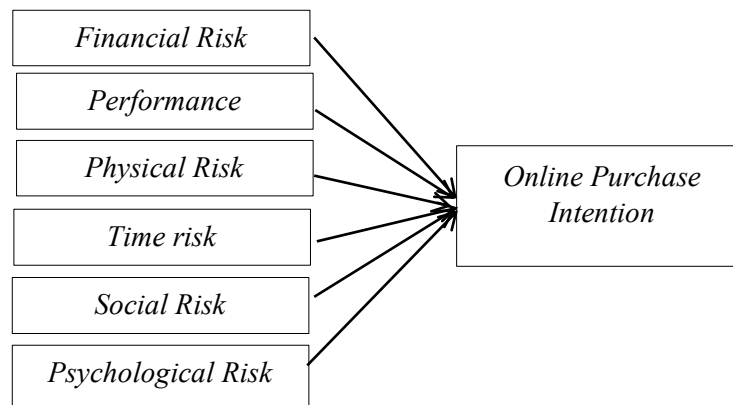
H₅: Social Risk will have a significant positive effect on Online Purchase Intention.

Relationship between Psychological Risk and Online Purchase Intention

The last factor to be discussed is psychological risk, which is the risk that is closely related to the unpleasant feelings experienced by consumers when they don't get the goods they want, besides this factor can also be explained when consumers feel unhappy receiving the product they want even though the product they want is buying has many other variations (Kamalul et al., 2018). However, according to (Mortimer, 2018), one form of experience that can be considered as psychological risk is when the consumer does not adequately understand the ins and outs of using the product so that it creates a bad experience for the consumer, for example when the consumer does not have data that contains clear information. regarding the schedule in taking the drug, the consumer may not get the full effect that should be obtained if the consumer takes the drug on the right schedule.

H₆: Psychological Risk has a significant positive effect on Online Purchase Intention.

Based on the explanation above, a research model can be drawn as follows:



Source: Developed by the authors, 2021

METHODS

Data

The objects in this study are the top 5 e-commerce in Indonesia, including: Tokopedia, Shopee, Lazada, Bukalapak, and Bli-bli, for Batam city people who make transactions or actively use online shopping will become the population in this study, and for people in the city of Batam who have online purchase intentions will be a sample in this study. The basis for selecting the number of samples used in this research is non-probability sampling techniques, questionnaires are the basis and the main media for obtaining research data obtained directly from respondents. The number of samples required in the study is based on a parameter comparison of 1:10. Which is where every single question in the questionnaire requires 10 respondents, this study has 30 questions, so the respondents needed to participate in conducting this research are at least 300 respondents.

Data Analysis

This study uses SPSS to analyze the data and consist of the following test

Validity test

The validity test serves to test the questionnaire whether the questionnaire can be said to be valid or not. The questionnaire is declared valid if the correlation coefficient has a value of > 0.6 (Ghozali, 2016).

The reliability test is a test that functions as a test answer which tells the respondents whether the answers given have consistency in each question item (Ghozali, 2016). The internal

consistency reliability approach is the approach that will be used in this study. The level of relationship between each question item on the instrument used to determine and state the reliability of the questionnaire using the Cronbach Alpha statistical method. Questionnaire can be accepted if the value is > 0.6 (Ghozali, 2016).

Outlier Test

Outliers are data that do not match or have differences in the suitability of the data with some of the existing data in the study. The analysis used in this test was by setting the z-score to have a vulnerable value of > 2.5 (Ghozali, 2016).

Classic assumption test

Normality test is useful for providing an assessment of the distribution of data on variables, which can be said to be normal or not. Data can be said to be normal by performing the Kolmogorov Smirnov Test which can be used as a basic benchmark. (Ghozali, 2016) The regression value can be said to be normal provided that the probability value is ≥ 0.05

Multicollinearity Test is used to test each independent variable for the relationship in the regression model with the correlation value for each independent variable of 0.00. (Ghozali, 2016) The regression model cannot be said to be multicollinearity if it has a Variance Inflation Factor (VIF) value of not more than 10 and has a tolerance value of > 0.10 .

Heteroscedasticity Test to analyze the regression method that has been tested at a time when there is no variance in the residual between observers. (Ghozali, 2016) If there is no change in the variance in the residual between each observer, it can be said that it is homoscedasticity and if it has a difference it can be said that it is heteroscedasticity.

Hypothesis testing

The hypothesis is a provisional statement on questions about problems in research that have been carried out by previous researchers, which in this study will be tested in more detail (Ghozali, 2016). This research data from questionnaires that have been given by respondents are collected and will be tested with a computerized system, testing this research researchers will use SPSS ver. 21. This system will collect and manage data which will later issue outputs in the form of graphs and tables that show the results of research analysis.

F test (F-test)

The F test in this study serves to determine the variables that will be carried out in the study, namely the independent variable whether it has an influence on the dependent variable by assessing the level of singification obtained from the output in the data analysis that has been carried out. If the probability value < 0.05 , the dependent variable affects the dependent variable (Ghozali, 2016).

t test

This test is to determine and manage the level of significant influence of the independent variable on the dependent separately with an error-prone level of 5%, this test can be carried out with a reference value of sig < 0.05 , so the independent variable has an influence on the dependent variable (Ghozali, 2016).

Determination Coefficient Test (R²)

The R² test has a function as a determinant of a regression model that has a positive or negative relationship, this can be determined and measured by measuring the results of the regression test which is greater than 0.05 (Ghozali, 2016). This test is also used as a determinant of the monthly rate. It can explain that the dependent variable is online purchase intention. The value on the coefficient of determination is between zero and one, if the R² value is high, then the independent variable is believed to be capable and competent in explaining the dependent variable.

RESULTS

Results

Demographic Analysis of Respondents

Table 1. Number of Respondents Based on Expenditures per Month

Expenditures per Month	No of Resp.	Percentage
< Rp 3.000.000	115	38.2%
Rp 3.000.001 - Rp. 5.000.000	85	28.2%
Rp 5.000.001 - Rp. 7.000.000	50	16.6%
Rp. > =7000.001	51	16.9%
Total	301	100.00%

Source: computed data

Based on the description of the data, which categorizes respondents based on the amount of expenditure per month. It can be seen in the table that respondents with expenses less than Rp. 3,000,000 with 115 respondents or with a percentage of 38.2%, the number of respondents who had expenses in the range of Rp. 3000,001 - Rp. 5,000,000 with 85 respondents or 28.2% of the total respondents, monthly expenditures are between Rp. 5,000,001 - Rp. 7,000,000, amounting to 50 respondents or equivalent to 16.6% and respondents with a monthly expenditure of Rp. > = 7000,001 as many as 51 people or 16.9%.

Table 2. Number of Respondents Based on e-commerce

E-Commerce	No of Resp.	Percentage
Shopee	144	47.8%
Tokopedia	83	27.6%
Lazada	68	22.6%
Bukalapak	4	1.3%
Blibli	2	0.7%
Total	301	100.00%

Source: computed data

It can be seen that the results show that the highest number of E-commerce users is shopee with 144 users or around 47.8% and the number from Tokopedia is 83 people or 27.6% of respondents, the number of respondents who use lazada is 68 people with a percentage of 22.6%, Bukalapak with 4 users people with a percentage level of 1.3%, and Blibli 2 people or the equivalent of 0.7%.

Outlier Test Results

After 151 respondents were obtained and tested, none of the respondent's data had a z-score value exceeding -3.0 or 3.0.

Table 3. Data Validity Test

Indicator	Correlation	Description
Financial_Risk 1	.689	<i>Valid</i>
Financial_Risk 2	.861	<i>Valid</i>
Financial_Risk 3	.795	<i>Valid</i>
Financial_Risk 4	.611	<i>Valid</i>
Financial_Risk 5	.788	<i>Valid</i>
Product_Risk 1	.854	<i>Valid</i>
Product_Risk 2	.865	<i>Valid</i>
Product_Risk 3	.891	<i>Valid</i>
Product_Risk 4	.842	<i>Valid</i>
Product_Risk 5	.814	<i>Valid</i>
Security Risk 1	.803	<i>Valid</i>
Security Risk 2	.834	<i>Valid</i>
Security Risk 3	.723	<i>Valid</i>
Security Risk 4	.801	<i>Valid</i>
Security Risk 5	.831	<i>Valid</i>
Time Risk 1	.763	<i>Valid</i>
Time Risk 2	.873	<i>Valid</i>
Time Risk 3	.892	<i>Valid</i>
Time Risk 4	.751	<i>Valid</i>
Social Risk 1	.850	<i>Valid</i>
Social Risk 2	.856	<i>Valid</i>
Social Risk 3	.806	<i>Valid</i>
Social Risk 4	.844	<i>Valid</i>
Psychological Risk 1	.782	<i>Valid</i>
Psychological Risk 2	.803	<i>Valid</i>
Psychological Risk 3	.688	<i>Valid</i>
Psychological Risk 4	.668	<i>Valid</i>
O.Purchase Intention 1	.867	<i>Valid</i>
O.Purchase Intention 2	.877	<i>Valid</i>
O.Purchase Intention3	.701	<i>Valid</i>

Source: computed data

This test serves to find out which questionnaires have data that can be said to be valid or not. The questionnaire can be said to be valid if the correlation coefficient has a value of > 0.6 (Ghozali, 2016) and it can be seen in the explanation in the table above that the overall correlation value that is owned is above 0.6 so that all data in the questionnaire can be said to be valid. Based on the elaboration of the primary data test results in table 4.9 of 30 questions representing each variable having 5 questions regarding financial risk, 5 questions regarding product risk, 5 questions regarding security risk, 4 questions regarding time risk, 4 questions for psychological risk and 3 questions regarding online purchase intention.

Table 4. Data Reliability Test

Variable	Alpha (α)	Description
<i>Financial Risk</i>	.809	Reliabel
<i>Product Risk</i>	.906	Reliabel
<i>Security Risk</i>	.858	Reliabel
<i>Time Risk</i>	.836	Reliabel
<i>Social Risk</i>	.859	Reliabel
<i>Psychology Risk</i>	.713	Reliabel
<i>Online Purchase Intention</i>	.753	Reliabel

Source: computed data

This test is a test that functions as a test answer which is stated by the respondents of the consistency of each question item (Ghozali, 2016). The level of relationship between each

question item on the instrument used to determine and state the reliability of the questionnaire using the Cronbach Alpha statistical method. Questionnaire can be accepted if the value is > 0.6 (Ghozali, 2016). It can be concluded that all variables are declared reliable because the Cronbach Alpha is > 0.6 .

Table 5. Normality Test Results

Description	<i>Unstandardized Residual</i>	Description
<i>Asymp. Sig. (2 tailed)</i>	0,05	<i>Normal</i>

Source: computed data

This test is useful for providing an assessment of whether the distribution of data on the variables can be said to be normal or not. Data can be said to be normal by performing the Kolmogorov Smirnov Test which can be used as a basic benchmark. The probability value > 0.05 becomes a benchmark so that the regression value can be said to be normal (Ghozali, 2016). It can be seen in the table above that it shows a value of 0.05, which means that the data in this study spread normally.

Table 6. Multicollinearity Test Results

Variable	<i>Variance Inflation Factors (VIF)</i>	Tolerance Value	Description
<i>Financial Risk</i>	3.449	0.290	non multikolinearitas
<i>Product Risk</i>	3.874	0.258	non multikolinearitas
<i>Security Risk</i>	2.845	0.351	non multikolinearitas
<i>Time Risk</i>	3.416	0.372	non multikolinearitas
<i>Social Risk</i>	3.334	0.300	non multikolinearitas
<i>Psychological Risk</i>	2.686	0.293	non multikolinearitas

Source: computed data

The regression model cannot be said to be multicollinearity if it has a Variance Inflation Factor (VIF) value of not more than 10 and has a tolerance value > 0.10 (Ghozali, 2016). The table above shows that each independent variable is not multicollinearity.

Table 7. Heteroscedasticity Test Results

Variable	<i>Significance</i>	Description
<i>Financial Risk</i>	0.138	Homoskedastisitas
<i>Product Risk</i>	0.789	Homoskedastisitas
<i>Security Risk</i>	0.330	Homoskedastisitas
<i>Time Risk</i>	0.604	Homoskedastisitas
<i>Social Risk</i>	0.360	Homoskedastisitas
<i>Psychological Risk</i>	0.300	Homoskedastisitas

Source: computed data

The heteroscedasticity test is carried out with the Glejser Test method, this test is carried out by regressing the absolute residual value on the independent variable, in this test the significance value obtained must have a significance value $> .05$ (Ghozali, 2016). The table above shows the results of the significant values obtained for each variable greater than all 0.05. So that in this study there is no heteroscedasticity, or it can be said that the results obtained in this test are homoscedasticity.

Table 8. F Test

Description	<i>Significance</i>	Description
<i>Regression Residual</i>	0,000	Signifikan

Source: computed data

In this study, the F test was basically carried out to see the independent variable affecting the dependent variable, this is seen in the significance value obtained and has a determination that

the significant value obtained from the output of the tests carried out is less than 0.005 (Ghozali, 2016). It can be seen in the table above that the significant value in the F test is 0.000. These results explain that the variable has an influence on the dependent variable online purchase intention.

Table 9. t Test

Variable	Standardized Coefficients B	Significance
<i>Financial Risk</i>	0.518	0.000
<i>Product Risk</i>	0.509	0.000
<i>Security Risk</i>	0.233	0.002
<i>Time Risk</i>	0.106	0.205
<i>Social Risk</i>	0.298	0.000
<i>Psychological Risk</i>	0.445	0.372

Source: computed data

This test is to determine and manage the level of significant influence of the independent variable on the dependent separately, this test can be carried out with a reference to the significance value which can be <0.05 , so the independent variable has an influence on the dependent variable (Ghozali, 2016).

H₁: Financial Risk will have a significant and positive effect on Online Purchase Intention.

It can be seen in the table above that the value of std coefficients shows a value of .518 with a significance of 0.000 which shows a positive effect and has a significant impact, so H₁ is accepted because financial risk as an independent variable has a positive significant effect on the dependent variable online purchase intention. These results explain that the high risk perceived by consumers makes less interest in purchasing products online. Consumers tend to spend more money when they browse websites that offer discounts and promotions. By having more discounts, consumers have a tendency to buy products they don't want to buy. The results of this test are also found in research by Dabrynin and Zhang, (2019) Ahmed, 2015; Ariff et al., (2014), and Muhammad Ashoer, (2016).

H₂: Product Risk will have a significant positive effect on Online Purchase Intention.

In the table above, the product risk variable has a std coefficients value of .527 with a significance value of 0.000 which shows a significant negative effect and means that H₂ is accepted because product risk has a significant positive effect on online purchase intention. This explains that the higher the risk of existing products, the lower the intention to purchase products online in Batam city people. By buying online, consumers will not get the right product quality to buy. For example, by ordering nylon clothing, if it turns out that the product being shipped is synthetic nylon or vice versa, it will make consumers instantly dissatisfied. Consumers can also become dissatisfied if the size of the product ordered is not accurate. For example, because of the large number of clothing size standards such as US standard sizes and European standard sizes, it will cause miscommunication if the standards used are not clearly stated to the customer in the clothing size description, this was also found by previous researchers such as Kamalul et al., (2018), Han & Kim, (2017), Sudibyo et al., (2020) and Gerber et al., (2019).

H₃: Security Risk has a significant positive effect on Online Purchase Intention.

The security risk variable in the table above has a value of std coefficients .233 with a significance value of 0.02, which shows the results have a significant positive effect and means that H₃ is accepted because security risk has a significant positive effect on online purchase intention. This explains that consumers' fear of security related to personal data, misuse of information and others causes a low desire to purchase products online. Consumers fear that online shopping company files can extract and leak their personal information for the purpose of promoting and advertising related products based on search history. These results are also found in research (Hsu and Minh Luan MBA, (2017) and Muhammad Ashoer, (2016).

H₄: Time Risk has no significant effect on Online Purchase Intention.

The table above shows that the value of std coefficients shows a value of 0.106 with a significance of 0.205 which shows a positive and insignificant effect, this means that H₄ can be rejected because time risk as an independent variable has a positive but insignificant effect on the dependent variable Online purchase intention. This explains that time such as product

arrival, product search results in low purchase intentions, but this does not have a significant effect on purchase intentions online. This is because there is no proper search engine optimization to fulfill a particular desired product. Hence, consumers spend most of their time searching for websites to satisfy their wants and needs. In addition, the complicated way to place an order results in more time wastage and it takes time for the product to be received. This was also found by research (Hasan, 2017) Masoud, (2013).

H₅: Social Risk will have a significant positive effect on Online Purchase Intention.

Seen in the table above that the value of std coefficients shows a value of 0.298 with a significance of 0.000 which shows a positive influence and also has a significant impact, it is concluded that H₅di is accepted because social risk as an independent variable has a positive effect and has a significant impact on the dependent variable Online purchase intention. This shows that the risk to social relationships / social views on purchasing goods online results in low intention to purchase products purchased online Consumers feel inferior and afraid of friends and family approval about the products ordered so that they will feel high social / psychological risks, in general consumers very self-aware and want to get approval from friends, family in product purchase decisions. This is also found in research by Ariffin et al., (2018), Hong et al., (2019 and Wang, (2016).

H₆: Psychological Risk has no significant effect on Online Purchase Intention.

The table above shows that the value of std coefficients shows a value of 0.445 with a significance of 0.372 which shows a positive but insignificant effect, this means that H₆ can be accepted because Psychological risk as an independent variable has a positive but significant effect on the dependent variable Online purchase intention. Risk is defined as consumer disappointment in making poor product or service choices despite having many choices. Consumers fear that products purchased online will not be delivered correctly. For example, product packaging is poorly carried out, which ultimately causes the package received to be in bad condition. Consumers will be frustrated and disappointed with the quality of the product purchased if it does not meet expectations as advertised (Kamalul et al., 2018) (Kamalul et al., 2018) (Kamalul et al., 2018). so that it causes psychological risk to have a positive effect on the intention to purchase goods online. This is also found in research conducted by Gautam and Sharma, (2019), Kamalul et al., (2018) Han and Kim, (2017) and Sudibyoet al., (2020).

Table 10. Determination Coefficient Test (Adjusted R²)

Description	<i>Adjusted R Square</i>
Model	0.388

Source: computed data

The results of this test are listed in the table above, the adjusted R² value is 0.388, equivalent to 38.8%. This means that financial risk, time risk, psychological risk, social risk, security risk and product risk which are independent variables can only describe online purchase intention as a dependent variable of 38.8% while 61.2% of other factors are described by other variables that are not exist in this study.

DISCUSSION

Researchers conducted research with a sample of people in the city of Batam who wanted to do online shopping on e-commerce such as Tokopedia, Bukalapak, Shoppe, Lazada and Blibli. This study aims to identify and examine the factors that influence consumer desire to purchase products on e-commerce such as financial risk, product risk, time risk, security risk, social risk and psychological risk. at the node like this:

The first hypothesis (H₁): Seen in the table above that the value of std coefficients shows a value of .518 with a significance of 0.000 which shows a positive effect and has a significant impact, so that H₁ is accepted because financial risk as an independent variable has a significant positive effect on the variable dependent Online purchase intention. The results of this test were also found in research by Dabrynin and Zhang, (2019) Ahmed, 2015; Ariff et al., (2014), and Muhammad Ashoer, (2016).

The second hypothesis (H₂): In the table above the product risk variable has a value of std coefficients of .509 with a significance value of 0.000, which shows a significant effect and means that H₂ is accepted because product risk has a significant effect on online purchases intention. This explains that the higher the financial risk there is, the lower the intention to purchase products online in Batam city people, this was also found by previous researchers such as Kamalul et al., (2018), Han & Kim, (2017), Sudibyo et al. al., (2020) and Gerber et al., (2019).

The third hypothesis (H₃) The security risk variable in the table above has a value of std coefficients. 233 with a significance value of 0.02 which shows the results have a significant positive effect and means that H₃ is accepted because security risk has a significant positive effect on online purchase intention. These results were also found in research (Hsu and Minh Luan MBA, (2017) and Muhammad Ashoer, (2016).

The fourth hypothesis (H₄) It is seen in the table above that the value of std coefficients shows a value of 0.106 with a significance of 0.205 which shows a positive and insignificant effect, this means that H₄ can be rejected because time risk as an independent variable has a positive effect but insignificant on the dependent variable Online purchase intention. This is also found by research (Hasan, 2017) Masoud, (2013) which states that time risk has a negative but insignificant effect on online purchase intention.

The fifth hypothesis (H₅): Seen in the table above that the value of std coefficients shows a value of 0.298 with a significance of 0.000 which shows a positive influence and also has a significant impact, it is concluded that H₅ is accepted because social risk as an independent variable has a positive effect and has a significant impact on dependent variable Online purchase intention. This is also found in research by Ariffin et al., (2018), Hong et al., (2019) and Wang, (2016) which state that social risk has a significant positive effect on online purchase intention.

The sixth hypothesis (H₆): Seen in the table above that the value of std coefficients shows a value of 0.445 with a significance of 0.372 which shows a positive but insignificant effect, this means that H₆ can be accepted because Psychological risk as an independent variable has a positive effect but significant on the dependent variable Online purchase intention, so that it causes psychological risk to have a positive effect on purchase intentions online. This is also found in research conducted by Gautam and Sharma, (2019), Kamalul et al., (2018) Han and Kim, (2017) and Sudibyo et al., (2020).

The findings of the study can help e-commerce businesses and marketplace platforms operating in Batam city to develop effective strategies to address consumers' perceived risk and enhance the online shopping experience. Therefore it is necessary to pay close attention that financial risk, product risk, security risk, social risk greatly affect purchase intention in the Batam community.

CONCLUSIONS AND SUGGESTIONS

Conclusion

The results of the data testing conducted, it can be concluded that the financial risk, product risk, security risk, social risk variables have a significant effect on the online purchase intention variable. Meanwhile, the variable time risk and psychological risk do not have a significant effect on online purchase intention.

Financial risk refers to the risk of losing money in an online transaction. Consumers may perceive financial risk when making online purchases due to concerns about fraudulent activities, hidden fees, or payment security. This risk can lead to hesitation or reluctance to make online purchases, which may negatively impact online purchase intention.

Product risk refers to the risk of receiving a low-quality, defective, or unsatisfactory product. Consumers may perceive product risk when purchasing products online due to a lack of physical inspection or inability to touch and feel the product. This risk can lead to concerns about product quality and dissatisfaction, which can reduce online purchase intention.

Security risk refers to the risk of information theft, data breaches, or other security-related issues. Consumers may perceive security risk when making online purchases due to concerns about the safety and privacy of their personal information. This risk can lead to reluctance to

share personal information and hesitation to make online purchases, which can reduce online purchase intention.

Social risk refers to the risk of negative social consequences resulting from making an online purchase. Consumers may perceive social risk when making online purchases due to concerns about social judgment or disapproval from others. This risk can lead to reluctance to make online purchases, particularly for high-involvement products, which can reduce online purchase intention.

Overall, these variables are likely to have a significant effect on online purchase intention as they represent significant sources of perceived risk that can impact consumers' confidence and willingness to make online purchases. E-commerce businesses and marketplace platforms can address these concerns by implementing effective strategies to reduce perceived risk and increase trust, such as providing detailed product information, offering secure payment options, and using customer reviews and ratings to build social proof.

Suggestion

For further researchers, it is hoped that research will carry out research in a wider population coverage, and have more targets and not only focus on Batam City.

Researchers in the future are expected to add other factors that can explain the influence of online purchase intentions on e-commerce such as variable functional risk, trust, brand awareness and physical risk.

To address this limitation in future research also researcher can expand the sample size to increase the generalizability of the findings. This can help to ensure that the findings are representative of the broader population and not just limited to a specific city or region.

Incorporate multiple methods of data collection, to gain a more comprehensive understanding of the research question, future research can consider incorporating multiple methods of data collection, such as surveys, interviews, and focus groups. This can help to triangulate findings and provide a more in-depth understanding of the factors influencing online purchase intention across different populations.

Consider cross-cultural differences to gain a more nuanced understanding of the research question, future research can consider cross-cultural differences in online shopping behavior and perceived risk. This can help to identify the unique factors that influence online purchase intention in different cultural contexts and inform the development of tailored strategies to address consumer concerns.

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