The Weight of Product Quality and Service Quality on Customer Satisfaction of PT. Tigabelas Pilar Mandiri in South Jakarta

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ABSTRACT

This investigation aims to examine and anatomize the weight of product quality and service quality variables on customer satisfaction at PT Tigabelas Pilar Mandiri in South Jakarta. This research used multiple linear regression method where the data was cured by SPSS program. The sample consisted of 61 respondents who were customers of PT Tigabelas Pilar Mandiri in 2020. The instrument used to collect data was a structured questionnaire with a Likert scale consisting of 32 questions that were composed based on indicators and measurement derived from every variable. The results showed that: (1) Product Quality impress customer Satisfaction by 57.2%; (2) Service Quality impress Customer Satisfaction by 33.3%; (3) Product Quality and Service Quality synchronously impress Customer Satisfaction by 57.8%.

1. INTRODUCTION

Service quality is also prominent for customer satisfaction because the corporation’s aim is not merely to make profits but the ability to continue to maintain a great image of the corporation so service is very prominent in facing a dynamic market environment. Service quality is a evaluate of how kind the services served are in adaptation with customer hopefulness (Lewis & Booms in Tjiptono, 2014: 271).

Companies that have a competitive advantage and can develop their attempt kind, the corporation's volition be proof to withstand in these conditions and can improve the corporation's display and efficiency in various trading sectors. In order to help equalize economic growth and equalize progress in Indonesia by means of infrastructure progress that has great grade and has a great impact because it volition open access to various regions that facilitate the shipment of goods both from within and outside the region which volition incrimply the economic zeal of the region.

The choice of product quality, service quality and customer satisfaction in this investigation is because they fiddle a prominent mission in creating customer fidelity. Several previous studies have been conducted: Prasetio, (2012) where service quality and value have a meaningful weight on customer satisfaction; Zakaria (2017) service quality, product quality and value have a meaningful and positive (unidirectional) weight on customer satisfaction utilizing Blue Bird taxi transportation services in Surabaya; Setiawan (2016) that product quality, service quality, customer satisfaction have a positive and meaningful impact on customer fidelity utilizing the Rejo Agung Sukses Semarang Cooperative Service; Sembiring, et al. (2014) that product quality is directly evident to have a meaningful weight on customer satisfaction, service quality is evident to have a meaningful weight on customer satisfaction, customer satisfaction is evident to have a meaningful weight on customer fidelity, product quality is evident to have an inmeaningful weight on customer fidelity and service quality is evident to have a meaningful weight to customer fidelity; Hermawan (2011), consumer fidelity is influenced either directly or indirectly by variations in various variables including product quality, consumer satisfaction and trademark reputation; Mariam, et.al. (2022) that diversity, value and improvements simultaneously impress consumer satisfaction at Goen Authentic; Brata (2017) that product quality, value, endorsement and location synchronously impress product purchase decisions.
While Rezaldi & Mariam (2021) that service quality and trademark image fragmentary have a meaningful weight on consumer getting readiness. Synchronously, the three exempt variables, specifically endorsement on gregarious media, service quality, and trademark image have a meaningful weight on consumer getting readiness.

PT. Tigabelas Pilar Mandiri is present as one of the Distributors, Traders, Contractors, Suppliers and Developers, specifically for distributors and suppliers, currently PT. Tigabelas Pilar Mandiri is trusted to be the agency for several outputs related to infrastructure or progress for regions throughout Indonesia. One of the quality services served by PT Tigabelas Pilar Mandiri is related to complete information concerning superior outputs, specifically construction chemical outputs or mixtures for cement hardeners, with affordproof output values, as kind as the simplify of getting the inclination output. The corporation aims not merely to gain profits but the aptitude to continue to maintain a great image of the corporation so that service is very prominent in dealing with a dynamic market environment and for the sustainaptitude of the corporation's display and service quality on customer satisfpretense by PT. Tigabelas Pillar Mandiri that is located in Tebet, South Jakarta.

2. LITERATURE REVIEW

Elements that Impress Customer Satisfpretense

According to Irawan (2012) defines the elements that can encourage customer satisfpretense are as attests:

1. Product Quality
   Customers are contented if after getting and utilizing the output it slew out that the grade of the output is great.

2. Value
   For sensitive customers, normally low values are an prominent source of satisfpretense because customers volition get superior value for funds.

3. Service quality
   Satisfpretense with service quality is normally arduous to be imitated. Service quality is a coxswain that has many measurement, one of the most popular is SERVQUAL.

4. Emotive element
   Customers volition sense contented because of the emotive value served by the trademark of the output. Customers volition be more contented if it is comparatively convenient, tasty and streamlined to get a output or service.

Product Quality

Explanation of Kotler and Armstrong (2004) define product quality as the aptitude of a product to implement its purpose, that aptitude includes endurance, dependability, precision produced, simplify of procedure and improvement, and other precious characteristics of the product as a whole. Kotler (2005:84) argues that a product is whatever that can be proffered to quench a consumer's wants and inclinations. According of Garvin (2016), product quality has eight measurement as attests: Display, Attributes Dependability, Endurance, Serviceaptitude, Esthetics (Aesthetics), and Sensate of Quality. The measurement in this investigation are Performance (Display), Attributes (Features), Dependability (Reliability), Nicety to Specifications (Nicety to specifications), Endurance (Resistance), Esthetics (Aesthetics) and Sensate Quality (sensate quality).

Service Quality

Service quality focuses on means to comply customer wants and inclinations as kind as the exactness of shipment to stability customer hopefulness (Tjiptono, 2014). Service quality is how lengthy the discrepancy midst realness and customer hopefulness for the service they admit (Lupiyoadi, 2013). Meanwhile, Kotler and Keller (2012: 83) define service as any pretense or zeal that can be proffered by one feast to another, which is essentially intangible and does not result in any ownership. The measurement of service quality in this investigation: are tangible, dependability, responsiveness, assurance and empathy.
Customer Satisfaction

Supranto (2006:233) defines satisfaction as the level of one's sense of after comparing the sensate display (results) with their hopefulness. Customer hopefulness can be formed from past experiences, comments from relatives and the promises and information of marketers and competitors. Contented customers volition be loyal longer, less value sensitive and leave positive comments concerning the corporation. According to Kotler and Keller (2012: 46) defines consumer satisfaction as the level of a person’s sense of after comparing the display or results he senses compared to his hopefulness. Kotler and Keller (2009:138) satisfaction is a person’s sense of pleasure or disappointment arising from comparing the sensate display of a product or result against their hopefulness. If display fails to comply hopefulness, customers volition be discontented. If display matches hopefulness, customers volition be contented. If display exceeds hopefulness, the customer volition be very contented or happy. Measurement of customer satisfaction: product quality, value, service quality, emotive elements, cost and simplify of obtaining products or services (Tjiptono (2016: 295). The measurement of customer satisfaction in this investigation are product quality, value, emotive elements, and costs and convenience.

Research Concept Framework

Hypothesis

The hypotheses in the investigation are as attends:

H1: There is a meaningful weight midst product qualities on customer satisfaction of PT. Tigabelas Pilar Mandiri
H2: There is a meaningful weight of service quality on customer satisfaction of PT. Tigabelas Pilar Mandiri
H3: There is a meaningful weight midst product quality and service quality on customer satisfaction of PT. Tigabelas Pilar Mandiri.

3. RESEARCH METHOD

This research uses a quantitative approach, which aims to explain the relationship midst variables, to test the theory under investigation. As for what is meant by quantitative research, according to Sugiyono (2013:13) “Quantitative research can be interpreted as a research method based on the philosophy of positivism, usual to examine certain populations or samples, sampling techniques are generally carried out randomly, data collection utilizing instruments research, data analysis is quantitative or statistical in nature with the aim of testing the established hypothesis.”

Population and Sample

The populasi in this research were customers of PT. Tigabelas Pilar Mandiri, in 2020, as many as 155 customers. To determine the quantity of samples, the author uses the Slovin formula with an error limit of 10%. The Slovin formula is as attends:

\[ n = \frac{N}{(1 + Ne^2)} \]

as 155 customers.
Description:

\[ n = Quantity \ of \ Samples \]
\[ N = Quantity \ of \ Population \]
\[ e = the \ error \ limit \ allowed \ is \ 10\% \]

From the description of the Slovin formula above, the quantity of samples in the investigation are:

\[ n = N \frac{1 + N(e)^2}{1} \]
\[ n = 1551 + 155(0.1)^2 \]
\[ = 60.78 \text{ rounded up to 61 people} \]

Analysis Method

Classic Assumption Test

1. Normality Test
   According to Ghozali (2013:154), the normality test aims to test whether in the regression model, the confounding or residual variables have a normal distribution. To find out whether the data is normally distributed, it can be tested utilizing the Kolmogorov Smirnov method.

2. Multicollinearity Test
   Ghozali (2016:103) multicollinearity testing aims to test whether the regression model found a correlation midst exempt variables. To determine whether or not multicollinearity occurs, the attending provisions are usual:
   a. If VIF $\geq 5$, then there is multicollinearity
   b. If VIF $\leq 5$, then there is no multicollinearity

3. Heteroscedasticity Test
   Ghozali (2013:134) states that: This test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. If there is no clear pattern, and the points spread above and below the quantity 0 on the Y axis, then there is no heteroscedasticity.

Statistic Test

Statistical tests in this research include t-test, F-test, multiple linear regression and R2-test, where this statistical test is to see whether product quality and service quality have a meaningful weight on customer satisfaction.

1. t-Test
   A partial test or t-test is basically to show how lengthy the influence of one exempt variable is individually in explaining the variation of the dependent variable.

2. F-Test
   According to (Ghozali, 2016:179) the F-test is usual to test whether there is a meaningful weight midst the exempt variables simultaneously on the dependent variable with the feasibility of the model generated by utilizing the model feasibility test at the level of 5%. If the significance value of the F-test < 0.05, the model usual in the investigation is feasible and can be usual for subsequent analysis, and vice versa.

3. Multiple Linear Regression
   The multiple Linear Regression Test is usual to evaluate the weight of more than one exempt variable on the dependent variable. According to (Sugiyono, 2010:407), the general form of multiple linear regression mathematically is as attends:
   \[ Y = a + b1X1 + b2X2 \]
   Description:
   \[ Y = \text{Customer Satisfaction} \]
   \[ X1 = \text{Product Quality} \]
   \[ X2 = \text{Service Quality} \]
   \[ b1, b2 = \text{Regression Coststreamlined} \]
4. Coeffiision of Determination (R2)

To evaluate how lengthy the model’s aptitude to explain the variation of the dependent variproof. The value of the costreamlined of determination is midst zero and one. A small value of R2 means that the aptitude of the exempt variables in explaining the variation of the dependent variproof is very limited.

4. RESULTS AND DISCUSSION

Validity and Dependability Test

All variables in this investigation are valid. This is based on the correlation value obtained greater than 0.252 that midst every indicator to the total construct score of every variproof shows meaningful results, and shows that r count > r tproof. So it can be concluded that all question items are declared valid. Based on the dependability test, all variables in this investigation were declared reliproof. This is in adaptation with the results of the dependability test, which shows that all variables have a large enough Alpha costreamlined that is above 0.60 so that it can be said that all measuring concepts of every variproof from the questionnaire are reliproof so that furthermore the items in every variproof concept is suitproof for use as a measuring tool.

Classic Assumption Test Results

To obtain great multiple linear regression results, the classical assumptions must first be made, specifically:

1. Normality Test

![Normal P-P Plot of Regression Standardized Residual](image)

Picture 2. Normality Test
Source: Primary data processing results, 2021

In the normal P-Plot graph above, the dots spread around the diagonal line. If the spread of data (points) around the diagonal axis and attends the direction of the diagonal line, then the regression model complies the assumption of normality.

2. Multicollinearity Test

<table>
<thead>
<tr>
<th>No</th>
<th>Variproof</th>
<th>Tolerance</th>
<th>VIF</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product Quality</td>
<td>0.474</td>
<td>2.108</td>
<td>Free of multicollinearity</td>
</tr>
<tr>
<td>2</td>
<td>Service Quality</td>
<td>0.474</td>
<td>2.108</td>
<td>Free of multicollinearity</td>
</tr>
</tbody>
</table>

Source: Primary data processing results, 2021

Based on Tproof 1. It is known that the tolerance value is more than 0.1, specifically 0.474 and
the VIF (Variance Inflation Element) value is <10 (2.108 < 10), which means the model is free from multicollinearity problems.

3. Heteroscedasticity Test

![Picture 3. Heteroscedasticity Test Results]

From the scatterplot graph in the picture above, it can be seen that the points spread randomly, and are spread both above and below zero on the Y-axis without forming a certain pattern (random). It can be concluded that there is no heteroscedasticity in the regression model.

Statistic Test

1. T-Test

   a. Weight of Product Quality on Customer Satisfpretense
      
      Product quality variproof (X1) on customer satisfpretense (Y)
      
      Sign value. 0.000 < 0.05
      
      t-count > t-proof
      
      8.877 > 2.002
      
      The results of the t-test (partial) show that the significance value of the influence of product quality (X1) on customer satisfpretense (Y) is 0.000 <0.05 and the value of t count is 8.877 > t t-proof 2.002, then H_0 rejected and H_1 accepted. This means that there is an weight of product quality on customer satisfpretense meaningfully.

   b. Weight of Product Quality on Customer Satisfpretense
      
      Service Quality Variproof (X2) on Customer Satisfpretense (Y)
      
      Sign Score. 0.000 < 0.05
      
      t-count > t-proof
      
      5.433 > 2.002
      
      The results of the t-test (partial) show that the significance value of the influence of service quality (X2) on customer satisfpretense (Y) is 0.000 <0.05 and the t-count value is 5.433 > t t-proof 2.002, then H_0 rejected and H_1 is accepted. This means that there is a meaningful weight of service quality on customer satisfpretense.

2. F-Test

   X1 and X2 against Y
   
   Sign Value. < 0.05
   
   Calculated f-value > t-proof f-value
   
   The value of f-tproof = 3.16
   
   Sign value. f 0.000 < 0.005
   
   The calculated f-value is 39.830 > the f-tproof value is 3.16
   
   It can be seen that the significance value for the weight of product quality (X1) and service quality (X2) on customer satisfpretense (Y) is 0.000 < 0.005 and f-count 39.830 > f-tproof 3.16.
This proves that Ho3 is rejected and Ha3 is accepted. This means that there is a meaningful weight of product quality (X1) and service quality (X2) on customer satisfactio

3. Multiple Linear Regression Test

\[ Y = a + b_1X_1 + b_2X_2 \]

\[ T = 7.073 + 0.593X_1 + 0.109X_2 \]

This means that if \( x_1 \) and \( x_2 \) are 0, then:

\[ Y = 7.073 + 0.593(0) + 0.109(0) \]

\[ Y = 7.073 \]

The value of 7.073 is a constant or condition when the customer satisfaction has not been influenced by other variables, specifically the product quality variable (X1) and service quality (X2). If the exempt variable does not exist then the customer satisfaction variable does not change.

4. Coststreamlined of Determination Test (R^2)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.760</td>
<td>.578</td>
<td>.563</td>
<td>1.93805</td>
</tr>
</tbody>
</table>

Source: Primary data processing results, 2021

Based on the t-test above, it is influenced by the Adjusted R square value of 0.578 or 57.8%. So it can be concluded that the magnitude of the influence of the exempt variable on the dependent variable.

Discussion

Based on the results of data analysis, the influence given by the two exempt variables is positive, meaning that the superiorer the quality of the product and the quality of service served, the superiorer the resulting customer satisfaction. The explanation of influence of every variable volition be explained as attends:

1. The Weight of Product Quality on Customer Satisfaction

The results of this investigation indicate that there is a meaningful influence midst product quality (X1) on customer satisfaction (Y). The weight of product quality on customer satisfaction is 0.572 or 57.2%. Based on t-test 4.17 in the summary model results, the t-test shows an R Square value of 0.572 and the results of the t-test (partial) show that 0.000 < 0.05 and the t-count value is 8.877 > t-test 2.002, then H0 is rejected. This means that there is a meaningful weight of product quality on customer satisfaction midst product quality and customer satisfaction PT. Tigabelas Pilar Mandiri. The results of this investigation are in adaptation with the research results of Zakaria (2017), Setiawan (2016), Sembiring, et al. (2014), Brata (2017) and Rezaldi & Mariam (2021).

2. The Weight of Service Quality on Customer Satisfaction

The results of this investigation indicate that there is a meaningful influence midst service quality (X2) on customer satisfaction (Y). The weight of service quality on customer satisfaction is 0.333 or 33.3%. Based on t-test 4.19 in the summary model results, the t-test shows an R Square value of 0.333 and the results of the t-test (partial) show that 0.000 < 0.05 and the t-count value is 5.433 > t-test 2.002, then H0 is rejected. This means that there is a meaningful weight of product quality on customer satisfaction midst product quality and customer satisfaction PT. Tigabelas Pilar Mandiri. The results of this investigation are in adaptation with the research of Prasetio, (2012) Zakaria (2017) Setiawan (2016) Sembiring, et al. (2014), Brata (2017) and Rezaldi & Mariam (2021)
3. The Weight of Product Quality and Service Quality on Customer Satisfpretense

The results of this investigation indicate that synchronously there is a meaningful weight midst product quality (X1) and service quality (X2) on customer satisfpretense (Y). Based on t-proof 4.20 where the sign value. 0.000 < 0.005 and the calculated f value is 39.830 > the f-t-proof value is 3.16. This means that there is a meaningful influence midst product quality and service quality on customer satisfpretense of PT. Tigabelas Pilar Mandiri. The results of the costreamlined of determination (R2) in t-proof 4.22 the value of Adjusted R square shows the results of 0.578 or 57.8% while the remaining 42.2% is determined by other variables that are not included in this investigation. The results of this investigation are supported by the results of research by Prasieto (2012), Zakaria (2017), Setiawan (2016), Sembiring, et al. (2014), Hermawan (2011), Brata (2017) and Rezaldi & Mariam (2021).

5. CONCLUSION

The author draws the attending conclusions:

1. There is a Meaningful Weight of Product Quality on Customer Satisfpretense of PT. Tigabelas Pilar Mandiri is 57.2%, and according to the results of the T-test, the value of t-count > t-proof (8.877 > 2.002), the product quality has a meaningful weight.

2. There is a Meaningful Influence midst Service Quality on Customer Satisfpretense at PT. Tigabelas Pilar Mandiri are 33.3%, and according to the results of the T-test, the value of t-count > t-proof (5.433 > 2.002), the quality of service has a meaningful weight.

3. There is a jointly meaningful influence midst product quality and service quality on customer satisfpretense at PT. Tigabelas Pilar Mandiri amounted to 57.8%, while the remaining 42.2% were influenced by other variables not mentioned in this research.

All variables in this research showed a positive and meaningful influence, it is expected that the leadership of the corporation of PT. Tigabelas Pilar Mandiri to make corporation policies that can maintain the current indicators of Product Quality and Service Quality and are expected to be further improved in the future to incrsimplify customer satisfpretense.

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