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# The influence of brand image and product quality on purchasing decisions in Medan Perjuangan District

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A R T I C L E I N F O

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ABSTRACT

This research was carried out to determine the influence of brand image and product quality on the purchase decision of Honda Beat in Medan Perjuangan District. This study uses a qualitative method and uses a questionnaire as a data collection tool. The data of this research that became the population were people in the Medan Perjuangan sub-district who used Honda Beat motorcycles. The sampling technique uses random sampling samples from the community in the Medan Pejuangan sub-district of as many as 92 people. The data analysis technique uses a validation test, reliability test, classical assumption test, multiple linear regression test, t-test, f test, and determination coefficient test (R^2), using the SPSS version 16 application. The results of the study showed that the results of the t-test of the brand image variable (X_1) t calculated at 2.786 > the table t of 1.986, then the brand image variable (X_1) had an influence and significance on the purchase decision (Y) of Honda Beat in Medan Perjuangan District. The results of the t-test of the product quality variable (X_2) t calculated as 6.054 > t the table of 1.986, the product quality variable (X_2) has an influence and significance on the purchase decision (Y) in Medan Perjuangan district. From the results of the study, it can be concluded that the result of the F test of 54.503 > the F table of 3.10 can be concluded that the brand image (X_1) and product quality (X_2) together (simultaneously) have a significant influence on the purchase decision (Y). The result of determination (R^2) was 54.0%. while the remaining 46.0% was explained by other variables that were not studied.



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## 1. INTRODUCTION

The development of the number of motorcycle products that stand in big cities is increasingly found in the community, one of which is Medan Perjuangan District where many people use Honda Beat brand motorcycles which spur motorcycle entrepreneurs to maximize their efforts in maintaining or improving the company so that they can compete with other similar companies. Beat motorcycle is one of the most popular types of

motorcycles in Indonesia with a competitive market. It is important for entrepreneurs to understand the factors that can influence consumer purchasing decisions.

The growth of motorcycles has increased tremendously in the midst of such sharp competition due to the many newcomer motorcycle brands. Honda motorcycles have been in Indonesia for a long time with all their advantages, still balancing the market and at the same time meeting the needs of tough, economical and economical transportation. Responding to these challenges, the organization behind the success of Honda motorcycles in Indonesia continues to strengthen itself. In its development in society, the type of motor vehicle is widely used as transportation, one of the automatic scooters is the Honda Beat. Honda Beat is the first scooter to be delivered to the ASEAN motorcycle market since 2015.

From the results of the survey conducted by a top brand survey agency through *the frontier group*, the results show that consumers use Honda Beat more than other types of two-wheeled vehicle brands. The number of consumers who use two-wheeled vehicles from the Honda Beat brand is due to several factors that can affect the purchase decision of consumers of Honda Beat such as the brand and product quality.

According to Tjiptono in Susanti et al. (2021), defines consumer decision-making as a process where consumers know their problems, and seek information about certain products or brands. Meanwhile, according to Kotler and Keller in Susanti et al. (2021), says that consumer purchasing decisions are part of consumer behavior, which is the study of how individuals, groups, and organizations choose, buy, use, and how goods, services, ideas or experiences to satisfy their needs and desires. Every manufacturer must carry out various strategies so that consumers decide to buy their products. According to Etta Mamang Sangadji & Sopiah (2018:121), purchase decisions are all behaviors deliberately based on desires that are generated when consumers consciously choose one of the available alternative actions. According to Setiadi in Sinurat & Sinurat (2020), says the definition of consumer decision-making is an integration process that combines knowledge and technology to evaluate two or more alternative behaviors and choose one of them. According to Buchari Alma (2018), explaining that A purchase decision is an individual who conducts a process within himself, finally making a purchase with the aim of wanting to get satisfaction from the goods he bought. After-sales service includes technical support, warranty, and ease of servicing and maintaining vehicles. Good service after purchase can increase consumer trust in a brand, because consumers feel supported in the long term after purchase. In the context of Honda, a wide authorized service network and easily accessible spare parts are some of the advantages that can influence consumer loyalty and purchasing decisions.

In addition to brand image, product quality is also one of the tools used by companies in determining the positioning of products marketed. Every company must choose the quality level of its products because the quality of the product can help improve and maintain the positioning of the product in its target market. According to Assauri in Santoso (2019), product quality is a statement of the level of ability of a particular brand or product in carrying out the expected function and as a material to meet human needs. Product quality *(Product Quality)* is the ability of a product to carry out its functions including, durability, reliability, accuracy, ease of operation and repair, and other valuable attributes (Rosnaini Daga, 2017).

## 2. RESEARCH METHOD

### 2.1 Research Object

The location of this research is on the community of Honda Beat users in Medan Perjuangan District and the time of this research will be carried out in May-August 2024. In this research there is no mention of how this study will address potential biases, such

as respondent bias or non-response bias. It is important to mention whether there will be measures taken to reduce response bias or non-response bias.

2.2 Types of Research

The method used in this study is a quantitative method, and a questionnaire is used as a data collection tool. According to Sugiyono (2020:16) The quantitative method is a research method based on the philosophy of positivism, used to examine a specific population or sample and collect data using research tools, analyzing quantitative or statistical data with the aim of testing a predetermined hypothesis. The type of research used is the survey method.

2.3 Population

A population is a collection of elements or cases that meet certain criteria determined by the researcher. According to Sugiyono (2020:126), Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are determined by the researcher to be studied and then draw conclusions.

2.4 Sample

A sample is an object or item that is selected from the population. According to Sugiyono (2020:127), The sample is part of the number and characteristics that the population has. So it can be said that this sample is a representative part of the entire population.

2.5 Sample Drawing Techniques

The sample criteria taken in this study are to use the probability sampling technique with an approach using Simple random sampling. According to Sugiyono (2020:288), Explain that probability sampling is a sampling drawing technique that provides an equal chance for each element of the population to be selected as a sample member. Then according to Sugiyono (2018:82), also explains that Simple random sampling That is, taking sample members from the population is carried out randomly without paying attention to the starters in that population. The number of research samples used in this study was determined by the Slovin formula. According to Anwar Sanusi (2017), Slovin included an element of inaccuracy laxity due to sampling errors that were still tolerable. The formula used is as follows:

$$n = \frac{N}{1 + N\alpha^2}$$

$$n = \frac{120}{1 + 120(0{,}05)^2}$$

$$n = 92$$

Source : Anwar Sanusi (2017: 101)
Information:
n = Sample Size
N = Population Size
$\boldsymbol{\alpha}$ = Error Rate (5%)

In this study, the researcher has a criterion, namely that the respondents in this study are farmers who at the time of the research used a Honda-type beat in Medan Perjuangan District. So the calculation above can be seen that the sample used in this study is as many as 92 people.

2.6 Analysis of Research Instruments

a. Validation Test

The validity test correctly indicates about the instrument used to reveal something done on the object of the research. A questionnaire is said to be valid if the questions on the questionnaire are able to reveal something that the questionnaire will measure (I. Ghozali, 2018).

b. Reliability Test

reliability test which aims to measure the validity of the measuring instruments used in this study. According to I. Ghozali (2018)**,** The reliability test is actually to measure the questionnaire which is an indicator of the construct variable.

2.7 Classical Assumption Test

a. Normality Test

The Normality Test is a test conducted with the aim of assessing the distribution of data on a group of data or variables, whether the distribution of the data is normally distributed or not. The distribution of data can be said to be normal if the significant value > 0.05 (I. Ghozali, 2018).

b. Mulicolinearity Test

The multicollinearity test is to see if there is a high correlation between the independent variables in a model. According to Imam Gunawan, (2017), explained that to see the existence of multicollinearity cases is to look at the VIF, if the VIF value is < 10, then the model is free from multicollinearity cases.

c. Heteroscedasticity Test

The heteroscedasticity test is used to see if there is a variance difference from the residual of one observation to another (I. Ghozali, 2018). If the significant value > 0.05, then no heteroscedasticity occurs, and vice versa, if the significant value < 0.05, heteroscessiousness occurs.

d. Multiple Linear Regression Test

Regression analysis is useful for obtaining a functional relationship between two or more variables obtaining an influence between the predictor variable on its criterion variable or forecasting the influence of the predictor variable on its criterion variable (Imam Gunawan, 2017).

Based on this explanation, this study uses a multiple linear regression test because it has two independent variables and one bound variable. The independent variable (X) is Brand Image ($X_1$) and the Product Quality ($X_2$) Bound variable is Purchase Decision (Y). The formula of the multiple linear regression equation used in this study is as follows:

$$Y = a + B1X1 + B2X_2 + e$$

Information:
Y = Purchase Decision.
a = Constant of regression decision
b1 = Variable regression coefficient
X1 = Brand Image
b2 = Variable Regression Coefficient
X2 = Product Quality
e = Standard Error

2.8 Hypothesis Test

a. Test t (persial)

The t-test basically explains how far an individual independent variable affects the dependent variable (Imam Gunawan, 2017).

b. Test F (simultaneous)

Joint influence test is used to find out whether independent variables together or joint influence dependent variables (I. Ghozali, 2018:179).

c. Coefficient of Determination ($R^2$)

The determination coefficient ($R^2$) in essence measures how far the ability to determine the variation of independent variables (I. Ghozali, 2018:95).

## 3. RESULTS AND DISCUSSIONS

### 3.1 Results of the Classic Assumption Test

The conclusion of the classical assumption test is that the results of the normality test of the P-P plot norm graph test are carried out to determine the results of normality where there are points around the diagonal line and the distribution of data in the direction of the diagonal line shows that all data are normally distributed because it meets the normality regression assumption model. The normality test using Kolmogorav-Simirnov showed a value (sig) of 0.995 > 0.05 meaning that it was distributed normally. From the results of the multicollinearity test showing that the tolerance values of the variables X1 and X2 are 0.603 > 0.10, it is concluded that there is no multicollinearity and the VIF value of variables X1 and X2 is 1.660 < 10, then it is concluded that multicollinearity does not occur. The heteroscedasticity test of the residual points of the spreader is random and scattered, this concludes that no heteroscedasticity occurs.

Table 2. Classical Assumption Test Conclusion

| It | Classical Assumption Test | Data Processing Results |
|---|---|---|
| 1 | Normality Test | Normal Distributed Data |
| 2 | Multicollinearity Test | No Mulitikolinearita |
| 4 | Heteroscedasticity Test | No Heteroscedasticity Occurs |

### 3.2 Multiple Linear Regression Test

Table 3. Multiple Linear Regression Test Results

Coefficients

| Type | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 4.810 | 2.780 | | 1.730 | .087 |
| | Brand Image | .246 | .088 | .255 | 2.786 | .007 |
| | Product Quality | .420 | .069 | .554 | 6.054 | .000 |

*Source: Data Processed SPSS 16.0, 2024*

Based on the table above, the regression equation is as follows:

Y = 4,810 + 0,246 () + 0,420 + $eX_1(X_2)$

Where:
Y = Purchase Verdict
X1 = Brand Image
X2 = Product Quality

The interpretation of the results of the multiple linear regression equation is as follows: (a) A positive constant value, indicates that if the brand image variable () of product quality is constant, then the purchase decision has a value of $4{,}810.X_1(X_2)$. (b) The regression coefficient of the brand image variable () is positive, this shows that the brand image variable () has a positive effect on the purchase decision, meaning that if the brand image () is good, the purchase decision (Y) will increase by having a value of $0.246.X_1X_1X_1$. (c) The regression coefficient of the product quality variable is positive, this shows that the product quality variable has a positive effect on the purchase decision, meaning that the better the product quality, the higher the purchase probability with a value of $0.420.(X_2)(X_2)$

3.3 Hypothesis Test

a. Test t (persial)

Table 4. Test Results t (persial)

| Type | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4.810 | 2.780 | | 1.730 | .087 |
| | Brand Image | .246 | .088 | .255 | 2.786 | .007 |
| | Product Quality | .420 | .069 | .554 | 6.054 | .000 |

a. Dependent Variable: Purchase Decision

*Source: Data processed by SPSS 16.0, 2024*

Based on Table 4, it can be found that the influence of each independent variable on the dependant is as follows: (a) The influence of the brand image variable () on the purchase decision (Y).$X_1$, (b) In Table 4, the brand image variable (X1) has an $t_{hitung}$ of 2.786 while the value $t_{tabel}$ is 1.986 with a significant level of 0.007. So it is known >, meaning that the hypothesis that reads has an influence and significance between the brand image on the purchase decision is accepted and rejected. It can be concluded that there is a significant effect between brand image $t_{hitung}t_{tabel}H_1\,H_0()\ X_1$and purchase decision (Y). (c) The influence of the product quality variable () $X_2$on the purchase decision (Y).

In Table 4, the product quality variable () $X_2$has a value $t_{hitung}$ of 6.054 while the value is 1.986 with a significant level of 0.000. So it is known >, meaning the hypothesis that reads that there is a significant influence between product quality on purchase decisions accepted and rejected. It can be concluded that there is a significant influence between product quality () and purchase decision (Y).$t_{tabel}t_{hitung}t_{tabel}H_2H_0X_2$

b. Test F (simultaneous)

Table 5. Test Result F

ANOVA[b]

| Type | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 515.685 | 2 | 257.842 | 54.503 | .000 a |
| | Residual | 421.043 | 89 | 4.731 | | |
| | Total | 936.728 | 91 | | | |

a. Predictors: (Constant), Product Quality, Brand Image
b. Dependent Variable: Purchase Decision
*Source : Data processed by SPSS 16.0, 2024*

Based on the calculation of the SPSS results, it shows that the F value calculated in this study is 54,503. To see the F table in hypothesis testing on a regression model, it is necessary to specify the degree of freedom or *degree of freedom* (df) or known as df2 and also in F table is denoted by N2. This is determined by the formula df1 = k -1 df2 = n – k.

So it can be known that the value of df1 is 3-1=2 and df2 92-3=89 with a significance of 0.05 so that the value of F table is 3.10. Based on the output results that have been carried out, it can be seen that F counts > F table where F-calculated is 54,503 > 3.10, with a significant level of 0.05 > 0.000.

Based on the method of simultaneous test decision-making and regression analysis model, it can be concluded that the variables of brand image () and product quality $X_1$() $X_2$if tested together (simultaneously) has a significant influence on purchase decisions (Y).

c. Coefficient of Determination $R^2$

Table 6. Coefficient of Determination Results$R^2$

Model Summary

| Type | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .742 a | .551 | .540 | 2.175 |

a. Predictors: (Constant), Product Quality, Brand Image
*Source: Data Processed SPSS 16.0 2024*

Based on the table above, from the results of the SPSS 16.0 program, it is known that the value of the determination coefficient *(adjusted R square*) is obtained by 0.540 or 54.0%. This result means that the independent variables, namely brand image and product quality, only explain 54.0% of the dependent variable, namely the purchase decision, while the remaining 46.0% are explained by other variables that are not studied.

## 4. CONCLUSION

Based on the results of the study, we intend to find out the Influence of Brand Image and Product Quality on Purchase Decisions in Medan Perjuangan District. Therefore, several conclusions can be drawn as follows: The results of the t-test of the brand image variable (X_1) have a positive effect on the purchase decision. This is proven that the value of t_ (calculate) is 2.786 with a significant value of 0.007 < 0.05 and a regression coefficient

value of 0.246. The results of the product quality test (X_2) have a positive effect on purchasing decisions. This is proven that the value of t_ (calculate) is 6.054 with a significant value of 0.000 < 0.05 and a regression coefficient value of 0.420. The results of the F test of the variables of brand image and product quality (X_2) have a positive effect together (simultaneous). This is evidenced by an F_hitung value of 54.503 with a significant value of 0.000 < 0.05. In this research, there are no research limitations because this research was only conducted in one place.

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