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Brand, Service Quality, and Product Quality Towards Customers Purchasing Decisions at PT. Wahana Jaya Raya Medan

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ABSTRACT

This study aims to determine the effect of brand, service quality, and product quality towards customers purchasing decisions. This type of research is explanatory research. The entire population is 127respondents. Due to a large population, the sampling technique will be reduced by using the Slovin formula with an error tolerance level of 5% so that there are as many as 96 respondents in the study which will be distributed with questionnaires measured by a Likert scale. The data analysis used multiple linear regression analysis, and the coefficient of determination as well as simultaneous test, and partial test. The results showed that brand, service quality, product quality partially, andsimultaneously have a positive, and significant effect on purchasing decisions. Based on the results of this study, the implications for management are to further improve the brand, service quality, and product quality.

1. Introduction

Currently, there are a lot of companies that are engaged in selling electronics and it is causing a lot of competition. Meanwhile, companies facing decreased sales occurred at PT. Wahana Jaya Raya Medan. This company is engaged in the distribution of electronic goods such as refrigerators, air conditioners, washing machines, and televisions with various product brands. However, the company is currently facing a problem of decreasing product sales, especially products of the Polytron brand. Polytron products are well-known to consumers, but sales of Polytron products have not reached the target and have even decreased.

The purchase decision is directly related to the brand of the product the company offers. The electronic brands that the company sells include well-known products such as the Polytron brand. The decline in sales for television products was due to a product failing to sell to consumers where the product could not stand for use within months of damage. This causes consumer claims to the company so that consumers think the current Polytron television is not good enough. Whereas previously the Polytron brand television had good quality in the eyes of consumers.

The buying and selling activity of polytron products is related to the services provided by company employees. The company employs several employees to provide product information and market and sell Polytron products. The company has friendly and kind employees to provide services to consumers, but the number of employees owned by the company is limited. The quality of service has decreased due to the company's employees being slow to handle customer complaints and the product return process which takes a long time.

The Polytron products offered by the company do not meet customer expectations such as the Polytron brand LED TV lies in the absence of a curved shape and 3 D, this results in limited screen display facilities unlike screens in theaters and Polytron brand televisions, not all of them have digital signals to help produce images with better quality. Not all Polytron products have LEDs, so the quality of Polytron products has decreased.

2. Research Method

2.1 Location, and Time

This research will be conducted at PT. Wahana Jaya Raya Medan, located in Krakatau Ujung street No. A8, Medan. The research time is planned from August 2020 to December 2020.

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2.2 Population, and Sample

The population is all the customers who make a purchase as much as 127respondents. Because the total population used is as much as 127 respondents, the population will be reduced by using the Slovin formula with a 95% confidence level, andtolerance of 5%. Then itcan be seen that the number of samples in this study is as many as 96 respondents.

2.3 Data Collection Method

Collecting data through a questionnaire is done by asking questions to parties related to the problem under study. To assess respondents' responses, the author uses the Likert scale which uses several question items to measure individual behavior by responding to 5 choice points on each item.

2.4 Validity, and Reliability Test

The data obtained needs to be tested for its accuracy, and reliability so that the results of data processing can be more precise, and accurate. Therefore, it is necessary to know how high the validity, and reliability of the measuring instrument (instrument) used.

Based on the research, each variable of the questionnaire item that was tested for validity, all the questionnaires had met the valid and reliability criteriaand were eligible to be used as a questionnaire in further research.

3. Research, and Analysis

3.1 Normality Test

A good regression model is to have residuals that are normally distributed. There is some method to do the normality test such as histogram graphic, normal probability plot of regression graphic, and one sample Kolmogorov Smirnov statistic.

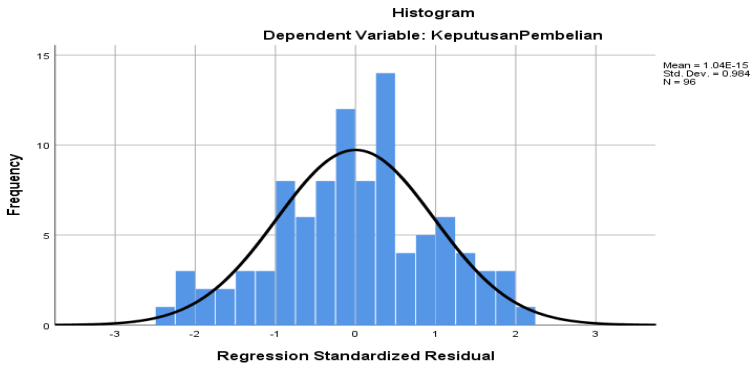

Fig 1 Histogram Graphic

Based on the picture above, it can be seen that the line forming a bell, not going left or right. This shows that the data is normally distributed, and meets the assumptions of normality.

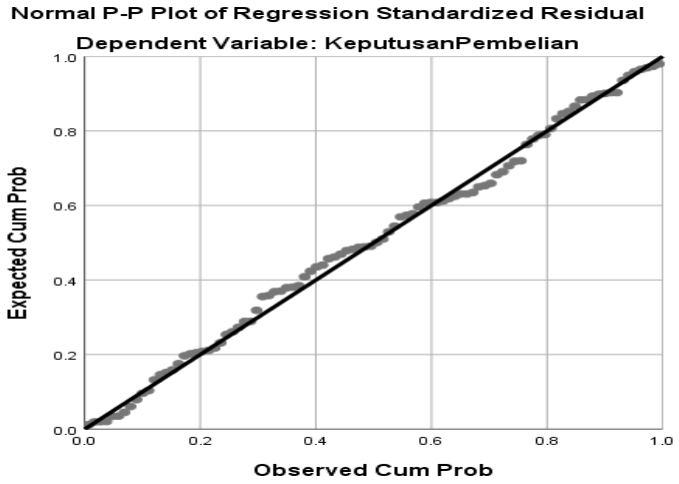

Fig 2 Normal Probability Plot of Regression Graphic

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Based on the picture above, it shows that the data (dots) spread around the diagonal line, and follows the diagonal line. So from this Fig, it is concluded that the regression model residuals are normally distributed.

Table 1
One-Sample Kolmogorov Smirnov Test

		Unstandardized Residual
N		96
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.96362963
Most Extreme Differences	Absolute	.051
	Positive	.046
	Negative	-.051
Kolmogorov-Smirnov Z		.051
Asymp. Sig. (2-tailed)		.200

a. Test distribution is Normal.
b. Calculated from data.
Source: Research Result, 2020

Based on the table above, the results of the Kolmogorov-Smirnov normality test prove that the significant value is greater than 0.05, namely 0.200, it can be concluded that the data is classified as normally distributed.

3.2 Multicollinearity Test

Multicollinearity is a condition in the regression model where there is a perfect or near-perfect correlation between independent variables where a good regression model should not have a perfect or nearly perfect correlation between the independent variables.

The commonly used test method is to look at the Tolerance, and Variance Inflation Factor (VIF) values in the regression model where the VIF value is less than 10, and has a Tolerance value of more than 0.1.

Table 2
Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Brand	.259	3.861
	Service Quality	.576	1.735
	Product Quality	.274	3.649

a. Dependent Variable: Purchasing Decision

Based on the table above, the test shows that all the variables have a tolerance value of more than 0.1, and VIF value less than 10 which can be concluded that there is no problem found in the multicollinearity test.

3.3 HeteroscedasticityTest

Heteroscedasticity is a condition wherein the regression model there is an inequality of variants from the residuals from one observation to another where a good regression model does not occur heteroscedasticity.

Various kinds of heteroscedasticity test, such as the Scatterplots test, which is done by looking at the pattern points on the graph that spreads randomly, and is not in the form of a pattern on the graph, it is stated that there is no heteroscedasticity problemand the Glejser test where if it is significant above 0.05 then it is stated that there is no problem in heteroscedasticity.

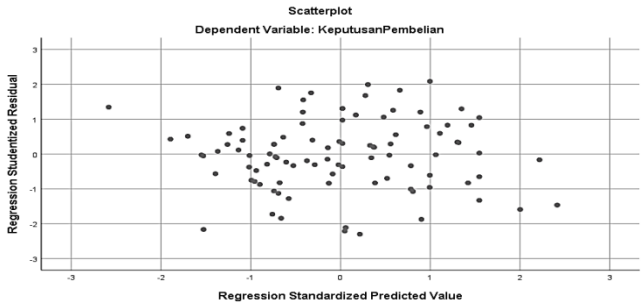

Fig 3 Scatterplot Graphic

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Based on the scatterplot graph presented, it can be seen that the dots spread r, andomly, and do not form a clear pattern, and are spread either above or below zero on the Y-axis.This means that there is no heteroscedasticity in the regression model, so the regression model can be used to predict performance based on the input of the independent variable.

Table 3
Glejser Test

Model		t	Sig.
1	(Constant)	.661	.511
	Brand	1.239	.219
	Service Quality	.748	.457
	Product Quality	-.982	.329

a. Dependent Variable: Purchasing Decision
Source: Research Result, 2020

Based on the table above, it can be seen that the level of significance of each variable is greater than 0.05. From the calculation results, and the level of significance above, it is not found that there is heteroscedasticity.

3.4 Multiple Linear Regression Analysis

Multiple regression analysis is an analysis to determine whether there is a partially or simultaneously significant influence between two or more independent variables on one independent variable.

Table 4
Multiple Linear Regression Analysis Test

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	10.033	2.055	
	Brand	.295	.101	.366
	Service Quality	.176	.063	.236
	Product Quality	.285	.127	.274

a. Dependent Variable: Purchasing Decision

$$Purchasing\ Decision = 10{,}033 + 0{,}295Brand + 0{,}176Service\ Quality + 0{,}285Product\ Quality \quad (1)$$

Based on the above equation, then: Constant (a) = 10.033. This means that if the independent variable, namely brand, service quality, andproduct quality are 0, then purchasing decisionis 10.033. Where if there is an improvement in brand, there will be an increase in purchasing decisionby 0.295. Likewise with service quality where if there is an improvement in service quality, purchasing decisionwill increase by 0.176. If there is an improvement in product quality, purchasing decisionwill increase by 0.285.

3.5 Coefficient Determination

Analysis of determination or also called R Square symbolized by R^2 is used to determine the magnitude of the influence of the independent variable (X) together on the dependent variable (Y) where the smaller the coefficient of determination, this means the effect of the independent variable (X) on the dependent variable (Y) is getting weaker. Conversely, if the coefficient of determination is closer to number 1, then the effect of the independent variable on the dependent variable is getting stronger.

Thus, if the coefficient determination is 0, this indicates that there is no percentage contribution of influence given by the independent variable to the dependent variable. However, if the coefficient of determination is 1, then there is a contribution that the independent variable gives to the dependent variable is perfect.

Table 4
Coefficient Determination Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.791[a]	.625	.613	3.01156

a. Predictors: (Constant), Product Quality, Service Quality, Brand
b. Dependent Variable: Purchasing Decision
Source: Research Result, 2020

Based on the table above, the value of the R Square coefficient of determination is 0.613. This shows that the variable ability of brand, service quality, andproduct quality explains the effect on purchasing decision by 61,3%. While the remaining 38,7% is the effectby other independent variables not examined in this study such as selling promotion, personal selling and others.

3.6 Simultaneous Hypothesis Test (F Test)

F test or regression coefficient test is used to determine whether simultaneously the independent variable has a significant effect on the dependent variable. In this case, to find out whether simultaneously the independent variable has a significant effect on the dependent variable or not. The test uses a significance level of 5%.

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The criteria for evaluating the hypothesis in this F test are:
H_0 Accepted if: F-count<F-table
H_α Accepted if: F-count> F-table

Table 5
ANOVA Test

Model		F	Sig.
1	Regression	51.107	,000[a]
	Residual		
	Total		

a. Predictors: (Constant), Product Quality, Service Quality, Brand
b. Dependent Variable: Purchasing Decision
Source: Research Result, 2020

Based on the table above, it is found that the value of F-table(2.70), and significant α = 5% (0.05), namely F-count (51.109), and sig.a (0.000a). This indicates that the results of the study accept Ha, and reject H0. A comparison between F-countand F-table can prove that simultaneously brand, service quality, andproduct quality have a positive, and significant effect on purchasing decision.

3.7 Partially Hypothesis Test (t-Test)

The t-test or partial regression coefficient test is used to determine whether partially the independent variable has a significant effect on the dependent variable or not. In this case, to find out whether partially the independent variable has a significant effect on the dependent variable or not. The test uses a significance level of 0.05, and a two-sided test.The criteria for evaluating the hypothesis are:
H_0 Accepted if: t-count < t-table
H_α Accepted if: t-count > t-table

Table 6
Coefficient Test

Model		t	Sig.
1	(Constant)	4.883	.000
	Brand	2.920	.004
	Service Quality	2.810	.006
	Product Quality	2.250	.027

a. Dependent Variable: Purchasing Decision
Source: Research Result, 2020

Based on the table above, it can be concluded that brand, service quality, andproduct quality partially have a positive, and significant effect on purchasing decisionwhich can be seen at the t-count is greater than t-table (1,985), and the significant is less than 0.05.

4. Conclusion

Based on the results of this study, it can be concluded several things such as:

a) The results of the t-test, and the F-test state that both partially, and simultaneously the variables of brand, service quality, andproduct quality have a positive, and significant effect on purchasing decision.
b) The results showed that brand, service quality, and product quality explains the effect on purchasing decision by 61,3%. While the remaining 38,7% is the effect by other independent variables not examined in this study such as selling promotion, personal selling and others.

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