



## **The effect of product quality and service quality on Indihome customer loyalty at Witel Tangerang**

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**Received:** 20 November 2021

**Accepted:** 05 December 2021

**DOI:** <https://doi.org/10.32479/jeb1.11367>

### **ABSTRACT**

This study aims to determine how much influence product quality and service quality have on customer loyalty at Indihome Witel Tangerang. The population in this study is Indihome customers who are in Witel Tangerang. The sample in this study amounted to 100 customers, with the technique of determining the sample using nonprobability sampling and the sampling technique using accidental sampling, namely by distributing questionnaires to Indihome customers in Witel Tangerang.

The results of data processing show that product quality and service quality partially affect customer loyalty Indihome witel Tangerang, this is indicated by t-count product quality 4.714 with a significant level of 0.000 and t-count Price 13,491 with a significant level of 0.000, the data above shows that the value of t-count is greater than t table 1.660 and the significant value of the two variables is below 0.05, then product quality and service quality have a very strong influence on customer loyalty which is indicated by the coefficient of determination which indicates the R<sup>2</sup> value is 80.8%.

**Keywords:** Product Quality, Service Quality, Customer Loyalty.

### **1. INTRODUCTION**

The need for technology, information, and communication in Indonesia is also growing rapidly. From time to time, it shows that technology, information, and communication are mandatory things that must be fulfilled in human life today after primary needs. Many companies engaged in technology, information, and communication are interested in this business and want to get big profits from this condition. Therefore, many companies offer various forms of service to the community in order to attract more consumers.

Product quality is important for consumers, therefore, product quality is one of the things that need to be considered by companies, because good product quality will be able to provide consumer satisfaction when consuming these products.

This good product quality will be able to provide a sense of confidence in consumers in their use which then becomes the motivation of consumers to buy or enjoy the product continuously.

The increasing intensity of competition and the number of competitors requires companies to always pay attention to the needs and desires of consumers and try to meet consumer expectations by providing products, prices, and promotions that are more satisfying than those carried out by competitors. Thus, only quality companies can compete and dominate the market. Quality has a close relationship with purchasing decisions. Quality provides an impetus to customers to establish a strong relationship with the company. In the long term, this kind of bond allows the company to understand carefully the customer's expectations and their needs.

Companies should be customer-oriented, in order to win the competition. By providing good service quality will build customer loyalty and ultimately can create a close relationship between customers and the company.

Service quality provides an impetus to customers or in this case visitors to establish strong ties with providers of goods or services, be it companies, institutions, or agencies. This good relationship will enable each agency or provider of goods or services to understand carefully the expectations of customers or visitors and their needs. Thus, providers of goods and services can increase visitor satisfaction by maximizing a pleasant visitor experience and minimizing an unpleasant visitor experience.

Customer loyalty is a manifestation and continuation of satisfaction in using service facilities provided by service providers, as well as to remain customers. Loyalty is proof that being a customer has power and a positive attitude towards the product. Loyal customers can become partners in developing new products because they maintain and defend and even use existing company services.

## 2. LITERATURE REVIEW

Product quality is one of the main things that is considered in the company, quality is one of the important policies in increasing product competitiveness, the main thing is to give satisfaction to consumers that exceeds or is at least equal to the quality of products from competitors. Before knowing the meaning of product quality, we must first understand the meaning of the product.

"A product is anything that is offered to the market for attention, purchase, use, or consumption to satisfy a want or need. Conceptually, the product is the subjective understanding of the producer on something that can be offered as an effort to achieve organizational goals through meeting consumer needs and activities, in accordance with the competence and capacity of the organization and the purchasing power of the market" (Revita & Frimayasa, 2018).

(According to (Kotler and Armstrong, 2012) define "product quality as the ability of a product to carry out its functions, including durability, reliability, accuracy, ease of operation and repair and other valuable attributes".

Product quality is an important thing that every company must strive for if they want their products to compete in the market. The existence of a reciprocal relationship between companies and consumers will provide opportunities to know and

understand what are the needs and expectations that exist in consumer perceptions. So, product provider companies can provide good performance to achieve consumer satisfaction by maximizing a pleasant experience and minimizing an unpleasant experience for consumers in consuming the product.

Factors Affecting Quality, namely: "1) Function of a product Function for what the product is used or intended. 2) Outer appearance The external form factor contained in a product is not only seen in the shape but the color and packaging. 3) The cost of the product concerned. The cost for the acquisition of an item, for example, the price of the item and the cost for the item is up to the buyer" (Assauri, 2017). "Acceptable product quality is the main element influencing consumer buying behavior. Consumer choices from a variety of alternative choices for products that best suit their desired needs" (Revita & Frimayasa, 2018).

Service quality is often the subject of people's conversations in terms of satisfying needs. Many experts have provided a definition of service quality with different expressions, but what is contained in it is the same, namely service quality basically includes efforts to meet customer expectations in accordance with the specifics. It can be concluded that service quality is how far the difference between reality and customer expectations for the service obtained. If the perceived service is in accordance with the expected service, then the quality of the service will be perceived as positive or good. If the perceived service exceeds expectations, then the service quality is perceived as ideal quality.

"Service is a translation of the term service in English which according to Kotler quoted by Tjiptono, means "any action or deed that can be offered by one party to another, which is basically intangible and does not result in ownership of anything." (Tjiptono, 2016).

"Customers are the main focus in providing services, therefore, in this case, the customer plays an important role in measuring the services provided by the company" (Frimayasa, 2017).

Measuring service quality means comparing the performance of a service or service with a set of predetermined standards. One approach to service quality that is widely used as a reference in marketing research is the servqual (service quality) model developed by Parasuraman, et al, which is built on a comparison of two main factors, namely customer perceptions of the service they actually receive (perceived service) with the actual service expected. / desired (expected service).

To increase loyalty, companies must increase the satisfaction of each customer and maintain that level of satisfaction in the long term. To increase satisfaction, companies must add value that can make them get what they pay for or more than they expect so that they can survive and lead to repeat purchases, recommendations, and an increased proportion of spending. From the description above, it can be concluded that customer loyalty is the level of the customer's role in the services provided

by the cafe service entrepreneur after comparing the performance or perceived results with their expectations.

Loyalty measurement includes an instrumental conditioning approach. The instrumental conditioning approach states that consistent purchases over time indicate brand loyalty. Repeat purchase behavior reflects a strong reinforcement or stimulus so that the measurement of loyal or disloyal customers can be seen from the frequency and consistency of their buying behavior towards a particular brand. Measurement with this approach emphasizes behavior in the past. However, this approach has the disadvantage that it is only based on past behavior, whereas loyalty is also an estimate of future buying behavior. The behavior measurement method is a direct way to determine loyalty, especially for habitual behavior. Patient loyalty is measured based on purchases made by customers.

"Customer loyalty, in general, can be interpreted as someone's loyalty to a product, both goods, and certain services. Customer loyalty is a manifestation and continuation of customer satisfaction in using the facilities and services provided by the company, as well as to remain a patient of the hospital. Loyalty is evidence of patients who are always customers, who have the strength and a positive attitude towards the product" (Frimayasa & Suratradi, 2017).

Customer loyalty is a measure of customer attachment to a brand. This measure is able to provide an idea of whether or not customers may switch to another service brand, if the product brand is found to have a change, both regarding price and other attributes. Customer loyalty is a customer's commitment to a brand, brand image, based on a positive attitude and is reflected in the consistent return of customers. One example of a positive attitude given by loyal patients includes repeat purchases, trying to find products from one product to another even though they are far away, and also no longer considering other brands to buy other than the product brands that are often purchased. Customer loyalty not only increases the value in the business but can also attract new customers. In the short term, improving customer loyalty will bring profits to product services. In the long run, improving loyalty will generally be more profitable, namely, customers are willing to pay higher prices, provide cheaper services, and are willing to recommend to new customers.

### 3. RESEARCH METHODS

This study uses associative research, which is research that proves and finds a relationship between two or more variables (Sugiono, 2017). This study analyzes and examines the effect of the independent variables (product quality and service quality) and the dependent variable (consumer loyalty). Research data processing is assisted by SPSS 21.0 application program tools and various tests carried out include:

#### 1. Descriptive Analysis Method

The descriptive analysis method is a method used to present quantitative data in descriptive form. The descriptive analysis describes or describes the data as it is.

#### 2. Classical Assumption Test

The classical assumption test is a prerequisite for multiple regression analysis, this test must be met so that the parameter and regression coefficient estimates are not biased. This classical assumption test includes normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test.

#### 3. Normality Test

In this study, the normality of the data was tested using the Kolmogorov-Smirnov test (Kolmogorov-Smirnov Test) by looking at the significance of the resulting residuals and the normal probability plot graph approach. Detect normality by looking at the spread of data (points) on the diagonal axis of the graph.

#### 4. Multicollierity Test

Multicollinearity test is a test carried out to ascertain whether in a regression model there is intercorrelation or collinearity between independent variables.

#### 5. Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. If the variance of the residual from one observation to another observation remains, it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is a model that does not occur heteroscedasticity (Ghozali, 2013).

#### 6. Multiple Linear Regression Analysis

In this study, the normality of the data was tested using the Kolmogorov-Smirnov test (Kolmogorov-Smirnov Test) by looking at the significance of the resulting residuals and the normal probability plot graph approach. Detect normality by looking at the spread of data (points) on the diagonal axis of the graph.

#### 7. Individual Significance Test (Test Statistical t)

The t statistical test shows how far the influence of one independent variable is individually in explaining the dependent variable. This partial test is done by comparing the value of (alpha) with the p-value. If the p-value < (0.05), then H0 is rejected. So it can be said that there is a partial influence between the independent variable and the dependent variable, and vice versa.

#### 8. Simultaneous Significance Test (F)

The F statistical test shows how far the influence of the independent variables simultaneously in explaining the dependent variable. This simultaneous test is carried out by comparing the value of (alpha) with the p-value. If the p-value < (0.05), then H0 is rejected. So it can be said that there is a simultaneous influence between the independent variable and the dependent variable, and vice versa. If the p-value > (0.05), then H0 is accepted, which means that there is no effect between the independent variables on the dependent variable simultaneously.

## 4. RESEARCH RESULT

### Validity test

A valid instrument means that the measuring instrument used to obtain data (measures) is valid, valid means that the instrument can be used to measure what should be measured.

Statistical techniques for validity testing are:

1. Correlate the score of a questionnaire number with the total score of all items
2. If the correlation value (r) obtained is positive, it is possible that the item being tested is valid
3. However, even though it is positive, it is also necessary to see whether the calculated correlation value is significant or not.

The criteria for concluding to determine whether the instrument is valid or not are as follows:

- Reject H<sub>0</sub> if the calculated probability set probability is 0.05 (sig.2-tailed 0.05)
- Accept H<sub>0</sub> if the calculated probability set probability is 0.05 (sig.2-tailed 0.05)

Product Quality validity test results

Items	Correlation value	Probability	Description
Item 1	0,810 (Positif)	0,000< 0,05	Valid
Item 2	0,821 (Positif)	0,000< 0,05	Valid
Item 3	0,787 (Positif)	0,000< 0,05	Valid
Item 4	0,831 (Positif)	0,000< 0,05	Valid
Item 5	0,845 (Positif)	0,000< 0,05	Valid
Item 6	0,831 (Positif)	0,000< 0,05	Valid
Item 7	0,830 (Positif)	0,000< 0,05	Valid
Item 8	0,714 (Positif)	0,000< 0,05	Valid
Item 9	0,720 (Positif)	0,000< 0,05	Valid
Item 10	0,683 (Positif)	0,000< 0,05	Valid

Source: data processed by SPSS 21.0

Service Quality Validity Test Results

Items	Correlation value	Probability	Description
Item 1	0,532 (Positif)	0,000< 0,05	Valid
Item 2	0,582 (Positif)	0,000< 0,05	Valid
Item 3	0,492 (Positif)	0,000< 0,05	Valid
Item 4	0,611 (Positif)	0,000< 0,05	Valid
Item 5	0,582 (Positif)	0,000< 0,05	Valid
Item 6	0,593 (Positif)	0,000< 0,05	Valid
Item 7	0,486 (Positif)	0,000< 0,05	Valid
Item 8	0,750 (Positif)	0,000< 0,05	Valid
Item 9	0,710 (Positif)	0,000< 0,05	Valid
Item 10	0,212 (Positif)	0,035 < 0,05	Valid

Source: data processed by SPSS 21.0

Of the 10 price statement items above, it shows all items of service quality statements with probability < 0.05, this means that H<sub>0</sub> is rejected. H<sub>a</sub> is accepted.

Customer Loyalty validity test results

Items	Correlation value	Probability	Description
Item 1	0,530 (Positif)	0,000< 0,05	Valid
Item 2	0,605 (Positif)	0,000< 0,05	Valid
Item 3	0,467 (Positif)	0,000< 0,05	Valid
Item 4	0,680 (Positif)	0,000< 0,05	Valid
Item 5	0,491 (Positif)	0,000< 0,05	Valid
Item 6	0,660 (Positif)	0,000< 0,05	Valid
Item 7	0,588 (Positif)	0,000< 0,05	Valid
Item 8	0,799 (Positif)	0,000< 0,05	Valid
Item 9	0,798 (Positif)	0,000< 0,05	Valid
Item 10	0,472 (Positif)	0,000< 0,05	Valid

Source: data processed by SPSS 21.0

Of the 10 price statement items above, it shows that all of the Customer Loyalty statement items have a probability < 0.05, which means that the H<sub>0</sub> is rejected. H<sub>a</sub> is accepted.

### Reliability Test

A reliable instrument is an instrument that, when used several times to measure the same object, will produce the same data. Then the product-moment correlation technique is said to be reliable if the results of Cronbach's alpha > 0.60.

Statistical techniques for reliability testing are:

1. Split the instrument into two parts (Odd and even instruments).
2. Correlate odd total scores, with even total scores, with the product-moment correlation statistic (r).
3. Enter the correlation value (r) obtained into the spearman brown formula.

The criteria for concluding to determine whether the instrument is reliable or not is if the reliability coefficient value (spearman brown/RI) is 0.6 then the instrument has good/reliable/trustworthy reliability.

Reliability test results

Variable	Reliability value
Product quality	0,927
Service quality	0,750
Customer loyalty	0,814

Source: data processed by SPSS 21.0

From the results of the reliability test above, the reliability value is > 0.60, meaning that all instrument variables are good and reliable.

### Classic assumption test

#### Normality test

The normality test aims to see whether, in the regression model, the dependent variable (product quality and service quality) and the independent (customer loyalty) has a normal distribution or not. The normality test can be seen on the probability value, the data is normal if the Kolmogorov Smirnov value is not significant (Asymp.sig(2-tailed) > 0.05 and If the data spread around the diagonal line and follows the direction of the diagonal line, the regression model fulfills the assumption of normality. The results of the normality test in this research study use the PP plot and the results can be seen in the following figure:

#### One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
N	100
Normal Parameters <sup>a</sup>	
Mean	.000000
Std. Deviation	2.6032545
Most Extreme Differences	
Absolute	.103
Positive	.103
Negative	-.059
Kolmogorov-Smirnov Z	1.035
Asymp. Sig. (2-tailed)	.235

a. Test distribution is Normal.

Source: data processed by SPSS 21.0



From the results of the Kolmogorov Smirnov table above, it can be seen that the Amp.Sig. (2-tailed) value of  $0.235 > 0.05$  can be concluded that this regression model data is normally distributed.

#### Multicollinearity Test

The multicollinearity test aims to test whether there is a regression model found there is a strong correlation between the independent variables. A good regression model should have multicollinearity. To detect the presence or absence of multicollinearity by looking at the value of the variance inflation factor (VIF) and the tolerance value. The value to indicate the presence or absence of multicollinearity is if the tolerance value is 0.10 or equal to the VIF value 10 then there is no multicollinearity between the independent variables. The following are the results of the multicollinearity test:

#### Multicollinearity Test Results

##### Coefficients<sup>a</sup>

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	3.450	1.843		1.871	.064		
	Product quality	.187	.039	.255	4.714	.000	.682	1.467
	Service quality	.766	.057	.729	13.491	.000	.682	1.467

a. Dependent Variable: customer loyalty

Source: data processed by SPSS 21.0

#### Test Criteria:

1. There is multicollinearity if the Tolerance value is  $< 0.10$  or VIF value  $< 10$
2. There is no multicollinearity if the Tolerance value is  $> 0.10$  or VIF value  $> 10$ . From the table above, it can be seen that the independent variable, namely product quality, has a tolerance value of  $0.682 > 0.10$ , service quality has a tolerance value of  $0.682 > 0.10$ , and a VIF value. product quality is 1.467 and service quality is 1.467 (not exceeding 4 or 5) so that there is no multicollinearity in the independent variables (product quality and service quality) of this study.

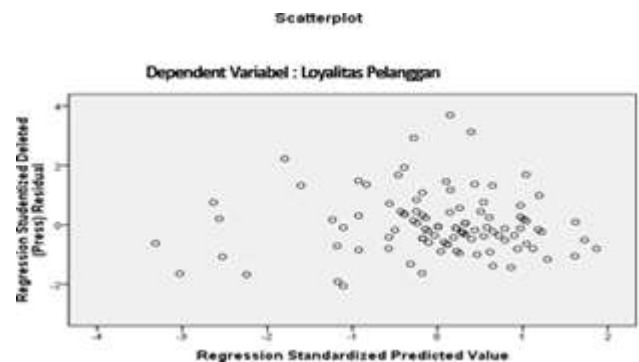
#### Heteroscedasticity Test

Heteroscedasticity aims to test whether, in the regression model, there is an inequality of variance from the residuals from another observation. If the residual variation from one observation to another observation remains, it is called homoscedasticity, and if the variance is different it is called heteroscedasticity. A good model is that there is no heteroscedasticity.

Heteroscedasticity can be detected in several ways, including using the scatterplot test. In the scatterplot test, if there is a certain pattern. Such as dots that form a regular pattern

(wavy, widen, and then narrow), indicates that heteroscedasticity has occurred. If there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then there is no heteroscedasticity.

#### Heteroscedasticity.



The picture above shows the points spread randomly, do not form a clear/regular pattern, and are spread both above and below the number 0 on the Y-axis. Thus, there is no heteroscedasticity in the regression model.

#### Multiple Linear Regression Analysis

Multiple linear regression analysis to analyze whether the regression model used in the study is the best.

#### Multiple Linear Regression Results

##### Coefficients<sup>a</sup>

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	3.450	1.843		1.871	.064		
	Product quality	.187	.039	.255	4.714	.000	.682	1.467
	Service quality	.766	.057	.729	13.491	.000	.682	1.467

a. Dependent Variable: customer loyalty

Source: data processed by SPSS 21.0

From the calculations using the SPSS version 21.0 program in the form of a multiple linear regression model as follows:

$$Y = a + b_1X_1 + b_2X_2 + e$$

$$a = 3,450$$

$$b_1 = 0,187$$

$$b_2 = 0,766$$

So the multiple linear regression equation for product quality and service quality on Indihome Witel Tangerang Customer Loyalty is

$$Y = 3,450 + 0,187 X_1 + 0,766 X_2$$

Information:

Y = Customer Loyalty

X1 = Product quality

X2 = Service Quality

From these equations it can be explained that:

a. If  $X_1 = 0$ ,  $X_2 = 0$ ,  $Y = 3,450 = a$

This means that the quality is not good, the quality of service is not valuable, then customer loyalty increases by 3,450 and it is not significant, which means it is not true that the quality of service is bad and customer loyalty is not worth increasing significantly.

b. If  $X_1$  increases then Y changes by  $b_1 = 0.187$

This means that if the quality of the product increases then customer loyalty will increase by 1.87 or in a percentage of 100% to 18.7% this is revealed based on the results of the answers to the questionnaire statements answered by consumers that consumers will look for good quality products.

c. If  $X_2$  changes then Y changes by 0.766

This means that if the quality of service increases, then customer loyalty will increase by 0.766 or in a percentage of 100% to 76.6% this is revealed based on the results of the answers to statements from the questionnaires answered by consumers who are looking for satisfactory service so that customer loyalty can be maintained.

#### Partial Correlation Test (t-Test)

Partial Correlation Test (t-test) shows how far the influence of one explanatory variable is individually in explaining the variation of the dependent variable. With the SPSS program the test is carried out using a significance level of 0.05 ( $\alpha = 5\%$ ) Value for  $n = 100 - 2 = 98$  is 1.660

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.450	1.843		1.871	.064		
	Product quality	.187	.039	.255	4.714	.000	.682	1.467
	Service quality	.766	.057	.729	13.491	.000	.682	1.467

a. Dependent Variable: customer loyalty

#### a) The Effect of Product Quality on Customer Loyalty

Based on the results in the table above, it can be partially described as follows:

##### 1) Hypothesis:

$H_0: r_{xy} = 0$  (There is no correlation between product quality and customer loyalty of Indihome Witel Tangerang).

$H_1: r_{xy} \neq 0$  (there is a correlation between product quality and customer loyalty of Indihome Witel Tangerang).

#### 2) Partial Correlation Test (t-test) as follows:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = 4,714$$

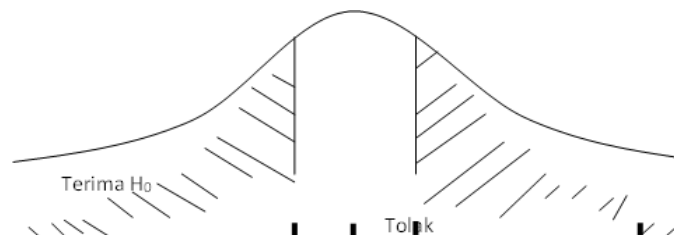
With  $t_{table} = \pm t(\alpha/2, 1) = 1.660$  where  $\alpha = 5\%$  degree of error.

##### 3) Test Criteria:

a) Accept  $H_0$  if:  $-t_{table} < t_{table}$ , Hallain Rejects  $H_0$  If  $-t_{table} < t_{table}$

It turns out that  $-1.660 < 4.714 > 1.660$  means rejecting  $H_0$

b) Or in the normal distribution t



$t_{table} 0 + t_{table} + t_{hitung}$

- 1.660 1.660 4.714

Hypothesis Testing Criteria Partial correlation test Product quality.

##### 4) Conclusion:

$H_0$  is rejected, it means that there is a correlation between product quality and customer loyalty Indihome Witel Tangerang. Or hypothesis testing, in this case, is done with the help of SPSS program data processing, it is said to be significant if the value of  $\text{sig} < \alpha = 5\%$  and it turns out 0.000  $< 5\%$  then there is an effect There is a significant relationship between product quality and customer loyalty Indihome Witel Tangerang.

#### b) Influence of Price on Purchase Decision

Based on the results in the table above, it can be partially described as follows:

##### 1) Hypothesis:

$H_0: r_{xy} = 0$  (There is no correlation between service quality and customer loyalty of Indihome Witel Tangerang).

$H_1: r_{xy} \neq 0$  (there is a correlation between service quality and customer loyalty of Indihome Witel Tangerang).

#### 2) Partial Correlation Test (t-test) as follows:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = 13,491$$

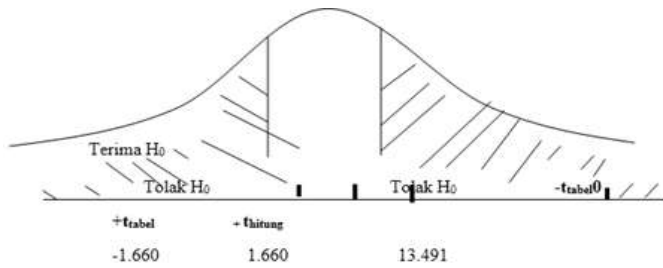
With  $t_{table} = \pm t(\alpha/2, 1) = 1.660$  where  $\alpha = 5\%$  degree of error.

##### 3) Test Criteria:

a) Accept  $H_0$  if  $-t_{table} < t_{table}$ , Hallain Rejects  $H_0$  If  $-t_{table} < t_{table}$

It turns out that  $13,491 > 1,660$  means rejecting  $H_0$

b) Or in the normal distribution t



Hypothesis Testing Criteria Price partial correlation test

4) Conclusion:

H0 is rejected, meaning that there is a correlation between service quality and customer loyalty at Indohome Witel Tangerang. Or hypothesis testing, in this case, is carried out with the help of SPSS program data processing, it is said to be significant if the value of  $\text{sig} < \alpha = 5\%$  and it turns out to be  $0.000 < 5\%$  then there is a significant influence between service quality and customer loyalty at Indohome Witel Tangerang.

Simultaneous correlation test (F test)

A simultaneous correlation test (F test) was carried out to find out whether the independent variables (Product Quality and Service Quality) which were included in the model had a joint effect on the dependent variable (customer loyalty) Indihome Witel Tangerang. The step to perform the F test was to determine the value The calculated F and the calculation table are F table dk =  $100-2-1=97$ , = 5% F table = 3.09.

1) Hypothesis

H0:  $\text{rx1x2y} = 0$  (There is no correlation between product quality and service quality with Indohome Witel Tangerang customer loyalty)

H1:  $\text{rx1x2y} \neq 0$  (there is a correlation between product quality and service quality with Indohome Witel Tangerang customer loyalty)

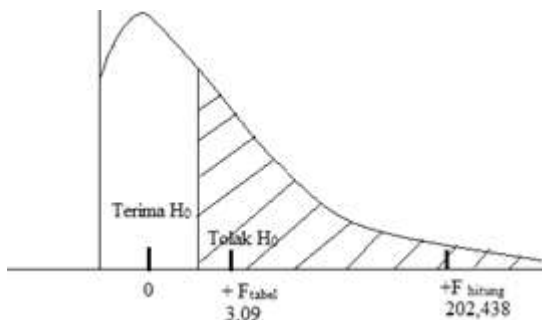
The statistical test used is the F . simultaneous correlation test

$$F_h = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

With F table = F ( $\alpha/2$ , - k1), dk=  $100-2-1=97$ , = 5%, Ftable=3.09

2) Test Criteria:

a) Accept H0 If F Calculate FTable, other things Reject Ho If F Calculate F Table it turns out that  $202.438 > 3.09$  means rejecting HO Or in the F . curve distribution



Hypothesis Testing Criteria Simultaneous correlation test

3) Conclusion:

Reject H0. This means that there is an influence of product quality and service quality on the loyalty of Indohome Witel Tangerang customers. Or testing this hypothesis is done by processing SPSS program data, it is said to be significant if the value of  $\text{sig} < \alpha = 5\%$  and it turns out  $0.000 < 5\%$  means a significant effect of product quality and service quality on customer loyalty Indihome Witel Tangerang.

Coefficient of Determination (R2)

The coefficient of determination knows how much the percentage contribution variable product quality and service quality in explaining variations in customer loyalty variables. Furthermore, by looking at the R-Square, it can be seen how the actual value of the contribution of the two independent variables. Product quality and service quality to the dependent variable of customer loyalty.

The result of the coefficient of determination (R2)  
Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899 <sup>a</sup>	.808	.804	2.62997

a. Predictors: (Constant), product quality, service quality

b. Dependent Variable: customer loyalty

From the table above, it can be seen that the R-Square value is 0.808 or 80.8%. This means that the contribution of rice quality and price to purchasing decisions is 80.8%, the remaining 19.2% is influenced by other variables not examined in this study, namely brand image, service quality, and location.

## 5. CONCLUSION

Based on the results of the research and discussion that have been stated previously, the following conclusions can be drawn:

1. There is a significant influence between product quality on Indihome Witel customer loyalty which is marked with  $0.000 < 5\%$ , this is shown if good product quality and service quality are maintained and even improved it will affect customer loyalty.

2. There is a significant influence between service quality on customer loyalty which is marked with  $0.000 < 5\%$ , this is indicated if better service quality can affect customer loyalty.
3. There is a joint influence between product quality and service quality on customer loyalty at Indihome Witel Tangerang in terms of the coefficient of determination ( $R^2$ ) of 80.8%, this shows what if good product quality and service quality will affect loyalty.

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