Examining the Effect of Brand Image, Price and WoM Communication on Purchase Decisions: A Case Study of Rinnai Gas Stove

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Abstract
The substitution of cooking utensils from kerosene stoves to gas stoves causes housewives to consider various brands of stoves in making their purchasing decisions for their daily cooking needs for their families. This study aims to determine the effect of brand image, price, and word-of-mouth communication on the Rinnai Gas Stove Purchase Decision on Housewives in Dusun VI, Kuta Baru Village. The independent variables of this study consisted of brand image, price and word-of-mouth communication, while the dependent variable was purchasing decisions. This research is a quantitative approach. The primary data was obtained through questionnaire answers from 65 respondents who use the Rinnai gas stove in Hamlet VI, Kuta Baru Village. Data were analyzed using multiple linear regression analysis methods. The results of the analysis show that Brand Image (X1) affects the Purchasing Decision variable (Y), Price (X2) does not affect the Purchasing Decision (Y), word-of-mouth Communication (X3) affects the Purchasing Decision (Y) and Brand Image (X1), Price (X2) and WoM Communication (X3) influence simultaneously (simultaneously) on the Purchase Decision Variable (Y).

1. Introduction
In the era of globalization, business competition is getting tougher in both domestic and international markets (Saragih et al., 2023). Developing a hyper-competitive market encourages every company to win the existing competition (Sihombing et al., 2023). Competition in the primary field of household needs, especially gas stoves, causes entrepreneurs to have the best and most appropriate strategy to consider the existing conditions within the company. Nowadays, modern society prefers gas stoves for cooking after it was determined by the government to switch the use of oil stoves to gas stoves, assuming that LPG is more economical and cleaner than kerosene. Rinnai Japan Corporation is one of the companies engaged in household needs, namely Gas Stoves.

The purchase decision is a stage in the buying decision process where consumers buy the product. Marketers must explore the various influences on consumer purchases and also understand how consumers make their purchasing decisions (Tampinongkol & Mandagie, 2018). In purchasing decisions, consumers do not directly decide to buy a product but have considerations such as seeing the brand image and word-of-mouth communication. Brand Image results from consumer research on a good or bad brand. The importance of product quality is an advantage for a company in improving the brand image of its products to survive in marketing its products to consumers in the hope that a good brand image will provide good quality (Aprianto, 2016).

In addition to the brand image factor, price is also a consideration for consumers in determining their choice to buy a product or not. Price is the value that consumers exchange for the benefits of owning and using a product with the wants and needs of consumers. What always happens is that consumers will always consider the brand image with the price of a product to be purchased (Alvionita & Prijati, 2017). The
price of the Rinnai Gas Stove is higher than that of other products, as seen from the online shop Tokopedia.

<table>
<thead>
<tr>
<th>No</th>
<th>Gas Stove Brand</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rinnai RI-302S</td>
<td>Rp. 274,550</td>
</tr>
<tr>
<td>2</td>
<td>Cosmos CGC 5268 CEB</td>
<td>Rp. 255,000</td>
</tr>
<tr>
<td>3</td>
<td>Miyako KG 502C</td>
<td>Rp. 252,450</td>
</tr>
<tr>
<td>4</td>
<td>Quantum QGC-201 DMP-B</td>
<td>Rp. 245,000</td>
</tr>
<tr>
<td>5</td>
<td>Winn W 288</td>
<td>Rp. 241,500</td>
</tr>
</tbody>
</table>

Source: Tokopedia.com 2020

The phenomenon of changing oil stoves to gas stoves makes many companies compete to issue products with their respective advantages to attract consumers to buy their products, one of which is the Rinnai Gas Stove, which has a brand image that competes with other gas stove products, but has a slightly higher price than stoves. Another brand of gas, but that is not a problem because the Housewives of Dusun VI Kuta Baru Village still choose the Rinnai Gas Stove, Another phenomenon today is WoM communication, where consumers tell and influence each other.

This phenomenon happened to the housewives of Tanagga Dusun VI Kuta Baru Village. They gave each other information about the Brand image and price of the Rinnai Gas Stove and compared it with other products, which was one of their considerations in deciding to buy a Rinnai Gas Stove. Thus, this study aims to determine the effect of brand image, price and WoM Communication on the decision to purchase Rinnai Gas Stoves at Housewives in Dusun VI, Kuta Baru Village.

2. Literature Review

2.1. Brand Image

A brand is an identity in the form of a name or symbol that influences the selection of a product or service, distinguishes it from competing products, and has value for buyers and sellers (Lie et al., 2022). At the same time, the image is the public’s perception of the company or its products. So, it is clear the Brand image is how a brand affects the perceptions and views of society or consumers towards the company or its products (Kurniawati, 2020). According to Daryanto (2011), brand is one of the most important attributes of a product whose use is currently widespread for several reasons. One of them is because the brand provides added value to the product. The product has several important elements, including a brand image, because it influences purchasing decisions.

Tjiptono (2016) states that brand image has benefits for producers and consumers. For producers, brand image plays an important role. Identification means facilitating the process of handling or tracking products for companies, especially in organizing inventory and accounting records. A form of legal protection against unique product features or aspects Brands can get intellectual property protection. Brand names can be protected through registered trademarks, the manufacturing process can be protected through patents, and packaging can be protected through copyrights and designs.

Signal the quality level for satisfied customers so they can easily choose and buy again later. A means of creating unique associations and meanings that differentiate a product from competitors sources of competitive advantage, mainly through legal protection, customer loyalty, and the unique image formed in the minds of consumers. The Brand image indicators, according to Lamb et al. in (Purba et al., 2020) are as follows:

a. Brands are easy to remember.
b. The overall quality of the product.
c. Product recognition.
d. Trusted brand.

2.2. Price

The definition of price according to Amstrong & Philip, (2012), defines price as the amount of money demanded for a product or a service. More broadly it can be said that the price is the sum of all the values given by consumers to obtain benefits (benefits) on the ownership or use of a product or service. Historically, price has been a major factor influencing a buyer's choice. However, in this decade non-price factors are considered important. Nevertheless, price is still one of the most important elements that determine the market share and profit level of the company.

Table 1. list of the gas stove

Table 2. Gas Stove Users at Housewives Stairs of Dusun VI of Kuta Baru Village.

The phenomenon of changing oil stoves to gas stoves makes many companies compete to issue products with their respective advantages to attract consumers to buy their products, one of which is the Rinnai Gas Stove, which has a brand image that competes with other gas stove products, but has a slightly higher price than stoves. Another brand of gas, but that is not a problem because the Housewives of Dusun VI Kuta Baru Village still choose the Rinnai Gas Stove, Another phenomenon today is WoM communication, where consumers tell and influence each other.

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In marketing, in general, it is directly related to the problem of the price of a product. Is the price in with the quality of the product? Some people, when determining the purchase, the first thing they see is the price. For this reason, it is very important to pay attention to price fixing. An economical price will make consumers more interested in making purchasing decisions.

According to Amstrong & Philip (2012), four dimensions characterize prices, namely:

- c. Prices according to the ability or competitiveness of consumers.

### 2.3. WoM Communication

WoM Communication is WoM communication about views or assessments of a product or service, either individually or in groups, that aim to provide personal information. WoM Communication is one of the most effective strategies for influencing consumer decisions in using products or services, and WoM Communication can build a sense of customer trust (Anang & Mahardhika, 2018).

WOMMA (WoM Marketing Association) explains that "WoM Communication" is a marketing effort that triggers consumers to talk about, promote, recommend, and sell our products/brands to other consumers". According to Ali Hasan (2010), WoM Communication is a compliment, recommendation and customer comments about their experience of services and products that influence customer decisions or buying behaviour.

Jerry R. Wilson in Kurniawati (2020) Indicators of WoM communication include a. to talk (do the talking), b. Promote (do the promoting), c. Sell (do the selling).

### 2.4. Purchase Decision

According to Tjiptono (2016), a purchase decision is a process where consumers recognize the problem, seek information about a particular product or brand and evaluate how well each alternative can solve the problem, leading to a purchase decision. The purchase decision is a consumer’s decision to buy a product after thinking about whether or not it is appropriate to buy the product by considering the information he knows about the product after he has witnessed it.

According to Amstrong & Philip (2012), the stages of the consumer purchasing decision process are as follows:

1. Recognition of needs. The buying process begins with a problem or need that has not been satisfied and can be felt by consumers. The consumer prepares the difference between the desired and the current situation to generate and activate the decision process. Consumers may have known and felt the need far - far from before.
2. Information search. After the consumer realizes the need for an item or service, the consumer looks for information stored in memory and information obtained from the outside environment.
3. Evaluation of alternatives. After obtaining the information, consumers evaluate various alternatives to meet these needs.
4. Purchase decision. If there are no other factors that interfere after the consumer has made the choice that has been made, the actual purchase is the result of search and evaluation.
5. Behaviour after purchase. In general, if the individual feels a very strong interest or satisfaction in meeting a need, he will usually continue to remember it. Post-purchase behavior includes post-purchase satisfaction, post-purchase action, and product use.

The purchasing decision indicators used in this study (Aprianto, 2016) are a. product introduction, b. information search, c. Alternative evaluation.

### 3. Materials and Methods

#### 3.1. Research Design

This research is quantitative descriptive research using quantitative data according to Siregar, (2015), which is data in the form of numbers or qualitative data that is numbered. Quantitative data can be processed or analyzed using mathematical or statistical calculation techniques. Quantitative data determines the number or magnitude of an object to be studied. This data is real or can be accepted by the five senses so researchers must be really observant and thorough to get the accuracy of the data from the object to be studied.

Sources of data used in this study is primary data. Primary data was obtained directly from selected respondents at the research location, by conducting interviews and providing a list of questions/questionnaires to consumers (Siregar, 2015).

The population is the set of subjects, variables, concepts, or phenomena that we study. The population in this study were all housewives in Dusun VI of Kuta Baru Village who used the Rinnai Gas Stove with a total of 65 respondents. According to Siregar, (2015) the sample is part of the number and characteristics possessed by the population. The sample in this study used the census method, where the entire population was sampled, as many as 65 people.

Data analysis in this study used the following tests:

1. Test the instrument, namely the validity test and reliability test.
2. Classical Assumption Test, namely normality test, multicollinearity test and heteroscedasticity test. 
3. Multiple Linear Regression Analysis. 
4. Coefficient of Determination (R²). 
5. Hypothesis Testing: t-test / Partial test and simultaneous test (F-Test).

3.2. Data Collection

The data to be used is primary data, with the data collection method using a questionnaire. Data collection techniques with questionnaires are a data collection technique by providing a list of questions to respondents, with the hope that respondents will respond to questions in the questionnaire using a closed question model, namely the form of questions that have been accompanied by alternative answers so that respondents can choose one of the following: alternative answer. In the measurement, each respondent is asked for their opinion on one question, with a rating scale of 1 to 5; positive responses (maximum) are given the largest value (5), and negative responses (minimum) are given the smallest value (1).

Respondents Perception Measurement Scale (Likert Scale 1 to 5), namely:

Scale 1: Strongly disagree (SD).
Scale 2: Less Agree (LD).
Scale 3: Disagree (D).
Scale 4: Agree (A).
Scale 5: Strongly Agree (SA).

5. Results and Discussion

5.1. Classic Assumption

5.1.1. Normality

The normality test aims to test whether the confounding or residual variables have a normal distribution in the regression model (Ghozali, 2016). Testing the normality of the data can be done using two methods: graphs and statistics. The normality test of the graph method uses a normal probability plot, while the statistical method normality test uses the one sample Kolmogorov Smirnov Test. The normality test using the graphical method can be seen in Figure 1:

![Expected Cum Prob vs Observed Cum Prob](image)

**Figure 1.** Normal P Plot

Respondents Perception Measurement Scale (Likert Scale 1 to 5), namely:

Scale 1: Strongly disagree (SD).
Scale 2: Less Agree (LD).
Scale 3: Disagree (D).
Scale 4: Agree (A).
Scale 5: Strongly Agree (SA).

Table 3. Result of Normality Testing (One Sample Kolmogorov Smirnov)

<table>
<thead>
<tr>
<th>Unstandardized Residual</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Parameters</td>
<td>65</td>
</tr>
<tr>
<td>Mean</td>
<td>0.000</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.103</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
<td></td>
</tr>
<tr>
<td>Absolute</td>
<td>0.070</td>
</tr>
<tr>
<td>Positive</td>
<td>0.070</td>
</tr>
<tr>
<td>Negative</td>
<td>-0.042</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td>0.567</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.905</td>
</tr>
<tr>
<td>Monte Carlo Sig. (2-tailed)</td>
<td>0.862</td>
</tr>
<tr>
<td>99% Confidence Interval Lower Bound</td>
<td>0.751</td>
</tr>
<tr>
<td>Upper Bound</td>
<td>0.972</td>
</tr>
</tbody>
</table>

Table 3 indicates that all variables’ significance value (Monte Carlo Sig.) is 0.826. If the significance is more than 0.05, then the residual value is normal, so it can be concluded that all variables are normally distributed.

5.1.2. Multicollinearity

The multicollinearity test aims to determine whether there is a correlation between the independent variables in the regression model. The multicollinearity test in this study is seen from the tolerance value or variance inflation factor (VIF). The calculation of the tolerance value or VIF with the SPSS-23 can be seen in Table 4 below:

Table 4. Result of Multicollinearity Testing

<table>
<thead>
<tr>
<th>Variable(s)</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>Brand Image</td>
<td>0.916</td>
</tr>
<tr>
<td>Price</td>
<td>0.964</td>
</tr>
<tr>
<td>WoM Communication</td>
<td>0.948</td>
</tr>
</tbody>
</table>

Table 5 captures that the tolerance value of the Brand Image variable (X1) is 0.916 Price variable (X2) is 0.964 WoM Communication (X3) variable is 0.948, where all of them are greater than 0.10, while the VIF value of the Brand Image variable (X1) is 1.091, Price variable (X2) is 1.037 WoM Communication (X3) variable is 1.055, all of which are smaller than 10. Based on the results of the above calculations, it can be seen that the tolerance...
value of all independent variables is greater than 0.10. The VIF value of all independent variables is also smaller than 10, so there is no correlation symptom in the independent variables. So, it can be concluded that there is no symptom of multicollinearity between independent variables in the regression model.

5.1.3. Heteroscedasticity
The heteroscedasticity test aims to test whether, from the regression model, there is an inequality of variance from the residuals of one observation to another. A good regression model is one with homoscedasticity or no heteroscedasticity. One way to detect the presence or absence of heteroscedasticity is the Glejser test. In the Glejser test, if the independent variable is statistically significant in influencing the dependent variable, then heteroscedasticity is indicated. On the other hand, if the independent variable is not statistically significant in influencing the dependent variable, then there is no indication of heteroscedasticity. This is observed from the significance probability above the 5% confidence level (Ghozali, 2016). The result is seen in the following table:

Table 5. Result of Glejser

<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>0.576 a</td>
<td>0.331</td>
<td>0.299</td>
<td>1.130</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), WoM Communication, Price, Brand Image
b. Dependent Variable: Purchase Decision

Table 7 captures that the adjusted R square value is 0.299 or 29.9%. This shows that the Brand Image (X1), Price (X2) and WoM Communication (X3) variables can explain the Purchase Decision Variable (Y) by 29.9%, the remaining 70.1% (100% - 29.9%) is explained by other variables outside this research model, such as customer satisfaction and loyalty variables, product quality variables, promotion variables and product innovation variables.

5.2. Validation

5.2.1. t-test (Partial)
The t-statistic test is also known as the individual significance test. This test shows how far the influence of the independent variable partially on the dependent variable. In this study, partial hypothesis testing was carried out on each independent variable, as shown in Table 5.5 below:

Table 6. Multiple Linear Regression Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.772</td>
<td>2.107</td>
</tr>
<tr>
<td>Brand Image</td>
<td>0.330</td>
<td>0.090</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Purchase Decision

5.1.4. Coefficient of Determination (R2)
The coefficient of determination is used to see how much the independent variable contributes to the dependent variable. The greater the coefficient of determination, the better the ability of the independent variable to explain the dependent variable. If the determination (R2) is getting bigger (closer to 1), it can be said that the influence of the X variable is large on the Purchase Decision Variable (Y). The value used to see the coefficient of determination in this study is in the adjusted R square column. The adjusted R square value is not susceptible to adding independent variables. The value of the coefficient of determination can be seen in Table 7 below:

Table 7. Coefficient of Determination

<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>
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<td>0.299</td>
<td>1.130</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), WoM Communication, Price, Brand Image
b. Dependent Variable: Purchase Decision

Table 5 shows the significance value of the brand image (X1) of 0.132, price (X2) of 0.064 and the WoM communication of 0.988, where all three are greater than 0.050 so that it is declared not statistically significant and there is no indication of heteroscedasticity symptoms.

5.1.3. Multiple Linear Regression
Multiple linear regression testing explains the role of Brand Image (X1), Price (X2) and WoM Communication (X3) variables on Purchase Decision Variables (Y). Data analysis in this study used multiple linear regression analysis using SPSS-23. The analysis of each variable is described in the following description:

Table 6. Multiple Linear Regression Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
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</tr>
<tr>
<td>Brand Image</td>
<td>0.330</td>
<td>0.090</td>
</tr>
</tbody>
</table>
Table 8 shows that the t-stat is 3.678. With = 5%, t-table (5%; 65-3 = 62), the t-table value is 1.998. From the description, it can be seen that t-stat (3.678) > t-table (1.998), as well as the significance of 0.000 <0.05, it can be concluded that the first hypothesis is accepted, meaning that the Brand Image variable (X1) affects the Purchase Decision Variable (Y). The t-stat is 1.292. With = 5%, t-table (5%; 65-3 = 62), the t-table value is 1.998. 0.201 > 0.05, it can be concluded that the second hypothesis is rejected, meaning that the price variable (X2) does not affect the Purchase Decision Variable (Y). The t-stats value is 2,554. With = 5%, t-table (5%; 65-3 = 62), the t-table value is 1.998. The significance of which is 0.013 <0.05, it can be concluded that the WoM Communication (X3) variable affects the Purchase Decision Variable (Y).

5.2.2. F Test (Simultaneous)
This test shows whether all the independent variables included in this model have a joint effect on the dependent variable. The results of the F test can be seen in Table 9 below:

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>38.632</td>
<td>3</td>
<td>12.877</td>
<td>10.081</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Residual</td>
<td>77.922</td>
<td>64</td>
<td>1.277</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>116.554</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), WoM Communication, Price, Brand Image
b. Dependent Variable: Purchase Decision

Table 9 describes that the F-stats value is 10.81. With = 5%, df in the numerator: 3, df in the denominator: 65-3-1 (5%; 3; 61), the F-table value is 2.76. From the description, it can be seen that Fcount (10.081) > Ftable (2.76), and a significance value of 0.000 <0.05, it can be concluded that the hypothesis is accepted, meaning that the Brand Image variable (X1), Price variable (X2) and word Of variable are accepted. Mouth Communication (X3) has a simultaneous (simultaneous) effect on the Purchase Decision Variable (Y).

6. Conclusion
This study analyzes the influence of Brand Image, Price and WoM Communication on Rennai Gas Stove Purchase Decisions. This study concludes that Brand Image, Price and WoM Communication positively relate to Purchase Decisions. The coefficient of determination of the R-square value is seen from the adjusted R-square value, which is 0.299 or 29.9%. It shows that the Brand Image (X1), Price (X2) and WoM Communication (X3) variables can explain the Purchase Decision Variable (Y) by 29.9%, the remaining 70.1% (100 - 29.9%) is explained by other variables outside this research model. Brand Image (X1) influences the Purchase Decision (Y). Price (X2) does not affect the Purchase Decision (Y). WoM Communication (X3) influences the Purchase Decision (Y).


Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.
Inform Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: The authors would like to thank Sekolah Tinggi Ilmu Ekonomi Bina Karya Tebing Tinggi, Indonesia, for supporting this research and publication. We also thank the reviewers for their constructive comments and suggestions.

Conflicts of Interest: The authors declare no conflict of interest.

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