

## **The Impact of Consumer Reviews and Ratings on Purchase Decisions on the Tokopedia Marketplace in Indonesia**

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### **ABSTRACT**

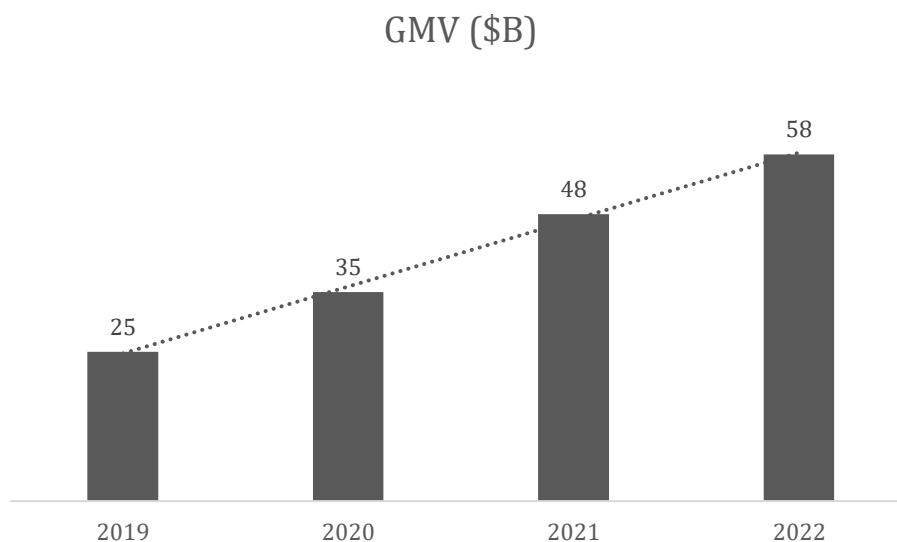
The rapid development of technology has caused a shift in consumer shopping behavior from offline to online around the world including in Indonesia, one of which is marked by the growth of e-commerce which has increased significantly. E-commerce Tokopedia is one of the largest e-commerce in Indonesia which provides a variety of features that are a source of information for consumers in determining the products that consumers will buy, one feature that is quite important is consumer reviews and ratings. The purpose of this study was to determine the effect of the variables of consumer reviews and ratings as independent variables on purchasing decisions as the dependent variable on the Tokopedia marketplace in Indonesia. This study used a survey method by distributing questionnaires to 130 respondents. The sample was taken using the purposive sampling technique, which is a sampling technique with criteria according to the researcher's determination. The analytical method used in this research is Multiple Linear Regression Analysis. The results showed that the variables of consumer reviews and judgments had a suggestive effect on the purchasing decision variable.

**Keywords:** *Consumer Reviews, Consumer Ratings, Purchasing Decisions.*

## INTRODUCTION

In the last decade, the digital transformation process has influenced the entire behavior of society to move towards digital systems. The concept of digital transformation uses new digital technology as a model for activities and transactions, leading to the emergence of industries such as e-commerce. The term e-commerce emerged in the early 1990s when commercialization on the Internet was growing rapidly. E-commerce itself is made up of two words, electronic and commerce, meaning electronic trade. E-commerce is a model of trade or transaction that takes place online. Transactions that are carried out through the sophistication of Internet-based technology, be it through the web or online shopping applications.

Based on the E-economy SEA 2023 report, the GMV (Gross Merchandise Value) of Indonesia's internet economy will grow by 49% from \$47 billion in 2020 to \$70 billion in 2021, with e-commerce as the main driver. GMV itself stands for Gross Merchandise Value or Gross Merchandise Volume, which represents the total sales value of merchandise sold through a given market during a given period. In general, the GMV formula involves calculating the selling price charged to customers and multiplying it by the number of items sold. The selling price excludes discounts and returns. Below is a graph of e-commerce GMV growth from 2019 to 2022:



**Figure 1 Indonesia E-Commerce GMV growth**

Source: E-Economy SEA 2023

From the chart above, we can see that Indonesia's GMV growth has increased significantly by 40% in 2020, 37% in 2021, and 20% in 2022. In line with the increase in GMV in 2020 and 2021, according to Bank Indonesia, there were 21 million new consumers of digital transactions from the beginning of the pandemic in 2020 to the first half of 2021, which is an indication that digital transactions are becoming increasingly popular among Indonesians.

Indonesians who are increasingly fond of shopping online represent a large market potential, so many new startups, both local and foreign, have emerged to play in this market. One of the local e-commerce startups popular with Indonesians is Tokopedia. Tokopedia is the largest and most visited marketplace. This is based on official data from the iPrice Group:

**Tabel 1 Tokopedia monthly web visitors**

<i>Ranking</i>	<i>Marketplace</i>	<i>Monthly web visitors</i>
1	Tokopedia	157.233.300
2	Shopee	132.776.700
3	Lazada	24.686.700
4	Bukalapak	23.096.700
5	Orami	19.953.300
6	Blibli	16.326.700
7	Ralali	8.883.300
8	Zalora	2.776.700
9	JD.ID	2.546.700
10	Bhinneka	2.360.000

Source: iPrice Group

The picture above shows that Tokopedia as a domestic company is the e-commerce with the most website visitors in Indonesia with 157,233,300 visitors. Tokopedia's main vision is to build an ecosystem where anyone can start and find anything, which means that Tokopedia wants to develop an application where the application builds an ecosystem of relationships between sellers and buyers who can connect wherever the sellers and buyers are.

Online sellers use shop pages to display the products they sell. Tokopedia has several levels of store membership, including:

- 1) Official Store, a membership level marked with a purple checklist symbol, is for verified stores that sell official brands and original merchandise managed directly by the brand or brand owner.
- 2) Power Merchant Pro, an exclusive program awarded only to stores that meet more stringent requirements, such as high sales and excellent consumer reviews.
- 3) Power Merchant, is a program given to stores that have been verified with a merchant ID card and meet certain conditions such as a high number of transactions and good consumer ratings.
- 4) Regular merchant, is a basic membership level for online sellers of Tokopedia without having to verify certain data.

Buyers who use E-commerce services have various kinds of considerations to then be able to make a purchase decision. The purchase decision itself is a consumer decision that is influenced by financial economics, technology, politics, culture, product, price, location, promotion, physical evidence, people, and process (Alma, 2016; 96). Furthermore, according to Kotler and Keller (2012; 188), purchasing decisions are a process of problem recognition, information search, or selection of two or more alternatives to a product. So purchasing decisions can be interpreted as a response taken by consumers which is influenced by their perceptions of price, product, promotion, and place (marketing mix) that has been implemented by the company so far. To understand how consumers make purchasing decisions, marketers must identify who makes decisions and has input into purchasing decisions.

There are major problems when consumers buy products online, when consumers buy products offline consumers can see, touch, and even use the product directly, but when consumers purchase products, online consumers cannot do this so making purchasing decisions increases risk and uncertainty. According to Turban et al (2010), these risks include:

- 1) The risk that the product ordered does not match the product image and description provided by the online seller,
- 2) The risk of the product being damaged, either due to transport damage or due to the seller's negligence,
- 3) The risk that the packaging does not correspond to the order, either in terms of color, size, or number of products ordered by the buyer, and
- 4) The last risk is the risk of fraud.

So, to minimize these risks, consumers need to gather information about the product and its distribution channels.

Marketplace has a variety of features that can be an input of information for consumers in their purchasing decisions, Customer Reviews (consumer reviews) and Customer Rating (consumer ratings), which are still part of electronic word of mouth (eWOM) one of the features that attracts a lot of attention from academics and the public as one of the most influential factors in determining purchasing decisions. Customer reviews are part of electronic word of mouth (eWOM), which refers to user-generated content posted on online sites and third-party websites. Meanwhile, customer rating is an opinion given by consumers in the form of a star scale.

Modern society has made the Internet the main source of information and this has drastically changed consumer behavior (Farki and Mulia, 2016). One of the major changes in consumer behavior is the transition from passive consumers to active and informed consumers. Tokopedia allows customers to share their opinions and experiences about goods and services with many other consumers, which is practically called consumer reviews and ratings.

Consumer reviews or customer ratings are opinions given by consumers on the information from the evaluation of a product in various aspects. With this information, consumers can get the quality of the product they are looking for from the reviews and experiences written by consumers who have purchased products from online sellers (Mo et al 2015). On the other

hand, a customer rating or customer assessment is the same as a review, but the opinion given by the consumer is in the form of a determined scale, usually the rating applied by online stores is in the form of stars, with more stars indicating a better value (Lackermair, 2013).

According to Phulpoto (2019), there are findings that detailed reviews have a more positive influence on purchase decisions compared to reviews that are only one line or two words. Even deeper, according to Yayli and Bayram (2012) in their research, which states that reviews are considered an important factor influencing purchase decisions, and the number of reviews has a significant impact on purchase decisions. Furthermore, according to Moe and Schweidel (2012), who linked reviews to customer decision-making. They found that customer ratings affect purchasing decisions before deciding to buy a product, depending on how often the rating or review is provided by the customer. In other words, the more people who provide ratings, the greater the influence on purchase decisions.

Contrary to the research by Mo et al. (2015) there are four factors out of nine factors in the study that are not significant in purchase decisions, namely moderate reviews, negative reviews, service ratings, and logistics ratings. This is supported by the related research conducted by Farki and Mulia (2016) with the results of the study that the review and rating variables are proven to have a positive impact on customers' purchase interest in online marketplaces in Indonesia, but four out of the seven research hypotheses are not significant or the p-value is above 0.05, including reviews on trust, ratings on trust, ratings on trust, and ratings on purchase interest. Furthermore, according to El-said (2020), the results of the study show that negative reviews have a strong influence on hotel booking interest, but on the other hand, positive reviews do not affect hotel booking interest.

## **LITERATURES REVIEW**

Marketing management is the art and science of selecting target markets and reaching, retaining, and growing consumers by creating, delivering, and communicating superior customer value (Kotler and Keller, 2012: 5). Tjiptono (2016: 63) defines marketing management as a business approach that prepares, determines, and distributes products, services, and ideas to meet the needs of target markets. Marketing is the process of identifying, creating, and communicating value to maintain satisfying customer relationships and maximize company profits (Hasan, 2013: 4). The importance of marketing management as a science applied to a company to stay alive is concluded through the process of planning, implementing, and controlling programs to create marketing concepts, as explained by several experts. Marketing management supervises the marketing of products and can adapt to changing market conditions through careful management techniques.

Kotler and Keller (2012: 460) define e-commerce as the use of websites to transact or facilitate the sale of products and services online. This includes technologies such as mobile commerce, electronic funds transfer, supply chain management, internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems (Kütz, 2016: 16). E-commerce services for consumers offer various features, including buyer information input and seller evaluation. This evaluation includes consumer reviews and ratings.

Reviews are a form of electronic word of mouth (eWOM), which is a direct opinion from someone rather than an advertisement (Farki and Mulia, 2016). Online reviews are consumer-

generated evaluation information about products and services posted on third-party websites and retailers (Mudambi and Schuff, in Mo et al., 2015). Customer ratings are expressed through star symbols on the service provider's web or application. They are a part of reviews but should be marked as subjective evaluations. Mo et al. (2015) define store reputation as the evaluation of content and star ratings given by consumers after purchase. The assessment is typically represented by stars, with a higher number of stars indicating a higher value. This value is based on factors such as quality, price, service, delivery time, and more. But according to Betsch et al. (in Phupoto, 2019), product ratings lose their influence on actual decisions in the absence of well-written reviews.

Kotler and Keller (2012: 188) state that purchase decisions involve problem recognition, information search, and selection of two or more alternatives from a product. Consumers go through several stages before making a purchase decision on a product. These stages include:

- 1) Need Recognition, which is the process by which consumers recognize needs or problems.
- 2) Information Search, which involves finding as much information as possible related to the desired needs. After experiencing a need, consumers tend to seek more information, often turning to those who are more knowledgeable about the product.
- 3) This is followed by alternative evaluation, which is influenced by beliefs and attitudes that ultimately impact purchasing behavior. Beliefs refer to a person's thoughts about a product or brand that can influence their decision to make a purchase. The second aspect is attitude, which involves subjective evaluations, emotional feelings, and a tendency to act favorably or unfavorably.
- 4) In a purchase scenario, consumers typically make several sub-decisions, such as choosing a brand, supplier, quantity, time of implementation, and payment method.
- 5) After making a purchase, consumers tend to seek out information that supports their decision, which is known as post-purchase behavior.

## FRAMEWORK OF THINKING

The frame of mind as follows:

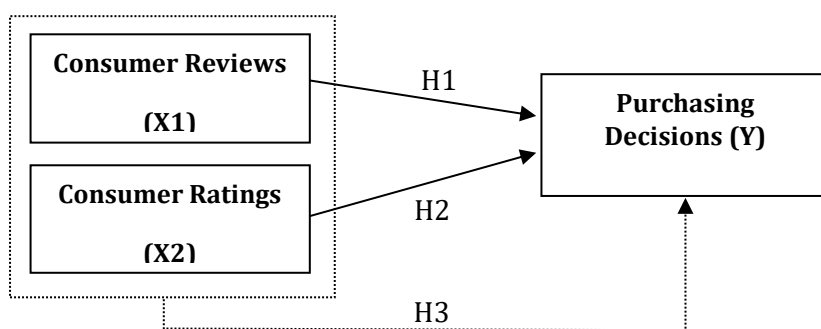


Figure 2 The Frame of Mind

## HYPOTHESIS

The hypothesis of this research is:

- H1: Consumer reviews affect purchasing decisions on the Tokopedia Marketplace in Indonesia.  
 H2: Consumer Ratings affect purchasing decisions on the Tokopedia Marketplace in Indonesia.

### H3: Consumer Reviews and Ratings affect purchasing decisions on the Tokopedia Marketplace in Indonesia

## **METHODS**

Research methods provide a step-by-step approach to obtaining the necessary information to develop and solve problems in a study. Quantitative data is the type of data used by researchers in this research. Quantitative research is a process of discovering knowledge that uses numerical data to analyze information (Panjaitan and Ahmad, 2017; 10). The research object refers to an attribute, characteristic, or value of people, objects, or activities that exhibit certain variations. Researchers use these variations to study and draw conclusions (Sugiyono, 2013: 20). In this study, the research objects are consumer ratings and reviews as independent variables (variable X), and purchase decisions as the dependent variable (variable Y). The respondents in this study were users of the Tokopedia application in Indonesia.

Sugiyono (2013: 119) defines population as a general area of study that comprises objects or subjects with specific qualities and characteristics, which researchers examine to draw conclusions. In this study, the population consists of all users of the Tokopedia application in Indonesia. The sample is a subset of the population that is observed and considered to accurately represent the characteristics of the population. The sample is selected from a defined population of all units or elements to be studied. Non-probability sampling is used with a purposive sampling technique, which involves sample selection based on research objectives and data collection decisions (Digdowiseiso, 2017: 81).

A validity test is used to determine the questionnaire's validity. A questionnaire is considered valid if it can measure what it intends to measure (Ghozali, 2016: 52-53). Confirmatory Factor Analysis (CFA) will be used as the testing technique. To measure the level of intercorrelation between variables, factor analysis will be conducted using the Kaiser Meyer Olkin Measure of Sampling Adequacy (KMO MSA). The analysis process can proceed if the KMO MSA value is greater than 0.5. To determine the validity of a questionnaire item, it is necessary to ensure that the factor loading value is greater than 0.5. Any factor loading value less than 0.5 and cross-loading must be removed until there are no more factor loading values less than 0.5 (Ghozali, 2016: 378). In this research, the reliability of the instrument was tested using the Cronbach Alpha formula because the research instrument is in the form of a questionnaire with a multilevel scale.

This study aims to determine the effect of the independent variables, reviews, and consumer ratings, on the dependent variable, purchasing decisions, using multiple linear regression analysis. Hypothesis testing will be conducted using partial tests (T-tests) and simultaneous test (F-test).

## **RESULTS**

### **Validity Test**

Respondents are users of the Tokopedia application and web who have used the application to decide to buy. Table 3 below shows the results of the validity test:

**Tabel 2 Validity test**

<b>Variable</b>	<b>Statement Items</b>	<b>KMO-MSA</b>	<b>Loading Factor</b>	<b>Anti-Image Correlation</b>	<b>Description (&gt;0,5=valid)</b>
Consumer reviews (X1)	X1.1	0,750	0,686	0,801	Valid
	X1.2		0,659	0,780	Valid
	X1.3		0,653	0,599	Valid
	X1.4		0,685	0,611	Valid
	X1.5		0,551	0,797	Valid
	X1.6		0,549	0,850	Valid
	X1.7		0,561	0,843	Valid
	X1.8		0,574	0,899	Valid
	X1.9		0,640	0,891	Valid
	X1.10		0,501	0,870	Valid
Consumer Ratings (X2)	X2.1	0,719	0,676	0,790	Valid
	X2.2		0,540	0,714	Valid
	X2.3		0,739	0,840	Valid
	X2.4		0,617	0,839	Valid
	X2.5		0,839	0,657	Valid
	X2.6		0,806	0,639	Valid
Purchasing Decisions (Y)	Y.1	0,734	0,800	0,794	Valid
	Y.2		0,593	0,649	Valid
	Y.3		0,502	0,871	Valid
	Y.4		0,562	0,633	Valid
	Y.5		0,860	0,717	Valid
	Y.6		0,736	0,692	Valid
	Y.7		0,594	0,866	Valid
	Y.8		0,525	0,882	Valid
	Y.9		0,711	0,679	Valid
	Y.10		0,832	0,789	Valid

From Table 2 above it can be seen that the statement items of the consumer evaluation variable with a total of 10 statement items, the consumer ratings with a total of 6 statement items and the purchase decision variable with a total of 10 statement items as a whole have a KMO-MSA > 0.50, so that factor analysis can be performed, with an anti-image correlation value > 0.50, the MSA assumption is met, and the loading factor value > 0.50, so that it can be concluded that the data obtained from the questionnaire as a whole can be declared valid.

### Reliability Test

The results of the reliability test for each of the variables are given below:

**Tabel 3 Reliability test**

<b>No.</b>	<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>Descriptions</b>
1	Consumer reviews (X1)	0,807	Reliable



2	Consumer Ratings (X2)	0,794	Reliable
3	Purchasing Decisions (Y)	0,865	Reliable

Source: Data processed with SPSS version 25

The reliability test results above show that all the variables have an alpha coefficient that is quite large, over 0.700, so it can be said that all the concepts measuring each variable from the questionnaire are reliable, so that from now on the items of each variable concept are suitable for use as measuring instruments.

## Multiple Linear Regression Test

**Tabel 4 Multiple linear regression test**

		Coefficients <sup>a</sup>			
		Unstandardized Coefficients		Standardized Coefficients	
Model		B	Std. Error	Beta	t
1	(Constant)	1,741	,294		5,931
	Consumer Reviews	,400	,101	,397	3,957
	Consumer Ratings	,202	,091	,224	2,227

a. Dependent Variable: Rata\_Y

Source: Data processed with SPSS version 25

Based on Table 2, the output values are entered into the following multiple linear regression equation:

$$Y = 1,741 + 0,397 X_1 + 0,224 X_2$$

From the above equations and discussions, it can be used as a reference to be interpreted as follows:

- a = a value of 1.741 indicates that if the variable X (reviews and consumer ratings) has a value of 0, then the online purchase decision is 1.741.
- b1 = a value of 0.397 indicates that each addition of one unit variation in the review factor in an online store will encourage or increase online purchase decisions in the Tokopedia marketplace by 0.397 units, assuming that the other variables remain the same.
- b2 = a value of 0.224 indicates that each additional one-unit variation in the consumer evaluation factor in an online store will encourage or increase online purchase decisions on the Tokopedia Marketplace by 0.224 one-unit, assuming that the other variables remain constant.

### Partial test analysis results (T-test)

Based on Table 4.10, which tests the hypothesis of the consumer review variable (X1), a significance value of  $0.000 < 0.05$  is obtained. This means that H1 is accepted, and there is a significant effect of the consumer evaluation variable (X1) on purchase decisions (Y). Then it is known that the consumer evaluation variable (X2) has obtained a significance value of  $0.028 < 0.05$ . This means that H2 is accepted, and there is a significant effect of the consumer evaluation variable on purchase decisions (Y).

### Simultaneous test analysis results (F-test)

**Tabel 5 Simultaneous test analysis results (F-test)**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	678,902	2	339,451	31,396	,000 <sup>b</sup>
	Residual	1373,105	127	10,812		
	Total	2052,008	129			

a. Dependent Variable: Total.Y

b. Predictors: (Constant), Total.X2, Total.X1

Source: Data processed with SPSS version 25

Based on Table 4.10, which tests the hypothesis that the variables Consumer Reviews (X1) and Consumer Ratings (X2) simultaneously have a significant effect on purchase decisions (Y), the F-significance value is 0.000, i.e.  $< 0.05$ . Then H0 is rejected and H3 is accepted, so there is a simultaneous significant effect of the consumer reviews and ratings variables on purchase decisions. The magnitude of the influence of the consumer reviews and ratings variable on purchase decisions in the Tokopedia marketplace can be seen from the coefficient of determination ( $R^2$ ).

**Tabel 6 Coefficient of Determination ( $R^2$ )**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,575 <sup>a</sup>	,331	,320	3,28814

a. Predictors: (Constant), Total.X2, Total.X1

Source: Data processed with SPSS version 25

Table 4.12 shows that reviews (X1) and consumer evaluations (X2) have an impact of 33.1% on purchase decisions (Y), while the rest is influenced by other variables outside this study.

## DISCUSSION

### **The effect of consumer reviews on purchase decisions through Tokopedia in Indonesia**

Based on data processing and partial test (t-test) using SPSS version 25, the significance is 0.000 (sig = 0.000 <0.05) and the regression coefficient value is 0.397. This shows that consumer reviews on Tokopedia are strongly considered by consumers before making a purchase decision. Supported by a statement item based on the highest score value, namely "Consumer reviews on Tokopedia provide correct information", this further reinforces that consumer reviews are correct information and influence purchase decision choices.

Consistent with the findings of Almana and Mirza (2013), the results of this study indicate that reviews are an important factor in helping consumers in Saudi Arabia make purchasing decisions. More than 80% of consumers stated that they read online reviews before making an online purchase. However, in contrast to the research conducted by El-said (2020), the results of the study show that not all reviews have an impact on hotel booking interest, only negative reviews have a strong impact on hotel booking interest, but otherwise positive reviews have no impact on hotel booking interest.

### **The effect of consumer reviews on purchase decisions through Tokopedia in Indonesia**

Based on data processing and partial test (t-test) using SPSS version 25, the significance is 0.028 (sig = 0.028 <0.05) and the regression coefficient value is 0.224. This shows that consumer evaluation (rating) has a significant influence on consumer purchase decisions. Reinforced by the statement item based on the highest value score, namely "A good star rating encourages me to buy a product", the influence of consumer ratings on consumer purchase decisions is further clarified.

In line with Moe and Schweidel's (2012) research, the results of their research found that customer ratings have an impact on purchase decisions before deciding to buy a product, depending on how often the rating or review is provided by the customer. In other words, the more people who provide reviews, the greater the influence on purchase decisions. This is in contrast to the study conducted by Mo et al. (2015), who found that out of nine factors in their study, four factors are not significant for purchasing decisions, namely moderate ratings, negative ratings, service ratings and logistics ratings.

### **The effect of reviews and consumer ratings on purchase decisions through Tokopedia in Indonesia**

Based on data processing and simultaneous test (F-test) using SPSS version 25, the significance is 0.000 (sig = 0.000 <0.05). Thus, it can be seen that there is a simultaneous influence between the variable reviews and consumer judgments on purchase decisions. Supported by the statement item based on the highest score of the purchase decision variable, namely 'I decided not to buy the product after reading negative reviews and ratings', this strengthens the evidence that consumers strongly consider consumer reviews and ratings before deciding which products and from which stores they will buy. In line with the research conducted by Latief et al. (2020) that online customer reviews and ratings simultaneously have a positive effect on purchasing decisions for domestic products on Sociolla with a significance of 0.00 <0.05, which means that the hypothesis is accepted so that the two variables simultaneously have a significant effect on purchasing decisions. However, this is different from the research conducted by Farki and Mulia (2016), where the results show that four of the seven research hypotheses are not significant or

the p-value is greater than 0.05, including reviews on trust, ratings on trust, reviews-evaluations on trust, and reviews-evaluations on purchase intention.

## CONCLUSION

Based on the results of the research and discussion conducted on the influence of reviews and consumer ratings on purchase decisions through Tokopedia in Indonesia, it can be concluded that:

1. The consumer review variable (X1) has a partially positive and significant effect on purchase decisions.
2. The consumer rating variable (X2) has a partially positive and significant effect on purchase decisions.
3. Both the consumer review variable (X1) and the consumer rating variable (X2) have a positive and significant effect on purchase decisions.

Based on the conclusions drawn from the research, several suggestions are made, which can be used as input for companies and as references for further research. This research has shown that consumers make purchasing decisions based on positive reviews and ratings and decide not to buy products that have negative reviews and ratings, so Tokopedia companies need to provide certain rewards that are more than just points for online sellers with positive reviews and ratings from consumers so that sellers will maintain the quality of their products and services. As well as giving warnings or even sanctions to online sellers who receive negative average reviews and ratings from consumers to improve the quality of their products and services. This can also be an effort to increase positive consumer reviews and ratings while minimizing negative consumer reviews and ratings.

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