

# Effects of Product Quality and Price on the Purchase Decision in Shopee Marketplace (A Case Study at Department of Business Administration, Politeknik Negeri Medan)

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## Abstract

*Business world in the digital era is developing rapidly today which causes business development increasingly to lead to intense competition. Technological advances make it possible to carry out business relationships through a technological device known as internet. This business activity that utilizes the internet is known as a marketplace. The research entitled "Effects of Product Quality and Price on the Purchase Decision in the Shopee Marketplace" is the result of a quantitative research aiming at answering the questions about the effects of product quality and price on the purchase decision in Shopee Marketplace. The research employs quantitative research method. The samples are taken by using simple random sampling technique. The data are collected by distributing questionnaires and analyzed by using multiple linear regression analysis. Based on the results of the partial test statistical calculations, it is concluded that, partially, product quality has some effects on the purchase decision in Shopee Marketplace. It is proved that product quality and price, offered by Shopee marketplace meet the consumers' expectation, and, especially the very reasonable price compared with the other marketplaces as their competitors.*

## Keywords

product quality; price;  
purchase decision



## I. Introduction

Business development in the digital era today grows rapidly which causes it to face tight competition while competitor is very common in a business. Consequently, producers have to think hard to win any business competition. Technological advancement makes it possible to carry out business relationship through technological device which is called internet. Business activity utilizing internet is called marketplace.

Marketplace is a website or online application which facilitates the process of buying and selling from various stores and has nearly the same concept as traditional market. Competition among players in the e-commerce industry in Indonesia is very tight with more than 47 types of e-commerce in Indonesia which generally consists of two business models. One of the marketplaces which connects sellers and buyers are Tokopedia, Shopee, and Bukalapak. Another model is an inventory based-commerce which provides its stock directly. Today, there are three types of e-commerce which control Indonesian market – Tokopedia, Shopee, and Bukalapak, followed with other platforms such as Lazada, Blibli, JD.ID.

Marketplace competition in Indonesia is very tight with appearance of a lot of well-known marketplaces. Shopee is one of them which precedes the big-five positions in

Indonesia. The increase in selling and active buyers in Shopee indicates the existence of the behavior of consumers' purchase decision through Shopee marketplace. Purchase decision is the last step of a consumer's transaction with a producer. Kotler and Armstrong (2014) point out that purchase decision is the stage in the process of buying by a buyer who seriously wants to buy.

This research is motivated by the differences found in the result of the research conducted by Melly, et.al. (2013) in the journal which states that the product quality does not have any significant effects on purchase decision. However, it is inversely proportional to Sarini Kodu's research (2013) in the journal which states that product quality has significant effects on buying decision.

Based on the explanation above, the researcher decides to use the variable of product quality and the variable of price to reveal purchase decision. Product quality in Shopee marketplace is selected it is indicated that several stores selling their products in Shopee marketplace have dissatisfying product quality which is not in accordance with what is written in the product description.

## **II. Review of Literature**

### **2.1 Product Quality**

According to Kotler and Armstrong (2014: 11), product quality is the capacity of a product to display its function, including the whole durability, reliability, accuracy, facility to operate, product reparation, and other product attributes.

Based on the meaning of product quality, it has to be the main priority for a company when it wants its product to be able to compete in the market. A company should satisfy its consumers and add their numbers.

### **2.2 Indicators of Product Quality**

Tjiptono (2016:134) mentions some indicators of product quality as follows:

1. Correspondence of a product with what has been expected;
2. Correspondence with specification;
3. Product Competitiveness;
4. Reliability;
5. Supplementary Specialty.

### **2.3 Price**

According to Kotler and Armstrong (2013: 151) a price is an amount of money place a burden on a product or service, or a number of values changed by a consumer on benefits since he owns or uses the product or the service.

Based on the explanation above, it is found that a price is an amount of money asked to get a product or service. Historically, a price has become the main factor which affects a person's decision to buy. Pricing is the most important and complex part of marketing management. In the one hand, pricing is a strategic element which is critical and important in marketing mix since it explains perceptions of quality; therefore, it is an important contributor in positioning a product.

## 2.4 Indicators of Price

Tjiptono (2016: 226) points out that there are some indicators of price as follows:

1. Price competitiveness;
2. Price affordability;
3. Price guarantee;
4. Correspondence between price and benefits;
5. Correspondence between price and product quality.

## 2.5 Purchase Decision

Tjiptono (2016: 184) points out that a process when a consumer knows his problems, he will search for information about a certain product or brand and evaluate the alternatives respectively in order to solve his problems which lead to purchase decision.

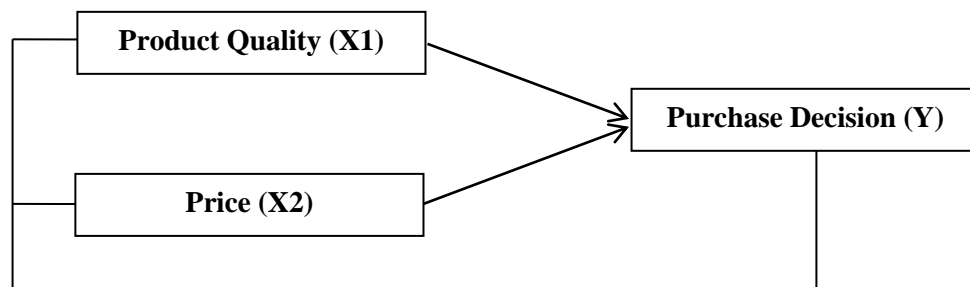
From the definition above, it is concluded that purchase decision is one of the forms of consumer behavior in using a product. In using a product for making a decision to buy, a consumer will go through a certain process as the image of consumer behavior in analyzing various kinds of choice to make a decision to buy.

## 2.6 Indictors of Purchase Decision

Kotler and Keller (2016: 8) point out that there are some indicators of purchase decision as follows:

1. Product selection;
2. Searching for Information;
3. Selecting Agents;
4. Making decision to buy;
5. Behavior in the post-buying

## 2.7 Conceptual Framework



*Figure 1. Conceptual Framework*

## 2.8 Hypothesis

According to Sugiyono (2017:93), a hypothesis is a temporary response to formula of the research problems in which it is presented in the form of declaration sentence. Based on the formula of the problems, the researcher formulated the hypothesis as follows:

- H<sub>1</sub> : Partially, product quality has effects on the purchase decision in Shopee marketplace;  
H<sub>0</sub> : Partially, Product quality has no effects on the purchase decision in Shopee marketplace;  
H<sub>2</sub> : Partially, price has effects on the purchase decision in Shopee marketplace;  
H<sub>0</sub> : Partially, price has no effects on the purchase decision in Shopee marketplace;  
H<sub>3</sub> : Simultaneously, product quality and price have effects on the purchase decision in Shopee marketplace;

H<sub>0</sub> : Simultaneously, product quality and price have no effects on the purchase decision in Shopee marketplace;

### III. Research Methods

#### 3.1 Research Approach

The research employs quantitative method. Sugiyono (2017: 12) points out that quantitative research is a type of research based on the philosophy of positivism which is used to do a research on certain population and samples. The data are collected by using research instruments and analyzed by using quantitative/statistic method.

#### 3.2 Place and Time of the Research

This research is intended to be used by students of the State Administration Department, Politeknik Negeri Medan (Medan Public Polytechnic), who have experienced shopping or using Shopee marketplace as online shopping device. The research is conducted from April until June, 2021.

#### 3.3 Population and Samples

The population is made up of 1,174 students at Business Administration Department, Politeknik Negeri Medan including D3 Business Administration Study Program, D4 MICE, and D4 Business Management. They are consumers or users of Shopee marketplace.

**Table 1.** Number of Students in the Business Administration Department

No	Study Program	Semester				Total
		II	IV	VI	VIII	
1	D3 Business Administration	201	231	233		665
2	D4 MICE	56	72	47	50	225
3	D4 Business Management	56	74	80	74	284
	Total	313	377	360	124	1.174

Source: Business Administration Department

A sample is a part of population or examples which can be used research materials in which the examples obtained from the population can represent the population. Arikunto (2013: 176) points out that a sample should be taken in such a way so that they can be functioned as examples or can describe the real population. In other words, samples must be representative. The research population is made up of 1,174 students so that the number of the sample is 10% of the population so that the whole samples in this research are 118 respondents.

The samples are taken by using simple random sampling technique because the researcher mixes the subjects in the population so that all subjects are regarded as equal.

#### 3.4 Technique of Gathering the Data

Noor (2015: 138) points out that data gathering is the method of gathering the data which are needed to answer the formula of the research problems. The respondents are the students of the Business Administration Department, Politeknik Negeri Medan, who have ever had transaction on Shopee marketplace. They are the students in Business Administration Study Program, the students in MICE Study Program, and the students in Business Management Study Program.

The researcher collects the data by distributing questionnaires. According to Arikanto (2013: 194), a questionnaire is a number of written questions used to obtain information from respondents, about their personal records and about anything they know.

### **3.5 Technique of Analyzing the Data**

#### **1. Instrument Test**

Before taking the data, validity and reliability test on the list of questions is done.

#### **2. Classic Assumption Test**

In this research, the data from the result of the research are processed by using inferential (quantitative) analysis, added by SPSS software program. The collected data are analyzed by using multiple linear regression method. Before doing it, however, classic assumption test is done including normality test, multicollinearity test, and heteroscedasticity test.

#### **3. Multiple Regression Analysis**

After classic assumption test is done, an analysis is made using multiple linear regression method with the reason that independent variables consist of some variables. The correlation between two variables stated by linear equation is used to make prediction about Y value (dependent variable), based on X value (independent variable). The prediction would be better when we do not pay attention to only one affecting variable (independent variable) so that we have to use multiple linear regression analysis. The form of multiple linear regression equation used in the formula is as follows:

$$\text{Equation: } Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Explanation:

Y: Purchase decision;

$\beta_0$ : Constant

$\beta_1, \beta_2$ : Regression coefficient

X1: Variable of product quality

X2: Variable of price

e: Standardized Error

#### **4. Hypothetical Test**

The hypothesis in this research concerns with the variables of product quality and price on purchase decision by using t-test and F-test. Hypothetical testing in this research is done by using multiple linear regression analysis, assisted by SPSS version-25 application.

#### **5. Coefficient Determination ( $R^2$ ) Analysis**

Coefficient determination ( $R^2$ ) is used to find out how large the percentage of the variation of independent variables in the model can be explained by dependent variables. Coefficient determination ( $R^2$ ) in the percentage of  $R^2$ -value is  $0 < R^2 < 1$ .

## IV. Results and Discussion

### 4.1 Instrument Test

Validity of data is measured by comparing  $R_{\text{count}}$  with  $R_{\text{table}}$  (r person product moment) with the criteria of testing as follows: when  $R_{\text{count}} > R_{\text{table}}$  at  $\alpha = 0.05$ , the measuring device is valid; on the other hand, when  $R_{\text{count}} < R_{\text{table}}$ , the measuring device is invalid. For validity test with 30 respondents, its significance value is 0.1779. The following is the result of the calculation of validity test, using SPSS version 25 software. With the total  $(n) = 30$ ,  $df = n - 2 = 30 - 2 = 28$  and  $\alpha = 0.05$  so that  $R_{\text{table}} = 0.361$ .

**Table 2.** Results of Validity Test in Variable of Product Quality ( $X_1$ )

No.	Item	Level of Error	$R_{\text{table}}$	Result		Explanation
				Sig.	$R_{\text{count}}$	
1.	X1.1	0,05	0,361	0,000	0,877	Valid
2.	X1.2	0,05	0,361	0,000	0,916	Valid
3.	X1.3	0,05	0,361	0,000	0,892	Valid
4.	X1.4	0,05	0,361	0,000	0,903	Valid
5.	X1.5	0,05	0,361	0,000	0,879	Valid

Source: SPSS data processing, 2021

Table 2 illustrates the result of data processing from SPSS version 25 software, and it is found that the whole instrument of the variable of product quality ( $X_1$ ) is valid at the significance  $< 5\%$  or 0.05 with the value of  $R_{\text{table}}$  of 30 respondents as the validity test  $> 0.361$  so that the value of  $R_{\text{count}} > R_{\text{table}}$  is fulfilled.

**Table 3.** Result of Validity Test in Variable of Price ( $X_2$ )

No.	Item	Level of Error	$R_{\text{table}}$	Result		Explanation
				Sig.	$R_{\text{count}}$	
1.	X2.1	0,05	0,361	0,000	0,778	Valid
2.	X2.2	0,05	0,361	0,000	0,825	Valid
3.	X2.3	0,05	0,361	0,000	0,840	Valid
4.	X2.4	0,05	0,361	0,000	0,795	Valid
5.	X2.5	0,05	0,361	0,000	0,714	Valid

Source: SPSS data processing, 2021

Table 3 shows the result of data processing from SPSS version 25 software and it is found that the whole instrument of the variable of price ( $X_2$ ) is valid at the significance  $< 5\%$  or 0.05 with the value of  $R_{\text{table}}$  of 30 respondents as the validity test  $> 0.361$  so that the value of  $R_{\text{count}} > R_{\text{table}}$  is fulfilled.

**Table 4.** Result of Validity Test in Buying Decision (Y)

No.	Item	Level of Error	$R_{\text{table}}$	Result		Explanation
				Sig.	$R_{\text{count}}$	
1.	Y.1	0,05	0,361	0,000	0,698	Valid
2.	Y.2	0,05	0,361	0,000	0,886	Valid
3.	Y.3	0,05	0,361	0,000	0,913	Valid
4.	Y.4	0,05	0,361	0,000	0,783	Valid
5.	Y.5	0,05	0,361	0,000	0,717	Valid



Source: Processed primary data, 2021

Table 4 demonstrates the result of data processing from SPSS version 25 software and it is found that the whole instrument of the variable of buying decision (Y) is valid at the significance  $< 5\%$  or 0.05 with the value of  $R_{table}$  of 30 respondents as the validity test  $> 0.361$  so that the value of  $R_{count} > R_{table}$  is fulfilled.

Therefore, it is concluded that the whole instrument in this research is valid so that for the next testing, the whole instrument can included.

**Table 5.** Result of Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.886	15

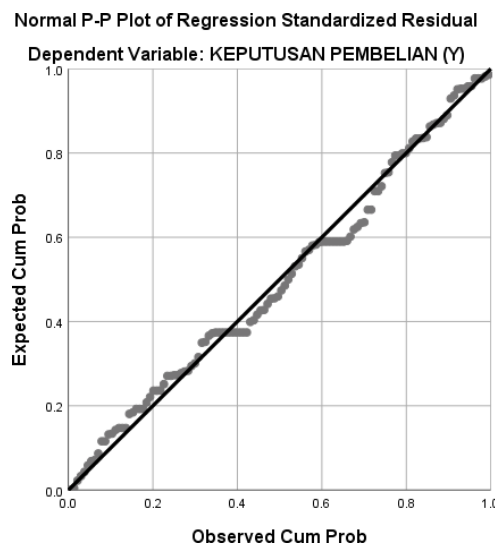
Source: SPSS data processing, 2021

Based on the result of the analysis above, it is concluded that the whole instrument in this research is reliable/accepted. It is be proved that  $r\text{-value } \alpha > 0.6$ . This reliability test use Cronbach Alpha formula aided by SPSS version 20 software. If the result of value is  $< 0.6$ , the consistency of the data instrument is considered not reliable or is rejected.

## 4.2 Classic Assumption Test

### a. Result of Data Normality Test

Normal chart of probability plots shows that the data are close to normal distribution. In Picture 2, some data spread surrounding diagonal and follow the direction of its line or histogram chart. Even though the data are slightly deviated from the line and return to follow its diagonal line, the observational data of this research are considered close to normal distribution.



**Figure 2.** Probability Plot of Normality Test

Source: SPSS data processing, 2021

### b. Result of Multicollinearity Test

The existence of multicollinearity is seen from the result of the value of tolerance and its opponent, Variance Inflation Factor (VIF). If the value of Tolerance is more than equal to 0.10 and VIF value is more than 10, it is indicated that there is multicollinearity among independent variables. The following is the result of multicollinearity test:

**Table 6.** Result of Multicollinearity Test

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Product Quality	.880	1.137
	Price	.880	1.137

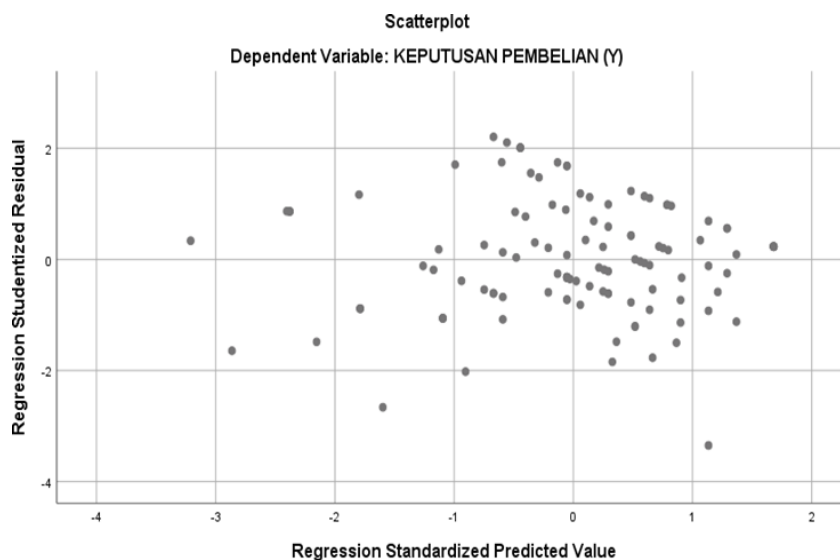
Source: SPSS data processing, 2021

From Table 6 above, it is demonstrated that

1. The regression model above can be considered free from multicollinearity, indicated by the variable of Tolerance value  $> 0.1$  where the value of product quality is  $0.880 > 0.1$  and the value of price is  $0.880 > 0.1$ .
2. The regression model above can be considered free from multicollinearity, indicated by VIF value  $< 10$  where the variables of product quality and price are  $1.137 < 10$ .

### c. Result of Heteroscedasticity Test

Heteroscedasticity test is intended to test whether in the regression model there is discrepancy of variance of the residual from one observer to another observer. In this research, the researcher employs Chart method or Scatterplot diagram.



**Figure 3.** Scatterplot Diagram of Heteroscedasticity Test

Source: SPSS data processing, 2021

Figure 3 illustrates that the dots spread and do not form specific and clear patterns so that it is concluded that there is no problem with heteroscedasticity.



### 4.3 Multiple Regression Analysis

**Table 7.** Multiple Regression Analysis

Coefficients <sup>a</sup>						
Model		unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.671	2.002		3.831	.000
	Product Quality (X1)	.163	.057	.216	2.882	.005
	Price (X2)	.562	.078	.536	7.168	.000
a. Dependent Variable: Buying Decision (Y)						

Source: SPSS data processing, 2021

Constant (B) is 7.671 indicating that the variables of product quality (X<sub>1</sub>) and price (X<sub>2</sub>) are 0, the value of the variable of purchase decision (Y) is 7.671.

Coefficient (B<sub>1</sub>) is 0.163 > 0 indicating that the variable of product quality (X<sub>1</sub>) has positive effects on purchase decision (Y) meaning that when product quality increases to one unit, the purchase decision in Shopee marketplace will increase to 0.163.

Coefficient (B<sub>2</sub>) is 0.562 indicating that the variable of price (X<sub>2</sub>) has positive effects on purchase decision (Y) meaning that when price increases to one unit, the purchase decision in Shopee marketplace will increase to 0.562.

### 4.4 Hypothetical Testing

**Table 8.** Result of Partial Test (t)

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.671	2.002		3.831	.000
	Product Quality (X1)	.163	.057	.216	2.882	.005
	Price (X2)	.562	.078	.536	7.168	.000
a. Dependent Variable: Buying Decision (Y)						

Source: SPSS data processing, 2021

A t-test is also known as partial test which is used to test each of independent variables toward their dependent variable. The value of  $t_{\text{count}}$  is obtained by using SPSS version 25 application which will be compared with  $t_{\text{table}}$  at  $\alpha = 005$  and  $df = n - k - 1 = 122 - 2 = 119$  so that  $t_{\text{table}} = 1.980$ ; it is concluded that

#### a. Hypothetical Test I

The first hypothesis in this research is

H<sub>1</sub>: Partially, product quality has effects on the purchase decision in Shopee marketplace;

H<sub>0</sub>: Partially, product quality has no effects on the purchase decision in Shopee marketplace.

The reasons for purchase making are as follows:

$H_0$  is rejected if the significance value is  $< 0,05$  or  $t_{\text{count}} > t_{\text{table}}$ .

$H_0$  is accepted if the significance value is  $> 0,05$  or  $t_{\text{count}} < t_{\text{table}}$ .

Based on Table 7 above, it is found that the significance value of the variable of product quality is 0.05 at the significance level of 0.05 and  $t_{\text{count}}$  in the Table as the result of  $t_{\text{coefficients}}$  test is  $2.882 > 1.980$ . It is concluded that  $H_0$  is rejected which indicates that product quality, partially, has effects on the purchase decision in Shopee marketplace.

## b. Hypothetical Test II

The second hypothesis in this research is as follows:

$H_2$ : Partially, price has effects on the purchase decision in Shopee marketplace;

$H_0$ : Partially, price has no effects on the purchase decision in Shopee marketplace.

The reasons for decision making are as follows:

$H_0$  is rejected if the significance value is  $< 0,05$  or  $t_{\text{count}} > t_{\text{table}}$ .

$H_0$  is accepted if the significance value is  $> 0,05$  or  $t_{\text{count}} < t_{\text{table}}$ .

Based on Table 8 above, it is found that the significance value of the variable of Price is  $0.000 < 0.05$  and  $t_{\text{count}}$  in the Table as the result of  $t_{\text{coefficients}}$  test is  $7.168 > 1.980$ . It is concluded that  $H_0$  is rejected which indicates that Price, partially, has effects on the purchase decision in Shopee marketplace.

**Table 9.** Result of F-Test

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	529.019	2	264.509	42.072	.000 <sup>b</sup>
	Residual	748.161	119	6.287		
	Total	1277.180	121			
a. Dependent Variable: Purchase Decision (Y)						
b. Predictors: (Constant), Price (X2), Product Quality (X1)						

Source: SPSS data processing, 2021

F-test is also known as simultaneous test which is used to test the effects of independent variables. The value of  $F_{\text{count}}$  is obtained by using SPSS version 25 application which will be compared with  $F_{\text{table}}$  at  $\alpha = 0.05$  and  $dtb - n - k = 122 - 2 = 120$  so that  $F_{\text{table}} = 3.07$ . It is concluded that

$H_3$  : Simultaneously, product quality and Price have effects on the purchase decision in Shopee marketplace;

$H_0$  : Simultaneously, product quality and price have no effects on the purchase decision in Shopee marketplace.

The reasons for decision making are as follows:

$H_0$  is rejected if the significance value is  $< 0.05$  or  $F_{\text{count}} > F_{\text{table}}$ ;

$H_0$  is accepted if the significance value is  $> 0.05$  or  $F_{\text{count}} < F_{\text{table}}$ .

Based on Table 8 above, it is found that the significance value is  $0.000 < 0.05$  and  $F_{\text{count}}$  in the Table as the result of  $F_{\text{coefficients}}$  test is  $42.072 > 3.07$ . It is concluded that  $H_0$  is rejected. It indicates that Product Quality and Price, simultaneously, have effects on the Purchase Decision in Shopee marketplace.

### c. Coefficient Determination ( $R^2$ ) Analysis

**Table 10.** Result of Coefficient Determination ( $R^2$ ) Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.644	.414	.404	2.507
a. Predictors: (Constant), Price (X2), Product Quality (X1)				
c. Dependent Variable: Buying Decision (Y)				

Source: SPSS data processing, 2021

Based on Table 10 above, it is found that R-square value is 0.414 which indicates that independent variables (product quality and price) can explain the dependent variable (buying decision) of 41.4% while the remaining 58.6% is explained by other variables excluded from the research.

### V. Conclusion

Based on the analysis and the discussion above, it is concluded that Product Quality, partially, has effects on the purchase decision in Shopee marketplace; it is because product quality offered by Shopee marketplace meets what is expected by consumers.

Based on the calculation of the statistics of partial test, it is concluded that price, partially, has effects on the purchase decision in Shopee marketplace. It is proved by consumers' statement saying that the products sold on Shopee marketplace are affordable, the price is very reasonable, and the products are in accordance with their quality and benefits, compared with those by the other marketplaces as the competitors.

Based on the result of the statistics of simultaneous test, it is concluded that product quality and price, simultaneously, have effects on the purchase decision in Shopee marketplace. It is proved by the stages of purchase decision done by consumers. Moreover, the products offered by the Shopee marketplace are considered to have been in accordance with what consumers need and demand.

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