IMPACT OF ONLINE CUSTOMER REVIEWS AND RATINGS ON ELECTRONIC PRODUCT PURCHASES: A TOKOPEDIA PLATFORM SURVEY AMONG PRODUCTIVE AGE CONSUMERS IN JAMBI CITY

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Abstract

This research aims to elucidate the impact of Online Customer Reviews and Online Customer Ratings on the decision-making process for online purchases on the E-Commerce platform Tokopedia. The study focuses on residents of Jambi City who are of productive age. A purposive sampling method was employed to select 100 respondents as the sample size for this study. Data collection was conducted through a survey questionnaire, and this primary data was analysed using multiple linear regression techniques, utilising the SPSS software for Windows. The findings of this analysis reveal that Online Customer Reviews positively influence purchasing decisions. In contrast, Online Customer Ratings were found to have no significant effect on these decisions. This suggests that while the content of customer reviews plays a crucial role in shaping consumer behaviour and choices on the Tokopedia platform, the numerical ratings assigned by customers do not significantly sway purchasing decisions. These results offer valuable insights into consumer behaviour in the digital marketplace, particularly in the context of e-commerce platforms like Tokopedia, and can inform strategies for online retailers and marketers in optimising customer engagement and sales conversion.

Keywords: Online Customer Review, Online Customer Rating, Purchase Decision, E-commerce, Tokopedia

Introduction

The internet has grown very rapidly in people's lives. Its use is not limited to accessing and obtaining information only, but now it is also used to fulfill various needs. Previously, people were accustomed to shopping offline but now people are getting used to shopping online, this has led to a rapid increase in the e-commerce market significantly (Ningsih, 2019).

Electronic commerce (e-commerce) is a form of mediation between organizations and all third parties whose focus is on financial and informational transactions derived from their transaction activities. So the involvement that occurs in e-commerce is not only for online sales transactions. But also in the non-financial transaction part such as paying attention to user interaction using customer service. Marketplace is usually explained through a catalog, the description of the image in the catalog usually explains the specifications of the goods and is listed below the image (Safitri et al., 2022)

Consumer purchasing decisions arise due to several factors, one of the factors that can influence the emergence of purchase intentions is online customer reviews and online customer ratings.

Because more and more consumers are using the internet as a means to find information before purchasing a product or service. One source of information that is widely used by consumers is online customer reviews or reviews from consumers who have used the product or service.

Research shows that online customer reviews can influence consumer purchasing decisions. A study by Paget (2023) found that 91% of consumers read online customer reviews to get information about local businesses before making a purchase. In addition, 84% of consumers also trust online customer reviews on par with recommendations from friends or family.

According to Ardianti & Widiartanto (2019) A rating is a customer's opinion on a certain scale. A popular rating scheme for rating on Tokopedia is by giving stars. The more stars you give, the better the seller's rating.

Literature Review
Technology Acceptance Model

TAM (Technology Acceptance Model) is a model built to analyze and understand, factors affecting the acceptance of a technology use. This model was introduced by Fred Davis in 1986. TAM aims to explain and predict user acceptance of a technology, TAM is a model that is considered very influential and is generally used to explain individual acceptance of technology systems (Fahlevi & Dewi, 2019).

Online Customer Review

Online customer reviews are reviews or opinions given by customers on products or services provided by a company or organization on online platforms such as websites, social media, discussion forums, and so on. These online customer reviews can provide valuable information for potential consumers in making their

purchasing decisions. What's more, online customer reviews can also provide feedback to companies about customer satisfaction and problems that need to be fixed.

In the research conducted by Mulyati & Gesitera (2020) It was found that online customer reviews have a significant impact on consumer purchase intention on products and services. This study also shows that consumer trust in online customer reviews affects their impact on purchase intention. According to Rasyid et al., 2023 There are five points that are indicators in customer reviews, namely: (1) Percivied Usefulness; (2) Argument Quality; (3) Volume of Review; (4) Source Credibility; (5) Valance.

Online Customer Rating

A rating is a customer's opinion on a certain scale. A popular rating scheme for ratings in online stores is to give stars. The more stars you give, the better the seller's rating (Lackermair et al., 2013). The online rating feature found on the product page in an e-commerce platform is one way for consumers to provide an assessment regarding the quality of a product. The number of stars obtained by a particular product can be associated with the quality of the product in question (Auliya et al., 2017). According to Rasyid et al., 2023 There are three points that are indicators in customer rating, namely: (1) Credible; (2) Expertise; (3) Fun.
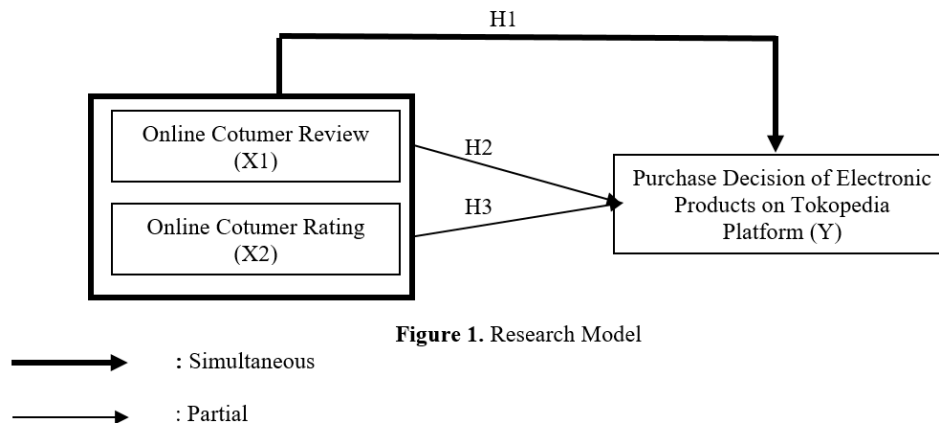
Purchase Decision

Purchasing Decision is a process of consumer behavior that begins with how a person chooses goods or services and then buys them and uses them to get consumer wants and needs (Damayanti Geraldine & Anisa, 2022).

The consumer purchasing decision process put forward Kotler (2009) consists of five stages carried out by a consumer before arriving at a purchase decision and then post-purchase. This shows that the buying process carried out by consumers begins long before the act of buying is carried out and has consequences after the purchase is made. These stages are: (1) Need Recognition; (2) Information Search; (3) Alternative Evaluation; (4) Purchase Decision; (5) Post-Purchase Behavior.

Indicators of purchasing decisions according to (Kotler, 2009) explain that consumer decisions to purchase a product include the following six sub-decisions: (1) Product Choice; (2) Brand Choice; (3) Distributor Choice; (4) Purchase Time; (5) Purchase Amount.

Based on the explanation above, the framework of thinking can be described as follows:

Figure 1. Research Model

The hypotheses formulated in this study are:

H1 : The influence of online customer reviews and online customer ratings on purchasing decisions
H2 : The influence of online customer reviews on purchasing decisions
H3 : The influence of online customer ratings on purchasing decisions

Methods

In this thesis research, the type of research used is causal research with a quantitative approach, which is one type of research that aims to explain the effect of changes in the value of a variable on changes in the value of other variables. This study consists of two variables, namely the independent variable which consists of online customer reviews (X1) and online customer ratings (X2). The dependent variable (Y) is the purchase decision. The data used is primary data which comes from respondents' responses to the questionnaire given.

Population and Sample

The population used in this study comes from the 2020 Jambi city BPS data regarding the number of people who are in productive age, totaling 421,275 people. The reason for making people of productive age is because people who are of productive age are considered to have sufficient finances in purchasing electronic products. Based on this population, a sample of 100 respondents was determined using the Slovin formula. The method of determining the sample is purposive sampling.

Data Analysis Method

Data analysis was carried out with descriptive quantitative using the SPSS version 25 analysis method with multiple regression analysis methods and conducting validity, reliability tests so that the results were feasible to generalize.

Result and Discusssion

Respondent Data

Based on the gender of the respondents, 85 people (63.4%) were female and 49 people (36.6%) were male. Based on the age of the respondents, namely 20-29 years old, namely 54 people (40.3%), 30-39 years old as many as 46 people (34.3%), 40-49 years old as many as 18 people (13.4%), 15-19 years old as many as 14 people (10.4) and the age of the least number of respondents is age> 50 years, namely 2 people (1.5%). Based on the respondent's income, namely Rp1,500,000 - Rp2,000,000, there were 36 people (26.9%), >Rp2,500,000, 30 people (22.4%), Rp1,000,000 - Rp1,500,000, 29 people (21.6%), Rp2,000,000 - Rp2,500,000, 24 people (17.9%) and Rp500,000 - Rp1,000,000, totaling 15 people (11.2%).

Validity test

Testing the validity in this study using the product moment correlation method with computer assistance through SPSS 25 for Windows. The correlation value obtained (rcount) is compared with the product moment correlatioin value to determine whether the correlation value obtained is significant or not. If rcount> table, it is concluded that the instrument is declared valid.

Tabel 1 Validity Test Results for Online Customer Review Indicators (X_1)

Indicator	Significant Value Comparison			
	Sig	Sig level.	Description	Validity
X1.1	0,000		Sig. <0,05	Valid
X1.2	0,000		Sig. <0,05	Valid
X1.3	0,000	0,05	Sig. <0,05	Valid
X1.4	0,000		Sig. <0,05	Valid
X1.5	0,000		Sig. <0,05	Valid

Source: SPSS Output data processed, 2023

Tabel 2 Validity Test Results for Online Customer Rating Indicators (X_2)

Indicator	Significant Value Comparison			
	Sig	Sig level.	Description	Validity
X2.1	0,000		Sig. <0,05	Valid
X2.2	0,000	0,05	Sig. <0,05	Valid
X2.3	0,000		Sig. <0,05	Valid

Source: SPSS Output data processed, 2023

Tabel 3 Validity Test Results on Purchasing Decision Indicators (Y)

Indicator	Significant Value Comparison			
	Sig	Sig level.	Description	Validity
Y.1	0,000		Sig. <0,05	Valid
Y.2	0,000		Sig. <0,05	Valid
Y.3	0,000	0,05	Sig. <0,05	Valid
Y.4	0,000		Sig. <0,05	Valid
Y.5	0,000		Sig. <0,05	Valid

Source: SPSS Output data processed, 2023

Reliability Test

Reliability test is used to measure the consistency of research variables. To measure the reliability test is done by using the statistical test Cronbach Alpha (a). The value of the coefficient a is reliable if the value is > 0.6. The results of the reliability test in this study can be seen in the following table:

Tabel 4 Reliability test

Variables	Question Item	Cronbach's Alpha	Description
Online Customer Review (X1)	5	0,619	Reliable
Online Customer Rating (X2)	3	0,870	Reliable
Purchase Decision	5	0,622	Reliable

Source: SPSS Output data processed, 2023

The results of testing the reliability of the research questionnaire resulted in a Cronbach's alpha number greater than 0.60. These results can be stated that all statements from the online customer review, online customer rating, and purchase decision variables have their reliability tested so that they are declared reliable.

Multiple Linear Regression Test

Multiple linear regression analysis was used in this study with the aim of proving the hypothesis regarding the effect of Online Customer Review and Online Customer Rating on Purchasing Decisions. Statistical calculations in multiple linear regression analysis used in this study are using the SPSS computer program. The results of data processing using the SPSS program in full are contained in the attachment and are further explained below:

Tabel 5 Multiple Linear Regression Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.706	.380		7.117	.000
	X1	.408	.080	.459	5.076	.000
	X2	-.028	.048	-.052	-.580	.563

a. Dependent Variable: Y

Source: SPSS Output data processed, 2023

Based on table 5 above, the regression equation obtained is as follows:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$

$Y = 2{,}706 + 0{,}408 X1 - 0{,}028 X2 + e$

The multiple linear regression equation above means that:
1. The constant value is positive, which is 2.706. If the online customer review and online customer rating variables are equal to zero, then the purchase decision (Y) is equal to 2,706.
2. The regression coefficient value for the online customer review variable is positive, namely 0.408. This means that online customer reviews can improve purchasing decisions (Y).
3. The regression coefficient value for the online customer rating variable is negative, namely -0.028. This means that online customer rating is not able to improve purchasing decisions (Y).

Hypothesis testing

F Test (Simultaneous)

This F test is used to prove that there is a significant effect between Online Customer Review and Online Customer Rating on Keputusan Pembelian. Decision making criteria:
1. Ho is accepted if F count < F table at = 5% and the significance of F count > 0.05
2. Ha is accepted if F count > F table at = 5% and the significance of F count < 0.05.

Tabel 6 Simultaneous Test (F)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.303	2	1.651	12.915	.000[b]
	Residual	12.403	97	.128		
	Total	15.706	99			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

Source: SPSS Output data processed, 2023

Based on table 6 above, the results of the f test can be concluded that the Fcount value is 12,915 with a significance of 0.000 <0.05 (α = 5%). then according to the basis for decision making in the f test it can be concluded that the hypothesis is accepted or in other words the Online Customer Review (X1) and Online Customer Rating (X2) variables simultaneously affect the decision to purchase electronic products on the Tokopedia platform (H1 accepted).

T test (Partial)

The t-test was used to determine how far the influence of one independent variable (Online Customer Review X1 and Online Customer Rating X2) in explaining the variation of the dependent variable (Keputusan Pembelian) separately or together. The criteria used are as follows:
1. If t count > t table or sig. < a (0.05), then Ho is rejected. Ha is accepted.
2. If t count < t table or sig. > a (0.05), then Ho is accepted Ha is rejected.

Based on the results of processing with the SPSS program, the results of the t test are obtained, the results of which are summarized in the table as follows:

Tabel 7 T Test Results

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.706	.380		7.117	.000
	X1	.408	.080	.459	5.076	.000
	X2	-.028	.048	-.052	-.580	.563

a. Dependent Variable: Y

Source: SPSS Output data processed, 2023

Table 7 above shows that the sig value. variable online customer review (X1) 0.000 <0.05 ($\alpha = 5\%$). This means that online customer reviews have an effect on purchasing decisions (H2 accepted). sig value. variable online customer rating (X2) 0.563> 0.05 ($\alpha = 5\%$). This means that online customer rating has no effect on purchasing decisions (H3 not accepted).

Coefficient of Determination

The determination test is a test used to determine the amount in percent of the independent variable on the dependent variable (Ghozali, 2018). The determination test results in an adjusted R Square value as can be seen in table 8 as follows.

Tabel 8 Coefficient of Determination Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.459^a	.210	.194	.35758

a. Predictors: (Constant), X2, X1

Source: SPSS Output data processed, 2023

Based on the results of the determination test in table 5.10, it is known that the Adjusted R Square value is 0.194, which means that 19.4% of the purchasing decisions can be explained by the online customer review and online customer rating variables, while the remaining 80.6% (100%-19.4%) is explained by other variables not included in this study.

Discussion

The Effect of Online Customer Reviews and Online Customer Ratings on Purchasing Decisions (H1)

The results of testing the effect of online customer reviews and online customer ratings on purchasing decisions show a significance value of 0.000 <0.05 ($\alpha = 5\%$). This means that there is a significant influence of online customer reviews and online customer ratings on purchasing decisions (H1 accepted). The results of the determination test show that the Adjusted R Square value is 0.194, which means that 19.4% of the purchasing decisions can be explained by the online customer review and online customer rating variables, while the remaining 80.6% (100%-19.4%) is explained by other variables not included in this study.

Online customer reviews have a significant influence on purchasing decisions on Tokopedia because they provide direct views from previous users about certain products or services. Online customer ratings have a strong influence on purchasing decisions on Tokopedia because they provide valuable information about product quality and satisfaction from the perspective of previous customers. High ratings tend to give potential buyers confidence that the product has good performance and satisfactory service.

The Effect of Online Customer Reviews on Purchasing Decisions (H2)

The results of testing the effect of online customer reviews on purchasing decisions show that the significance value is 0.000 <0.05 ($\alpha = 5\%$). This means that online customer reviews have an effect on purchasing decisions (H2 accepted).

The results of this study explain that online customer reviews have a positive effect on purchasing decisions. Based on the observations of researchers, before prospective consumers buy electronic products on the Tokopedia platform, prospective consumers will see reviews from previous consumers to gather information from a product that they will buy. In addition, when potential consumers see many positive reviews of an item, it makes consumers more confident in the product to be purchased.

The Effect of Online Customer Rating on Purchasing Decisions (H3)

The results of testing the effect of online customer rating on purchasing decisions show that the significance value is 0.563 <0.05 ($\alpha = 5\%$). This means that online customer rating has no effect on purchasing decisions (H3 is not accepted).

The results of this study explain that online customer ratings have no effect on purchasing decisions. Based on the researcher's observations, potential customers often assume that ratings in the form of scores

and stars do not provide detailed information about the reasons behind the ratings and some people may only give low ratings without providing detailed reviews, which makes it difficult to understand the real problem.

Conclusion

Based on the research results, it is known that the variables Online Customer Review and Online Customer Rating together (simultaneously) have an effect on purchasing decisions on the Tokopedia Platform. When viewed individually (Partially), Online Customer Review affects purchasing decisions on the Tokopedia Platform and Online Customer Rating has no effect on purchasing decisions on the Tokopedia Platform.

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