

# The Influence of Product Quality and Price on Customer Loyalty

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## ARTICLES INFORMATION

## ABSTRACT



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**Abstract.** This research aims to determine the effect of product quality and price on customer loyalty at Apollo 88 Noodle Store On Jl Siliwangi Bogor Timur. The method used is a quantitative method. The sampling technique used is Probability Sampling with Random Sampling type. The number of samples used in this research was 96 respondents. Data analysis techniques using instrument tests, namely validity and reliability tests, classic assumption tests, namely normality test, multicollinearity test, heteroscedasticity test, autocorrelation test, simple linear regression test, multiple linear regression test, correlation coefficient test, coefficient of determination test and hypothesis test, namely t test and F test. The results of this research are that product quality has a significant effect on customer loyalty with the regression equation  $Y = 10.284 + 0.261X_1$ . Hypothesis testing obtained t value > t table ( $6.978 > 1.661$ ). Price has a significant effect on customer loyalty with the regression equation  $Y = 6.418 + 0.566X_2$ . Hypothesis testing obtained t value > t table ( $8.739 > 1.661$ ). Product quality and price simultaneously have a significant effect on customer loyalty with the regression equation  $Y = 5.306 + 0.94X_1 + 0.438X_2$ . Hypothesis testing obtained a value of Fcount > Ftable or ( $41.108 > 3.094$ ). Thus, it can be concluded that product quality and price have a positive and significant effect on customer loyalty.

## A. INTRODUCTION

Competition in the business sector is increasingly developing in Indonesia. Many products compete to gain profits and loyalty from their customers. Looking at practices in various parts of the world, food business growth still occupies the top position. The increasing quantity of products accompanied by the increasing number of enthusiasts has made the topic of competition levels a common topic of discussion in everyday life. Because of this, the level of competition will continue to increase sharply.

Business people are required to have a strategy to satisfy and increase customer enthusiasm for their products, which can make customers amazed. Thus, food is actually a primary need for every human being. Included in this context is a fast food restaurant, namely Apollo Noodle Shop 88 On Jl Siliwangi Bogor Timur. As a typical food from Aceh which is much loved by the public, Mie Aceh has a marketing strategy in terms of product quality, price and customer loyalty. Customers will tell about a product to friends, family or people around them about their satisfaction with using the product. It is important for business owners to see whether customers have high or low loyalty.

There are factors that can influence customer loyalty, one of which is product quality. Product quality is the perfect stepping stone for creating a positive image and also for keeping customers loyal for a long time. Customers can be called loyal if they have a high commitment to making purchases and consuming a product sustainably, even though the price increases. Tjiptono in Sahabuddin (2019) states that customer loyalty is generated by satisfaction. Product quality and price are closely related to customers.

Customer loyalty is categorized as good if the customer is willing to buy again from the same brand, and provides recommendations and has a strong commitment not to switch to a competitor's product. On the other hand, if customer loyalty is categorized as not good, the customer will not be willing to buy again from the same brand and will switch to a competitor's product. The following are the pre-survey results of customer loyalty at Apollo 88 Noodle Store On Jl Siliwangi Bogor East.

**Table 1 Pre Survey Customer Loyalty**

NO	Statement	Answer		Number of Respondents	Percentage
		Yes	No		
Repeat purchases					
1.	I am interested in making repeat purchases at Mie Aceh 46	5	25	30	83%
maintain					
2.	In my opinion, the quality of Mie Aceh 46 must be maintained	8	22	30	73%
reference					
3.	I would recommend Mie Aceh 46 to people I know	13	17	30	57%

Sumber : Pendahuluan Penelitian 2023

Based on Table 1 of the pre-survey data conducted, it can be explained that of the 30 customers who were respondents, there was a problem with customer loyalty at Apollo 88 Noodles Shop, where in the first indicator related to repeat purchases only 5 respondents answered "yes" and as many as 25 respondents answered "no" with a percentage of 83%. Then in the second indicator related to retention, only 8 respondents answered "yes" and 22 respondents answered "no" with a percentage of 73%. In the last indicator related to references,

only 13 respondents answered "yes" and 17 respondents answered "no" with a percentage of 57%. From this data it can be seen that there are still problems with the Customer Loyalty indicator. Product quality also influences customer loyalty, with good product quality it is hoped that it will be able to provide the desired reaction from customers, namely a sense of satisfaction. Refer

Kotler and Armstrong (2021:230) say that "Product quality is the characteristic of a product or service that supports its ability to satisfy customer needs." This means that companies are required to always improve the quality of their products and services, because this can make their customers satisfied. In product quality, there are 7 (seven) things that are used as indicators, namely; performance, durability, suitability, features, reliability, aesthetics, impression of quality (According to Garvin in Yamit, 2018:10). Product diversity in a restaurant is interpreted as product diversity, in other words the completeness of the menu, starting from taste, size, quality, as well as the level of availability of the product in the restaurant. The following is a menu list for Apollo 88 Noodle Store On Jl Siliwangi Bogor East

**Table 2 Comparison list of similar restaurant menus**

Dry/Wet/Stir-Fried Gorang Noodles	price of fried/dry/wet/stir-fried noodles	boiled noodles	price of boiled noodles
Noodle Aceh Polos	Rp. 24.000	Noodle Aceh Polos	Rp. 26.000
Noodle Aceh Egg	Rp. 26.000	Noodle Aceh Egg	Rp. 28.000
Noodle Aceh Meet	Rp. 28.000	Noodle Aceh Meet	Rp. 30.000
Noodle Aceh Shrimp	Rp. 29.000	Noodle Aceh Shrimp	Rp. 31.000
Noodle Aceh Meet Egg	Rp. 32.000	Noodle Aceh Meet Egg	Rp. 34.000
Noodle Aceh Egg Shrimp	Rp. 33.000	Noodle Aceh Egg Shrimp	Rp. 35.000
Noodle Aceh Meet + Shrimp	Rp. 35.000	Noodle Aceh Meet + Shrimp	Rp. 37.000
Noodle Aceh + Egg+ Shrimp (Special)	Rp. 38.000	Noodle Aceh Meet + Egg + Shrimp (Special)	Rp. 40.000

As shown in the table, it can be observed that there is menu availability at Apollo 88 Noodle Store On Jl Siliwangi Bogor Timur so it is necessary to add new variants for customers, so that customers can choose more variants according to their tastes. In order to improve product quality, competition is a crucial challenge for entrepreneurs. Superior quality products can certainly attract customers, which can increase sales figures. The following is product quality data for Apollo 88 Noodle Store On Jl Siliwangi Bogor Timur.

**Table 3 Product Quality Data**

Indicator	Standar	Realization
performance	processing Acehnese noodles using a machine	Acehnese noodles are produced using machines
Durability	4 days	2-3 days
suitability	the texture of Acehnese noodles is soft	The texture of Aceh 46 noodles is soft, but if you fry it for too long it can fall apart
Feature	Aceh noodle packaging is good using thinwall	Aceh noodle packaging still uses styrofoam
reliability	Acehnese noodles have a delicious taste	Mie Aceh 46 has a distinctive taste with delicious spices
Aesthetics	the appearance of the	The appearance of the Aceh

	Acehnese noodle product is served with pickles	46 noodle product is suitable for serving with pickles
impression of quality	Mie Aceh has met customer expectations	Mie Aceh 46 has met customer expectations according to its standards

As shown in the table, it can be observed that there are indicators of durability, suitability and features of product quality that are not paid enough attention to by the Kedeu Noodle Apollo 88 Restaurant On Jl Siliwangi Bogor East that is not able to offer good quality products to customers, if business people do not Looking for a solution to this problem will result in loyal customers moving to competitors.

The mainstay menu of Apollo Noodle Store 88 On Jl Siliwangi Bogor East which is very popular with customers is dry egg fried Acehnese noodles, as follows.

Apart from product quality, there is another factor, namely price. According to Nurhalimah in Solikha et al (2020:69) "Price is the main factor that can influence a buyer's choice, price plays quite a role in determining customer purchases, for this reason before setting a price, the company should look at several price references for a product that is considered quite high in sales ". So price plays an important role in customer assessment. In measuring prices, there are four indicators, including price affordability, price competitiveness, price suitability to product quality, and price suitability to product benefits (Kotler and Armstrong (2019:52).

Price is the most important point in making a company's product. This is the cause of price competition between brands spread across the market. Customers tend to be sensitive to price changes, which can lead to customers switching to brands that they consider cheaper. Referring to Tjiptono and Chandra in Priansa (2018:209), they state that price is an inherent part of the product which reflects the quality of the product. Price is the only element of the marketing mix that provides income for the company and is flexible. Setting high prices can cause sales to decline. On the other hand, if it is too low it can reduce the profits the company gets.

Apollo Noodle Shop 88 On Jl Siliwangi Bogor East is a business operating in the culinary food sector. Apollo 88 Noodle Shop On Jl Siliwangi Bogor East certainly requires product quality. The price offered can determine the customer's attitude in providing an assessment. Because, there is a view that loyal customers are satisfied customers. Customers will consider the ingredients of Aceh noodles both in terms of durability and taste. The high attractiveness of customers to buy Acehnese noodles, researchers want to see whether these customers really have a preference for Acehnese noodle products because the prices offered are affordable, or whether there are factors outside of that that encourage people to buy Acehnese noodles. The following is price comparison data for Apollo Noodle Shop 88 On Jl Siliwangi Bogor East among similar restaurants Paying attention to this data, it can be observed that the price of Apollo 88 Noodle Store On Jl Siliwangi Bogor Timur has a higher price difference, this indicates that there is price competition for each product which can have an influence on loyal customers seen from the competitive price. In order to buy according to what is needed or desired, the quality of the product offered to customers is something important. Included in what determines whether customers want to make repeat purchases is how their experience was when making the purchase. The following is data on sales results at Apollo 88 Chicken Noodle Store On Jl Siliwangi Bogor East. Based on the table above, it can be seen that due to the high prices offered by restaurants and not matching the products to what customers want, this causes ups and downs in Aceh Noodle SHOP income 46. If restaurants do not evaluate prices and do not adjust the products that customers want then this will be a bad thing for restaurant for the future. That competitive prices can have an influence on customer loyalty. The problem is that it is difficult to identify the difference between those who are truly loyal and those who are fake, even though their behavior is the same. Loyalty is interpreted as a strong relationship with repeat purchases.

**Table 4 Comparative Data on Restaurant Prices**

Keude Mie Aceh	Aceh village dephubu restaurant	Aceh Sabang noodle restaurant	information
Restaurant 46			
Rp. 40.000	Rp. 33.000	Rp. 37.000	More expensive

Customer loyalty plays a crucial role in restaurants, maintaining this means trying to improve financial performance and maintain restaurant sustainability. This is the main motive for restaurants to maintain their loyalty. The customer data for the Kedai Mie Apollo 88 Restaurant On Jl Siliwangi Bogor East for 2020-2022 is as follows:

**Table 5 Restaurant Customer Data**

Years	Repeat purchases	reference
2020	3511	870
2021	4289	903
2022	2500	746

From this table, it can be seen that customers who make repeat purchases experience changes where the reference data fluctuates from 2020 - 2022 regarding the product Apollo 88 Noodle Kedai On Jl Siliwangi Bogor Timur, efforts to get loyal customers cannot be carried out immediately, but rather through a number of steps, starting from looking for potential customers to finally getting partners. The problem related to Aceh noodle products is that the product purchased is a product whose quality does not meet customer expectations and the price is relatively expensive and cannot maintain customer loyalty.

**B. LITERATURE REVIEW**

Zulfi Ilfathna (2021) Scientific Journal of FEB Brawijaya University Students. *The Influence of Product Quality and Price on Customer Loyalty at the Satan Noodle Shop in Malang City*. There is a significant influence of Product Quality and Price on Customer Loyalty.

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Marshelly Chandra Kumala, Widodo (2019) Krisnadwipayana Business Management Journal (JMBK), Vol.7. No. 2 ISSN: 2338 – 4794 E-ISSN: 2579-7476 Krisnadwipayana University *The Influence of Product Price and Quality on Aluminum Customer Loyalty at PT. Alakasa Extrusindo Jakarta*. There is a significant influence of Product Price and Quality on Customer Loyalty.

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Retno Ayu Dewi Novitawati, Ari Mahfud, Totok Sasongko (2019) Journal of Management and Accounting Science Vol. 7, No.2 ISSN 2548-6152 (online) ISSN 2089-0532 (print) Tribuhwana Tunggaladewi University *The Influence of Product Quality and Price on Customer Loyalty at Sanger Warung Kopi Aceh, Malang City. There is a significant and positive influence of product quality and price on customer loyalty*.



### C. RESEARCH METHOD

#### Data Instrument Test

This data analysis is carried out after the data is obtained from the sample through instruments, and will be used to answer problems in the research or to test the proposed hypothesis.

Validity Test Sugiyono (2019) states that a scale or measurement instrument can be said to be valid if the measuring instrument used to obtain data (measure) is valid. Valid means that the instrument can be used to measure whatever is being measured. If  $r\text{-count} > r\text{-table}$  then the instrument is said to be valid. If  $r\text{-count} < r\text{-table}$  then the instrument is said to be invalid. The formula used to carry out this test is:

$$r_{xy} = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{\{n \sum x^2 - (\sum x)^2\} \{n \sum y^2 - (\sum y)^2\}}}$$

#### Reliability Test

The reliability test according to Susan Stainback (1998) in Sugiyono (2015:267-268) states that reliability is related to the degree of consistency and stability of data or findings. In a positivistic (quantitative) view, data is declared reliable if two or more researchers in the same object produce the same data, or the same researcher at different times produces the same data, or a group of data when split into two shows no different data. Internal reliability formula

This research uses the Chronbacht alpha method formula

$$rca = \left( \frac{k}{k-1} \right) \left( 1 - \frac{\sum S_i}{\sum St} \right)$$

#### Classic assumption test

##### Normality Test

The normality test is used to test whether the regression model in this study has residuals that are normally distributed or not. An indicator of a good regression model is having normally distributed data.

##### Multicollinearity Test

The multicollinearity test is used to test whether a research regression model has a correlation between independent (free) variables.

##### Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is inequality of variance from the residuals of one observation to another (Ghozali, 2018: 120).

##### Autocorrelation Test

The autocorrelation test is the relationship between the residuals of one observation and the residuals of other observations (Winarno, 2015:5.29).

### Linear Regression Analysis

#### Simple Linear Regression Analysis

Simple linear regression analysis is a linear regression in which only two variables are involved, namely the dependent variable Y, and one independent variable X and has a rank of one.

$$Y = a + b.X$$

#### Multiple Linear Regression Analysis

According to Sugiyono (2017:275), multiple linear regression analysis is used by researchers, if the researcher predicts how the condition of the dependent variable (criterion) will rise and fall, if two or more independent variables as predictor factors increase and decrease their value (manipulated).

$$Y = (a + \beta_1.X_1 + \beta_2.X_2 + \epsilon)$$

#### Correlation Coefficient Test

According to Sugiyono (2018:286) partial correlation is used for analysis or hypothesis testing if the researcher intends to determine the influence or relationship between the independent and dependent variables, where one of the independent variables is controlled (made fixed). Partial correlation calculations can be done using the following formula

$$R_{yx_1 \cdot x_2} = \frac{r_{yx_1} - r_{yx_2} \cdot r_{x_1x_2}}{\sqrt{1 - r_{x_1x_2}^2} \sqrt{1 - r_{yx_2}^2}}$$

#### Analysis of the Coefficient of Determination

In this research, determination analysis is used to determine how much the independent variable is able to explain variations in the dependent variable. To find out the value of the coefficient of determination, this research uses the following formula

#### Hypothesis testing

$$KD = r^2 \times 100\%$$

#### Partial Regression Test (t Test)

The t statistical test is used to determine how far the influence of an independent variable individually is in explaining variations in the dependent variable (Ghozali, 2017:22). To determine whether there is an influence of each independent variable on the dependent variable, you can do it in the following way:

- a) If the significant value is <0.05 then Ha is accepted and H0 is rejected, meaning the independent variable has an effect on the dependent variable.
- b) If the significant value is > 0.05 then Ha is rejected and H0 is accepted, meaning the independent variable has no effect on the dependent variable

#### Simultaneous Test (F Test)

The F test is used to test whether the regression model can be used to predict the dependent variable. The hypothesis will be tested using a significance level (a) of 5 percent or 0.05. The criteria for accepting or rejecting the hypothesis will be based on the significance probability value. If the significance probability value is <0.05, then the hypothesis is accepted. This means

that the regression model can be used to predict independent variables. If the significance probability value is  $> 0.05$ , then the hypothesis is rejected. This means that the regression model cannot be used to predict the dependent variable.

#### D. RESULT AND DISCUSSION

##### Validity Test

**Table 6 Validity Test Results Based on Product Quality Variables (X1)**

No	Item Question	r Count	R Table	decision
1	The quality of the noodles at Mie Aceh 46 has a delicious taste	0,463	0,200	valid
2	Keude Mie Aceh 46 restaurant has good quality noodles	0,629	0,200	Valid
3	The durability of Aceh 46 noodles can last for 2-3 days if stored in the freezer	0,504	0,200	Valid
4	In my opinion, Aceh 46 noodles are stored and packaged well so that they can maintain the product's durability	0,545	0,200	Valid
5	In my opinion, the texture of Aceh 46 noodles is in line with the elasticity of noodles in general	0,517	0,200	Valid
6	Aceh 46 noodle portions are adjusted based on customer needs	0,646	0,200	Valid
7	Aceh 46 noodle packaging is safe and hygienic	0,471	0,200	Valid
8	I feel the appearance of the packaging on Mie Aceh 46 is attractive	0,646	0,200	Valid
9	Dry fried noodles are a mainstay menu at the Aceh 46 noodle restaurant	0,396	0,200	Valid
10	Aceh 46 noodle products really satisfy customers	0,572	0,200	Valid
11	The aesthetics or appeal of Mie Aceh 46 already meets customer standards	0,624	0,200	Valid
12	the appearance of the Aceh 46 noodle product is attractive	0,602	0,200	Valid
13	In my opinion, Aceh 46 noodles have a quality taste	0,581	0,200	Valid
14	In my opinion, Mie Aceh 46 is the best and most delicious Acehnese noodle	0,624	0,200	Valid



**Table 7 Validity Test Results Based on Price Variables (X2)**

No	Item Question	r Count	R Table	decision
1	The prices at the Aceh 46 noodle restaurant are relatively affordable	0,591	0,200	Valid
2	In my opinion, the price of Aceh 46 noodles is in line with the taste	0,534	0,200	Valid
3	the price of Aceh 46 noodles can compete with other Aceh noodle sellers	0,536	0,200	Valid
4	the price of Aceh 46 noodle products is competitive with other competitors	0,548	0,200	Valid
5	the price of Aceh noodles is 46 according to the quality and taste	0,629	0,200	Valid
6	The price offered for Aceh 46 noodle products is in accordance with the product quality that customers want	0,538	0,200	Valid
7	the affordable price of Aceh 46 noodles is commensurate with its benefits	0,554	0,200	Valid
8	the price offered by Mie Aceh 46 is in accordance with the benefits provided	0,575	0,200	Valid

As the data shows, the price variable (X2) shows that the calculated r is above 0.200 (calculated  $0r > r$  table), so all items can be said to be valid. Therefore, the questionnaire used is suitable as data.

**Table 8 Validity Test Results Based on Customer Loyalty Variable (Y)**

No	Item Question	r Count	R Table	decision
1	I will make repeat purchases at the Aceh 46 noodle restaurant because of the taste and affordable prices. I will buy it more often	0,626	0,200	Valid
2	I am interested in making a repeat purchase at Mie Aceh 46	0,581	0,200	Valid
3	In my opinion, the quality of Aceh 46 noodles must be maintained	0,681	0,200	Valid
4	In my opinion, the spices and taste of	0,668	0,200	Valid

	Aceh 46 noodles must be maintained			
5	I will recommend Mie Aceh 46 to people I know	0,681	0,200	Valid
6	I will plan to make a repeat purchase at Mie Aceh 46 and refer to other people	0,624	0,200	Valid

As the data shows, the customer loyalty variable (Y) shows a calculated r value that is above 0.200 (calculated  $r > r$  table), so all items can be said to be valid. Therefore, the questionnaire used is worthy of being used as data

### Reliability Test

**Table 9 Reliability Test Results**

No	Cronbach's Alpha
Product Quality	0,687
Price	0,711

As the table shows, the Cronbach's Alpha value is  $> 0.60$ , which means that the the variables are Reliable.

### Classic assumption test

#### Normality Test

As obtained in the table,  $\alpha = 0.073$  is a significant quantity above  $\alpha = 0.05$  ( $0.073 > 0.05$ ). In this way, the distribution in this test is assumed to be normal.

#### Multicollinearity Test

**Tabel 10 Normality test results with the Kolmogorov Smirnov test**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		96
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	1.92232703
Most Extreme Differences	Absolute	.086
	Positive	.081
	Negative	-.086
Test Statistic		.086
Asymp. Sig. (2-tailed)		.073 <sup>c</sup>
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As obtained from the multicollinearity test in the table, it was found that the tolerance value for the product quality variable was 0.477 and the price was 0.477, where both values of the two variables were above 0.1. Next, the Variance Inflation Factor (VIF) for the product quality variable is 2.095 and the price is 2.095, which is no more than 10. That way, there are no symptoms of multicollinearity in this regression model.

**Heteroscedasticity Test**

**Table 11 Heteroscedasticity Test Results Using the Glejser Test**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.032	1.432		2.118	.037
	Kualitas Produk	-.059	.032	-.275	-1.867	.065
	Harga	.054	.060	.132	.901	.370

a. Dependent Variable: Abs\_Res

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the test results appear in the table, the Glejser test model for the Product Quality variable (X1) obtained a probability significance value (Sig.), namely 0.065, then for price (X2) it was 0.370, where both significance levels (Sig.) > 0, 05. In this way, it can be said that there is no heteroscedasticity interference in the regression model in this data, which means that the regression model is suitable for use as research data.

**Autocorrelation Test**

As the test results appear in the table, this is proven by the Durbin-Watson results being between the Du and 4-Du values, namely 1.710 < 2.079 < 2.290. So there is no autocorrelation in this regression model.

**Table 12 Autocorrelation Test Results with Durbin Watson**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.685 <sup>a</sup>	.469	.458	1.94289	2.079

a. Predictors: (Constant), Harga, Kualitas Produk

b. Dependent Variable: Loyalitas Pelanggan

Sumber: Pengolahan Data SPSS Versi 26 (2023)

**Linear Regression Test**

**Table 13 Simple Linear Regression Test Results for Product Quality Variables (X1) on Customer Loyalty (Y)**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.284	2.160		4.760	.000
	Kualitas Produk	.261	.037	.584	6.978	.000

a. Dependent Variable: Loyalitas Pelanggan

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As obtained from the regression calculations shown in the table, the regression equation  $Y = 10.284 + 0.261X_1$  is found.

**Table 14 Simple Linear Regression Test Results for Price Variables (X2) on Customer Loyalty (Y)**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	6.418	2.168		2.961	.004
	harga	.566	.065	.670	8.739	.000

Dependent Variable: Loyalitas Pelanggan

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the calculated results from the regression appear in the table, the regression equation  $Y = 6.418 + 0.566X_2$  is found.

**Table 15 Results of Multiple Linear Regression Testing for Product Quality (X1) and Price (X2) Variables on Customer Loyalty (Y)**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.306	2.215		2.396	.019
	Kualitas Produk	.094	.049	.210	1.918	.058
	Harqa	.438	.092	.518	4.736	.000

a. Dependent Variable: Loyalitas Pelanggan

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the calculated results from the regression appear in the table, the regression equation  $Y = 5.306 + 0.094X_1 + 0.438X_2$  is found.

e. Correlation Coefficient Test

Coefficient of Determination Test

**Table 16 Results of Partial Determination Coefficient Analysis Between Product Quality (X1) and Customer Loyalty (Y)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.584 <sup>a</sup>	.341	.334	2.153

a. Predictors: (Constant), Kualitas Produk

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the test results can be seen in the table, the R-square (coefficient of determination) was found to be 0.341, so the conclusion that can be drawn is that the product quality variable (X1) has an influence on the customer loyalty variable (Y) worth 34.1% while the remaining 65.9% were influenced by other factors.

**Table 17 Results of Partial Determination Coefficient Analysis Between Price (X2) and Customer Loyalty (Y)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.670 <sup>a</sup>	.448	.442	1.970

a. Predictors: (Constant), Harga

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the test results can be seen in the table, the R-square (coefficient of determination) was found to be 0.448, so it can be concluded that the price variable (X2) has an influence on the customer loyalty variable. (Y) is worth 44.8% while the remaining 55.2% is influenced by other factors.

**Table 18 Results of Simultaneous Determination Coefficient Analysis Between Product Quality (X1) and Price (X2) on Customer Loyalty (Y)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.685 <sup>a</sup>	.469	.458	1.943

a. Predictors: (Constant), Harga, Kualitas Produk

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the test results can be seen in the table, the R-square (coefficient of determination) was found to be 0.469, so it can be concluded that the Product Quality (X1) and Price (X2) variables have an influence on the Customer Loyalty (Y) variable. namely 46.9%, while the remaining 53.1% is influenced by other factors which are not implemented here.

**Hypothesis testing**

The results of the data processing above obtained tcount. As the test results appear in the table, it was found that the t count > t table (6.978 > 1.985) this gain was also confirmed by the p value < Sig. 0.05 can also be (0.000 < 0.05). In this way, H01 is rejected and Ha1 is accepted, this shows that there is a partially significant influence between product quality and customer loyalty at Apollo 88 Chicken Noodle Kedai On Jl Siliwangi Bogor East.

**Table19 Hypothesis Test Results (t Test)  
 Product Quality Variables (X1) on Customer Loyalty (Y)**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.284	2.160		4.760	.000
	Kualitas Produk	.261	.037	.584	6.978	.000

a. Dependent Variable: Loyalitas Pelanggan

Sumber: Pengolahan Data SPSS Versi 26 (2023)

**Table 20 Hypothesis Test Results (t Test) Price Variable (X2) on Customer Loyalty (Y)**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.418	2.168		2.961	.004
	Harga	.566	.065	.670	8.739	.000

a. Dependent Variable: Loyalitas Pelanggan

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the test results appear in the table, it is found that the calculated t > t table (8.739 > 1.985). This is also confirmed by the p value < Sig. 0.05 or (0.000 < 0.05). In this way, H02 is rejected and Ha2 is accepted, this shows that there is a partially significant influence between price on customer loyalty at Apollo 88 Chicken Noodle Shop On Jl Siliwangi Bogor East.



**Table 21 Simultaneous Hypothesis Test Results (F Test)  
 Between Product Quality (X1) and Price (X2) on Customer Loyalty (Y)**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	310.349	2	155.174	41.108	.000 <sup>b</sup>
	Residual	351.057	93	3.775		
	Total	661.406	95			

a. Dependent Variable: Loyalitas Pelanggan

b. Predictors: (Constant), Harga, Kualitas Produk

Sumber: Pengolahan Data SPSS Versi 26 (2023)

As the test results appear in the table, it is found that  $F_{count} > F_{table}$  or  $(41.108 > 3.094)$ , this is also confirmed by the  $p$  value  $< Sig.$  0.05 or  $(0.000 < 0.05)$ . Thus,  $H_03$  is rejected and  $H_{a3}$  is accepted, this shows that there is a significant simultaneous influence between product quality and price on customer loyalty at Apollo 88 Noodle Kedai On Jl Siliwangi Bogor East.

## E. CONCLUSION

As obtained from the analysis that has been carried out, the conclusions that the author can formulate are:

Product quality (X1) has a positive influence on customer loyalty (Y) with the regression equation  $Y = 10.284 + 0.261X_1$ . It can be seen that  $t_{count} > t_{table}$   $(6.978 > 1.985)$  is confirmed by the quantity  $< Sig.$  0.05 or  $(0.000 < 0.05)$ . Thus,  $H_01$  is rejected and  $H_{a1}$  is accepted, meaning that there is a partially significant influence between Product Quality and Customer Loyalty at Apollo 88 Noodle Store On Jl Siliwangi Bogor East.

Price (X2) has a positive influence on customer loyalty (Y) with the regression equation  $Y = 6.418 + 0.566X_2$ . It can be seen that  $t_{count} > t_{table}$   $(8.739 > 1.985)$  is confirmed by the quantity  $< Sig.$  0.05 or  $(0.000 < 0.05)$ . Thus,  $H_02$  is rejected and  $H_{a2}$  is accepted, meaning that there is a partially significant influence between price and customer loyalty at Apollo 88 Noodle Store On Jl Siliwangi Bogor East.

Product quality (X1) and price (X2) have a positive influence on customer loyalty (Y) with the regression equation  $Y = 5.306 + 0.094X_1 + 0.438X_2$ . It can be seen that  $F_{count} > F_{table}$   $(41.108 > 3.094)$  is confirmed by  $< Sig.$  0.05 or  $(0.000 < 0.05)$ . Thus,  $H_03$  is rejected and  $H_{a3}$  is accepted, meaning that there is a significant simultaneous influence between Product Quality and Price on Customer Loyalty at Apollo 88 Noodle Store On Jl Siliwangi Bogor East.

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