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Price Perception, Risk, Quality of Information, and It's Effect on Online Purchase Decisions

(Case Study on Millennials in DKI Jakarta)

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***Abstract*—This study aims to examine whether the perception of price, risk and quality of information influence the decision to make purchases online, this study was conducted by distributing questionnaires to millennials in DKI Jakarta where the sample was determined based on non-probability sampling techniques in the form of convenience sampling, which is a technique in which there is a closeness of comfort between the researcher and the target respondent so that the data used in this study are primary data. The data analysis technique used is multiple linear regression analysis with SPSS 24 statistical software. The results of this study say that perceived price, risk and quality of information influence the decision to make online purchases, this can be seen from the adjusted R Square of 0, 58 which means the decision to make an online purchase 58% is influenced by the perception of price, risk and quality of information and the rest is influenced by other factors outside this research.**

Keywords: price perception, risk, quality of information, purchase, on-line

I. Introduction

The new era of increasingly rapid information technology, especially the internet at this time has made sellers and buyers connected through e-commerce. For most internet users today, e-commerce is not just buying and selling products online. E-commerce covers the entire process from development, marketing, sales, delivery, service, and payment to customers, with support from a network of business partners throughout the world. British research institute, Merchant Machine, released a list of ten countries with the fastest e-commerce growth in the world in 2019. Indonesia led the ranks of these countries with a growth of 78% in 2018. The number of internet users in Indonesia, which is more than 100 million users, became one of the forces driving e-commerce growth.

In Indonesia there are several e-commerce businesses that are developing. Tokopedia, Bukalapak and Shopee are e-commerce companies that implement a form of customer to customer (C2C), which is an activity of buying and selling goods or services that provide a Marketplace for consumers to make sales and purchase transactions online. Users can display their merchandise on the C2C site so other users can see and are interested in buying.

The increasing number of e-commerce users in Indonesia is followed by an increase in the number of e-commerce itself, this causes competition among e-commerce to capture potential customers, where competitive prices are a consideration for consumers to buy the goods they want. So price perception is one of the important considerations in the purchasing decision process, and most consumers evaluate value (a combination of price and quality) in a purchasing decision.

Shopping online on e-commerce has advantages and disadvantages. The advantages of shopping online on e-commerce are practical, saving time, and a large selection of items that can be purchased. While the drawbacks are the presence of several risks, because they cannot see the goods directly so that the goods cannot be tried, sometimes the goods purchased are not in line with expectations, and the delivery of old items and expensive shipping costs.

In the development of online product sales, most e-commerce companies also try to eliminate consumer doubts about e-commerce, by completing information on how to purchase, help centre, guarantee transactions and also require the seller to register and provide a true identity and deliver detailed information about the products being sold. Then a good quality of information can reduce consumers' concerns. In this case the purchase of online products quality information from e-commerce is an important factor that is able to give effect to the consideration of consumers to make purchasing decisions.

II. Theoretical Review

A. E-Commerce

Electronic commerce includes the process of buying, selling, transferring, or exchanging products, services or information through computer networks, including the internet [1] as quoted from the e-commerce book Business Technology Society states that, "E-commerce is the use of the Internet, the Web, and apps to transact business. More formally, digitally enabled commercial transactions between organizations and individuals" [2]. Can be interpreted that e-commerce is the use of the internet, web, and applications for business transactions.

More formally, commercial transactions are made possible digitally between and between organizations and individuals.

From the two definitions above it can be concluded that e-commerce is the use of the internet, the web, and applications for business transactions including the process of buying, selling, transferring, or exchanging products, services or information through computer networks, including the internet.

So this can be concluded that e-commerce is a digital platform or container for trading transactions (market place) between the seller or the company with consumers as buyers to exchange products and money in using electronic media as an intermediary, which is expected can reduce purchasing costs on the part of consumers, and marketing on the part of the seller, as well as minimize the waste of time (Cost Efficiency), so that e-commerce business can run well [3].

B. Benefits of E-Commerce

The benefits that can be achieved by implementing e-commerce [4] are:

- The company can have an international market. Business can be run without having to bump into national borders with digital technology.
- Operational costs can be reduced as little as possible Speed up processing time and reduce the risk of human error.
- Reducing the use of paper in a variety of work activities ranging from designing, producing, shipping, distribution to marketing.
- Products and services can be modified in accordance with consumer desires.
- Business can be run without knowing the time limit because it is run online through the internet which always operates every day.
- Consumers can shop around the world and compare prices by visiting different sites or by visiting a single site that displays various prices from a number of providers.

C. Price Perception

In the context of product/service marketing, in simple terms the price can be interpreted as one of the determinants of buyers determining a purchase decision on a product or service [4]. Perception is defined as the process carried out by individuals to choose, organize and interpret stimuli into meaningful and sensible images about the world [5]. Perception has a strong influence on consumers. One factor that affects consumers is the perception of price.

Price perception is related to how price information is understood entirely by consumers and gives a deep meaning to them [6]. When consumers evaluate and research the price of a product is strongly influenced by the behaviour of the consumers themselves.

Thus the assessment of the price of a product is said to be expensive, cheap or ordinary from each individual does not have to be the same, because it depends on the individual's perception that is based on the environment and individual conditions.

D. Price Perspective Aspects

When cognitive price processing occurs, consumers can make comparisons between prices set and prices or price ranges that have formed in their minds for the product. In decision making, price has two main roles [4], namely:

- The role of allocation, which is to help the buyers to decide the best way to obtain the expected benefits according to their purchasing power. Thus, the price can help buyers to decide how to allocate their purchasing power to various types of goods or services. The buyer compares the prices of the various alternatives available, then decides on the desired allocation of funds.
- The role of information, namely educating consumers about the factors of the product being sold, for example quality. This is especially useful in situations where buyers find it difficult to objectively assess product factors or benefits. A common perception is that high prices reflect high quality.

E. Dimensions of Price Perception

Price is the amount of money billed for a product or service, or the sum of all values given by customers to benefit from owning or using a product or service [7] and there are four indicators that reflect price [8], as follows:

1) Affordable prices: An assessment of the price of a product is said to be expensive, cheap or ordinary from each individual does not have to be the same, because it depends on the individual's perception that is based on the environment and individual conditions.

2) Price suitability for product quality: Consumers tend to associate prices with the level of product quality. Price is a statement of the value of a product. Value is the ratio or comparison between perception of benefits and the costs incurred to get the product.

3) Price competitiveness: Conditions of competition greatly affect the pricing policy of the company or seller. Therefore, the seller needs to know the competitive reaction that occurs in the market.

4) Price match with benefits: The perceived benefits are greater or equal to what has been incurred to get the product that was purchased.

So based on the theory above, researchers used it to be an indicator of price perception [8] namely:

- Affordability of prices.
- Price competitiveness.
- Price compatibility with product and service quality.
- Price match with benefits.

F. Risk Perception

Perception is a perspective on a matter, perception is a complex process, and often where one message is not related to another message and finally enters the consumer's brain because it understands the process of perception is very important for producers or business people to be able to, create effective communication with consumers [9]. Etymologically perception comes from the Latin perception which means to receive or take, and is a process by which a stimuli are selected, organized, and interpreted into meaningful information.

Perceived risk can be defined as the 'uncertainty faced by consumers when they are unable to see the likelihood of a purchasing decision being made [10], there are six consumer risk perceptions, namely:

- Financial risk.
- Performance risk.
- Psychological risk.
- Physiological risk.
- Social risks.
- Time risk.

G. Dimensions of Risk Perception

To be able to measure risk there are 5 (five) dimensions as follows [8]:

1) Financial risk: Financial risks are related to financial losses that must be borne by consumers when conducting business transactions. Financial risks are usually higher in online shopping systems.

2) Product risk: Product risk is related to the low quality of the product purchased. Purchasing through online media has a high enough product risk, because consumers cannot know well the raw materials used in the advertised product. Therefore, the level of product risk in online purchases is higher than conventional purchases.

3) Time risk: The risk of time is related to the sacrifice (time) required to search for products or services through online media. In addition, the risk of time is also related to the length of time the product is bought by consumers.

4) Shipping risk: Delivery risk is related to product safety when sent to the customer's address. Delivery risk is also related to customer or customer error in address.

5) Security risks: Security risks associated with the risk of misuse of consumer identity (such as credit card numbers, debit card numbers, addresses, etc.) by marketers (online businesses).

Indicators of risk perception in this study [8], namely:

- Financial Risk
- Product Risk
- Time Risk
- Risk of Sender.
- Security Risks.

H. Information Quality

Information is data that has been processed and analysed formally, in a correct and effective way, so that the results are useful in operations and management, information can also mean that the data has been processed into a form that is meaningful to the recipient and useful in making current or future decisions.

Information quality is defined as the customer's perception of the quality of information about a product or service provided by a website [11]. Availability of information not only considers product or service information, but also convenience and personalization of information to retain customers. Therefore, the success of online stores will be determined by the ability to adjust their information to meet the needs of consumers [12].

The quality of information helps consumers to compare the products they will buy, moreover, the wider and higher quality of information available in online stores, has an impact on better purchasing decisions and higher customer satisfaction [13].

I. Dimensions of Information Quality

In online shopping, it is better to present information that includes relation to existing products and services. This information should be useful and relevant in predicting the quality and usefulness of the product or service. Product and service information must be up-to-date to satisfy the needs of consumers or online shoppers. This can help buyers in making decisions, consistent and easy to understand.

The quality of information depends on three things, namely information must be accurate, timely, and relevant [14], Based on the above theory, the indicators of information quality in this study, namely:

- Accurate information
- Latest information
- Useful information

J. Buying Decision

Purchasing decisions are part of consumer behaviour consumer behaviour, namely the study of how individuals, groups, and organizations choose, buy, use, and how goods, services, ideas or experiences to satisfy their needs and desires [7].

Purchasing decision is a process of valuation and selection of various alternatives in accordance with certain interests by determining a choice that is considered the most profitable [15]. Based on the opinion of the experts above, it can be conveyed that the purchasing decision is a person's decision where he chooses one of the several alternative choices available and the integration process that combines the attitude of knowledge to evaluate two or more alternative behaviours and choose one of them.

K. Millennial Generation

Millennials (also known as Generation Y) are the demographic group after Generation X (Gen-X). There is no definite time limit for the beginning and end of this group. Experts and researchers usually use the early 1980s as the beginning of the birth of this group and the mid-1990s to the early 2000s as the end of birth. Millennials in general are children of the older Baby Boomers and Gen-X generations. Millennials are sometimes referred to as "Echo Boomers" because of the 'booming' (large increase) of birth rates in the 1980s and 1990s. Fortunately in the 20th century the trend towards smaller families in developed countries continued to develop, so the relative impact of "baby boom echo" was generally not as great as that of the post-World War II population boom.

L. Who belongs to the Millennial Generation?

Included in the Millennial Generation are young people aged 17-37 this year. Millennials themselves are considered special because this generation is very different from previous generations, especially in matters relating to technology. Millennials have their own characteristics, that is, they were born when TV, cell phones colour and the internet were introduced. So this generation is very proficient in technology.

M. Characteristics of the Millennial Generation

Millennials trust User Generated Content more than unidirectional information.

- Millennials prefer cell phones over TVs,
- Millennials must have social media Millennial,
- Began a lot of cashless transactions,
- Millennials don't like to read conventionally,
- Millennials know more about technology than their parents,
- Millennials tend to be disloyal but work effectively.

III. METHODS

A. Data Analysis Method

The data analysis method used in this study is the statistical analysis method using the Statistical Application Software Statistical Package for Social Science (SPSS) version 24. This research uses multiple linear regression method. Before testing the classical assumptions to determine whether the data used has met the terms and conditions in the regression model. The classical assumption testing includes normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test. Testing the hypothesis is done by t test and F and R2 tests. This test is conducted to determine whether or not the influence of each independent variable on the dependent variable.

B. Quantitative Analysis

This type of research is quantitative research, then carried out by quantifying research data in the form of numbers. The method of analysis of this research is to do a validity test, a reliability test on a questionnaire that has been distributed online. Then the results of the questionnaire that can be analysed with multiple linear regression method that aims to describe the phenomenon that exists.

C. Partial Test (T-test)

T test is used to test how far the influence of the independent variables used in this study individually in explaining the dependent variable partially. The basis for decision making used in the t test is if the significance value> 0.05, then the hypothesis is rejected and vice versa [16].

Independent variables or independent variables entered in the model have a joint influence on the dependent variable or the dependent variable. To test this hypothesis F statistics are used with the following decision-making criteria: Comparing the calculated F value with the F according to the table. If the calculated F value is greater than the F table value, then Ho is rejected and accepts Ha [16].

D. Determination Coefficient Test (R2)

The coefficient of determination (R2) is a tool to measure how far the model's ability to explain variations in the dependent variable. The coefficient of determination is between zero or one [16]. A small R2 value means that the ability of the independent variables to explain the variation of the dependent variable is very limited.

And conversely if a value close to 1 means that the independent variables provide almost all the information needed to predict the dependent variables.

IV. RESULTS AND DISCUSSION

A. Partial Test (T-test)

Partial testing aims to find out the significant relationship of each independent variable to the dependent variable. The way for partial test decision making (t test) is:

- If the sig value <0.05, then the hypothesis is accepted.
- If the sig value> 0.05, then the hypothesis is rejected.

TABLE I. PARTIAL HYPOTHESIS TEST RESULTS (T-TEST)

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	***Std. Error***	***Beta***		
1	(Constant)	3,141	1,140		2,757	,007
	Price perception	,350	,096	,305	3,626	,000
	Risk Perceptions	,500	,091	,478	5,490	,000
	Quality of Information	,166	,105	,117	1,582	,117
a. Dependent Variable: Purchase decision						

Based on the results of the partial test (t test) shown in Table 1 above, the effect of each independent variable (Price Perception, Risk Perception and Information Quality) on the dependent variable (Online Purchasing decision) can be seen as follows:

1) Price perception of online purchasing decisions: In this study the hypothesis formulated is H1: Price Perception influences Online Purchasing Decisions and based on the results of the partial test (t test) shown in 1, the significance value is 0.007 less than 0.05 which means that H1 is accepted. This means that partially Price Perception has a significant influence on online purchasing decisions.

2) Risk perceptions of online purchasing decisions: In this research, the hypothesis formulated is H2: Risk perception influences Online purchasing decisions and the partial test results (t test) shown in Table 1, the significance value is 0,000 less than 0.05 which means that H2 is accepted. This means that partially Risk Perception has a significant influence on Online Purchasing Decisions.

3) Quality of information on online purchasing decisions: In this study the hypothesis formulated is H3: Information Quality influences Online Purchasing Decisions, and based on the results of the partial testing (t test) shown in Table 1, the significance value is 0.117. This value is greater than 0.05 which means that H3 is rejected. This means that partially Information Quality does not have a significant influence on Online Purchasing Decisions.

B. *Simultaneous Test (F Test)*

Simultaneous testing aims to see whether or not the influence of independent variables together on the dependent variable and to test whether the model used is fixed or not. In this study the hypotheses formulated are:

- H4: E-filling, e-billing and e-invoicing simultaneously affect the compliance of corporate taxpayers at the Jakarta Sunter Tax Office.

The way to make a decision in accepting or rejecting a hypothesis is formulated as follows:

- If the value of sig. <0.05, then the hypothesis is accepted
- If the value of sig. > 0.05, then the hypothesis is rejected.

The results of simultaneous testing (F test) can be seen in Table 2 below:

TABLE II. SIMULTANEOUS TEST RESULTS (TEST F)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	236,171	3	78,724	46,482	,000[b]
	Residual	162,589	96	1,694		
	Total	398,760	99			

a. Dependent Variable: Buying decision

b. Predictors: (Constant), Information Quality, Price Perception, Risk Perception

Based on the results of the simultaneous testing (F test) shown in Table 1 the significance value is 0,000. This value is smaller than 0.05 which means that H4 is accepted. Thus, the independent variable (Price Perception, Risk Perception, and Quantity of Information) simultaneously has a significant effect on the dependent variable (Online Purchasing decision). The results of this study concur with previous research that has been conducted which states that simultaneously price perception, risk perception and information quality significantly influence online purchasing decisions.

C. *Coefficient of Determination*

The results of testing the correlation coefficient and the coefficient of determination (R2) can be seen in table 3 below:

TABLE III. DETERMINATION COEFFICIENT TEST RESULTS (R2) MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,770a	,592	,580	1,301

a. Predictors: (Constant), Information Quality, Price Perception, Risk Perception

Based on Table III Correlation Coefficient and Multiple Determination Results obtained correlation coefficient (R) value of 0.770, the relationship that the perception of price, risk perception and quality of information with online purchasing decisions is very strong and direct (positive).

Based on the test results of the coefficient of determination shown in Table 3 the value of the coefficient of determination (R2) is 0.592 or equal to 59.2% this shows that there is a correlation between the independent variables and the dependent variable, but does not have a large effect because it is still far from the number one . This value indicates that the percentage of the contribution of the independent variable (price perception, risk perception and information quality) to the dependent variable (online purchasing decisions) is 59.2%. While the remaining 40.8% is explained by other variables not discussed in this study.

V. CONCLUSION

Based on the results of the discussion and data processing, it can be concluded as follows:

- Partial testing of perceived real price influences significantly on online purchasing decisions.
- Risk perception also influences significantly on online purchasing decisions
- The quality of information apparently does not affect the decision to make purchases online
- Tests conducted together with online purchasing decisions are influenced by all three variables in this study.

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