Consumer Knowledge and Perception in Purchasing Decisions for East Belitung Teran Honey

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1. Introduction
The COVID-19 pandemic, ongoing worldwide for approximately two years, has significantly changed people’s lives. A stronger emphasis is on maintaining a healthy lifestyle
and boosting stamina by paying attention to the food consumed to improve immunity. The trending lifestyle among people today is “Back to nature” or returning to nature.

One of the products experiencing significant demand is honey production and consumption. According to data from BPS – Statistics Indonesia in 2021, as cited from www.dataindonesia.id, Indonesia produced 189,780 liters of honey. This amount surged by 269.65% compared to the previous year when it was only 51,338.26 liters. The region with the largest honey production is Java, with 180,508 liters, followed by Sumatra, with 7,534 liters. Most honey belongs to the *Apis Dorsata* bee species (Badan Pusat Statistik, 2021).

According to Mustoha Iskandar, the Chairman of the Indonesian Beekeeping Association, as cited on www.perhutani.co.id, the per capita honey consumption in Indonesia is approximately 15-20 grams, while in developed countries like Germany, Japan, England, and France, the honey consumption level has reached 700-1,500 grams per capita (Bisnis Indonesia, 2016). Based on these facts, it can be concluded that honey consumption in Indonesia is still very low compared to other countries. One of the reasons for this low consumption is the perception among people that honey is only beneficial as a medicine.

According to Winahyu et al. (2021), honey has good business prospects with a wide market share, leading to intense competition among honey bee farmers. East Belitung, one of the producers of Heterogona Itama honey, also known as Teran Honey, aims to market its cultivation results to the local community on Belitung Island and beyond. Although Teran Honey is relatively new and less popular in East Belitung compared to Forest Honey or *Apis Dorsata* honey, the growth of Teran Honey production in East Belitung is very high.

Based on shipping data sent via PT Pos Persero Indonesia, Tanjung Pandan Branch, from July to December 2021, East Belitung Regency shipped 8.6 tons of Teran Honey, distributed from the tip of Sumatra to Sulawesi and even exported to Malaysia. However, local consumption has not matched the high production and sales outside of Belitung Island. This means that East Belitung and Belitung people are still more familiar with Forest Honey or Forest Honey from *Apis Dorsata* bees than with consuming Teran Honey. As a result, the productivity of Teran Honey produced by farmers in East Belitung, which amounts to 5-6 tons per month, has not been fully absorbed for local and non-local consumption in the East Belitung region. This leads to a shift from Forest Honey to Teran Honey in Belitung Timur.

Therefore, this study examines the influence of consumer knowledge and perception, both partially and simultaneously, on the purchasing decisions for East Belitung Teran Honey. This study’s benefits determine the policy direction East Belitung Teran Honey cultivators will use to market their products to the community.

2. Literature Review

2.1. Consumer Knowledge

Consumer knowledge refers to the understanding and information individuals possess about products, brands, markets, and consumption activities in general. It encompasses knowledge about product attributes, prices, brand reputation, and consumer preferences for those products and brands (Kotler & Keller, 2016).
Consumer knowledge refers to individuals’ knowledge about their needs and desires, preferences, purchasing behavior, and evaluations of the products and services available (Solomon, 2019).

Consumer knowledge is a collection of information individuals hold about products, brands, and markets acquired through personal experience, interpersonal communication, and external sources of information such as advertisements, product reviews, and user testimonials (Lamb et al., 2018). Kotler and Keller (2016) and Hawkins and Mothersbaugh (2010) cite personal experience, outside sources of knowledge, demographic factors, and social interaction as influencing consumer knowledge.

2.2. Consumer Perception

Consumer perception is how people interpret and comprehend the information they receive from their surroundings, especially when using and purchasing goods and services. Information processing, pattern recognition, decision-making, and the development of attitudes toward particular brands or products are all part of consumer perception. Past experiences, individual values, perceived risks, social influence, and demographic factors influence it.

Consumer perception is how people compile and interpret stimuli to create a subjective perception of the environment (Solomon, 2019). Consumer perception is the basis for consumer decision-making and is defined as “individuals’ subjective understanding of the marketing environment and the products they encounter (Kotler & Keller, 2016).

In order to create a meaningful understanding of the world, Kotler and Keller (2016) claim that perception is a process that involves the selection, organization, and interpretation of information inputs. Culture (culture, subculture, and social class), social (reference groups, family, and social status roles), and personal (age, life cycle stage, occupation, economic situation, lifestyle, personality, and self-concept) factors all have a significant impact on consumer behavior.

2.3. Purchase Decision

Hoffman and Fodor (2010) define a purchase decision as the process by which consumers choose a good or service after taking into account a number of factors. According to Solomon (2019), a number of factors, such as consumer needs and desires, product information, price, quality, brand, promotion, and social influence, can have an impact on this purchase decision. According to (Kotler & Keller, 2016), “a purchase decision is a complex cognitive process in which consumers gather, assess, and choose goods or services they think will satisfy their needs and desires.”

Consumers can solve problems and make purchases during the decision-making process, which is the last step. The five stages of consumer purchase decisions are problem recognition, information search, alternative evaluation, purchase decision, and post-purchase behavior, according to Kotler and Keller (2016).

According to Schiffman and Kanuk (2015), consumers consider several factors when purchasing a product or service, including price, quality, brand, trust, reputation, and product features and benefits. Research conducted by Salleh et al. (2010) found that consumer knowledge of organic food significantly influences consumer purchase intentions. According to Joglekar and Sreekumar (2019), consumer knowledge about organic beauty products positively
impacts consumer attitudes toward purchasing those products. Meanwhile, according to Kaur and Soch (2016), the perception of social influence has a significant relationship with purchase decisions.

2.4. Conceptual Research Framework

2.5. Hypothesis
1) It is hypothesized that consumer knowledge and perception influence the community’s purchase decision of East Belitung Teran Honey.
2) It is hypothesized that knowledge influences the community’s purchase decision of East Belitung Teran Honey.
3) It is hypothesized that consumer perception influences the community’s purchase decision of East Belitung Teran Honey.

3. Research Methodology

Research methodology is obtaining data to answer research questions or investigate phenomena. The data collection conducted by the researcher in this study consists of information related to the problem being examined. The research method will be descriptive and verificative (Sekaran & Bougie, 2016).

This research is conducted in seven East Belitung Regency districts: Manggar, Gantung, Simpang Pesak, Dendang, Simpang Renggian, Damar, and Kelapa Kampit. These locations are selected based on the distribution of forest honey consumers in those seven districts.

The data collection method and research methodology used are interviews or direct questioning of the respondents. According to Pelling (2017), distributing questionnaires through Google Forms is more effective. In this case, the respondents are Forest Honey and Teran Honey, consumers in East Belitung. A structured list of questions (Questionnaire) will be given to the respondents using accidental sampling, with a sample size of 100 respondents.

Using descriptive and verificative research methods, as well as data collection methods through interviews and questionnaire distribution, this study is expected to provide accurate and accountable information regarding Forest Honey and Teran Honey, consumers in East Belitung.

Data analysis in this study uses the following methods:
1) Validity Test: Validity is a tool to measure the unity between the measuring instrument and what is being measured. An instrument is considered valid if it can measure what is intended to be measured or accurately express the data and variables being investigated.

2) Reliability Test: A reliability test is an index that indicates the extent to which the results of a measurement can be trusted. A questionnaire is considered reliable if an individual’s answers are consistent or stable over time.

3) Multiple Linear Regression Analysis: Multiple linear regression is a statistical method used to establish a model that explains the relationship between a dependent variable and one or more independent variables.

\[ Y = a + b_1 X_1 + b_2 X_2 + \varepsilon \]  

Explanation:
- \( Y \) = Purchasing Decisions of East Belitung Teran Honey
- \( a \) = Constant
- \( b_1, b_2 \) = Regression coefficients
- \( X_1 \) = Knowledge Variable
- \( X_2 \) = Consumer Perception Variable
- \( \varepsilon \) = Epsilon

4. Results and Discussion

Based on the sample proportion, the largest group of respondents are the people of East Belitung who consume honey daily, both forest honey (Apis Dorsata) and East Belitung Teran Honey (Heterotrigona Itama).

4.1. Validity Test

The validity test determines the accuracy of measuring consumers’ knowledge and perceptions in purchasing East Belitung Teran Honey. The purpose of the measurement is to assess the instrument’s validity.

This study uses construct validity, where the testing is done by calculating the correlation for each question posed to the consumers. Here is the data obtained from the testing.
### Table 1. Validity Test

<table>
<thead>
<tr>
<th>Testing Variables</th>
<th>Test Repetitions</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Knowledge (X1)</td>
<td>0.508</td>
<td>0.730</td>
</tr>
<tr>
<td>Consumer Perception (X2)</td>
<td>0.846</td>
<td>0.869</td>
</tr>
<tr>
<td>Purchase Decision (Y)</td>
<td>0.867</td>
<td>0.927</td>
</tr>
</tbody>
</table>

Additional Information:

1) A coefficient value of 0 = No relationship (rarely occurs).
2) A coefficient value of 1 = Perfect relationship (rarely occurs).
3) A coefficient value > 0 to < 0.2 = Very low or weak relationship.
4) A coefficient value of 0.2 to < 0.4 = Low or weak relationship.
5) A coefficient value of 0.4 to < 0.6 = Moderately large or moderately strong relationship.
6) A coefficient value of 0.6 to < 0.8 = Large or strong relationship.
7) A coefficient value of 0.8 to < 1 = Very large or strong relationship.
8) Negative values indicate the direction of the relationship. For example, suppose the correlation coefficient between variable 1 and variable 2 is -0.5. In that case, it means that as the value of variable 1 increases, the value of variable 2 decreases, with the strength of the relationship being 0.5 or moderately strong.

Based on the measurements above, the correlation value obtained is greater than the coefficient, with an alpha value of 0.000 < 0.05. This indicates that consumers’ knowledge, perception, and purchasing decisions are strong and significant. Therefore, it can be concluded that the repeated variables used, namely X1 (Knowledge) five times, X2 (Perception) four times, and Y (Decision) three times, are valid for use.

#### 4.2. Reliability Test

A reliability test determines whether the questionnaire administered to East Belitung Teran Honey consumers is reliable. This test is performed using Cronbach’s Alpha method with the assistance of SPSS software.

The reliability coefficient used has a Cronbach’s alpha value of 0.6. If the results of the X1, X2, and Y values are above Cronbach’s alpha value, they can be considered reliable or consistent. Conversely, they can be considered inconsistent if they are below that value. Therefore, upon examining the three variables above, namely the knowledge (X1), consumer perception (X2), and purchase decision (Y), all values are shown to be above Cronbach’s alpha value. This proves that the questionnaire administered to the consumers is reliable and consistent.
4.3. Classic Assumption Test

4.3.1. Normality Test

Based on the histogram above, it can be observed that the data distribution appears to be normally distributed, as the resulting histogram forms a symmetrical bell shape.

From the above figure, it can be seen that the residual values (data points) are scattered around the diagonal line. This indicates that the residual values of the regression model are approximately normally distributed.
4.3.2. Multicollinearity Test

Table 2. Multicollinearity Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.722</td>
<td>.878</td>
<td></td>
<td>4.237</td>
<td>.000</td>
</tr>
<tr>
<td>Knowledge</td>
<td>.088</td>
<td>.048</td>
<td>.155</td>
<td>1.823</td>
<td>.071</td>
</tr>
<tr>
<td>Consumer</td>
<td>.441</td>
<td>.064</td>
<td>.586</td>
<td>6.909</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Purchase Decision

Based on the table output above, it is evident that the Tolerance value for the variables ‘Knowledge’ (X1) and ‘Consumer Perception’ (X2) is 0.784, greater than 0.10. Additionally, the VIF (Variance Inflation Factor) value for the variables ‘Knowledge’ (X1) and ‘Consumer Perception’ (X2) is 1.276, which is less than 10.00. Therefore, it can be concluded that there is no multicollinearity issue in the regression model.

4.3.3. Heteroskedasticity Test

![Scatterplot](https://example.com/figure-4)

Figure 4. Scatterplot

Based on the scatterplot output above, the following observations can be made:

1) The data points are scattered above and below, or around 0.
2) The data points do not cluster only above or below.
3) The dispersion of data points does not exhibit a widening and narrowing wave pattern.
4) The dispersion of data points does not show any discernible pattern.
Therefore, it can be concluded that there is no heteroscedasticity issue, indicating that the regression model is considered good and ideal.

4.4. Multiple Linear Regression Analysis

From the results of multiple linear regression analysis in Table 2 above, the regression equation is as follows:

\[ Y = 3.722 + 0.88 X_1 + 0.441 X_2 + \varepsilon \]  

(2)

From the equation, the following interpretations can be provided:

1) A constant value of 3.722 indicates that if there are no changes in the knowledge and consumer perception variables (all X1 and X2 values are zero), the purchasing decision will have a value of 3.722.

2) The regression coefficient of the knowledge variable is 0.88, indicating that if the knowledge variable (X1) increases by one unit, assuming the consumer perception variable (X2) and the constant (a) are zero, the purchasing decision increases by 0.88. This suggests that the knowledge variable positively impacts the purchasing decision.

3) With a regression coefficient of 0.441 for the consumer perception variable (X2), if the consumer perception variable (X2) increases by one unit, assuming the knowledge variable (X1) and the constant (a) are zero, the purchasing decision increases by 0.441. This indicates that the consumer perception variable positively impacts the increase in the purchasing decision.

4.5. Coefficient of Determination Analysis

Table 3. Model Summary

<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>.673a</td>
<td>.452</td>
<td>.441</td>
<td>1.514</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Consumer Perception, Knowledge

Based on the SPSS “Model Summary” output table above, it is evident that the coefficient of determination or R-Square value is 0.452. This value of R-Square 0.452 is obtained by squaring the correlation coefficient value or R, which is 0.673 (0.673 x 0.673). The coefficient of determination (R-Square) is 0.452, equivalent to 45.2%.

The 45.2% figure implies that the knowledge variable (X1) and the perception variable (X2) collectively influence the purchasing decision variable (Y) by 45.2%. The remaining portion (100% - 45.2% = 54.8%) is influenced by other variables outside the regression model generated in this study.
4.6. Simultaneous Test (F-test)

Table 4. ANOVA

<table>
<thead>
<tr>
<th>Model</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>183.497</td>
<td>2</td>
<td>91.748</td>
<td>40.050</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>222.213</td>
<td>97</td>
<td>2.291</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>405.710</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Purchase Decision  
b. Predictors: (Constant), Consumer Perception, Knowledge

Based on the “ANOVA” output table above, it is evident that the significance value (Sig.) in the F-test is 0.000. Since Sig. = 0.000 < 0.05, according to the decision-making basis in the F-test, it can be concluded that the knowledge variable (X1) and the Perception variable (X2) collectively have a significant impact on the purchasing decision variable (Y).

4.7. Partial Test (t)

Table 5. t-Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>3.722</td>
<td>.878</td>
<td>4.237</td>
<td>.000</td>
</tr>
<tr>
<td>2 Knowledge</td>
<td>.088</td>
<td>.048</td>
<td>.155</td>
<td>.071</td>
</tr>
<tr>
<td>3 Consumer Perception</td>
<td>.441</td>
<td>.064</td>
<td>.586</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Purchase Decision

Based on the “Coefficients” output table above, the following conclusions can be drawn:

The significance value (Sig.) in the t-test for the knowledge variable is 0.071. Since Sig. = 0.071 > 0.05, according to the decision-making basis in the t-test, it can be concluded that the knowledge variable (X1) does not have a significant impact on the purchasing decision variable (Y).

The significance value (Sig.) in the t-test for the consumer perception variable is 0.000. Since Sig. = 0.000 < 0.05, according to the decision-making basis in the t-test, it can be concluded that the consumer perception variable (X2) has a significant impact on the purchasing decision variable (Y).
5. Conclusion

Knowledge and consumer perception have a significant impact on the purchasing decisions of East Belitung Teran Honey. The knowledge variable does not significantly impact the consumer decision variable in purchasing East Belitung Teran Honey. The consumer perception variable has a significant impact on the purchasing decision variable of East Belitung Teran Honey. To improve the sales uptake of East Belitung Teran Honey, conducting promotions and increasing public understanding that honey is not just a medicine but also contributes to a healthier lifestyle are recommended. Raising awareness among the public is essential, considering that the general population is already familiar with East Belitung Teran Honey.

6. Conflicts of Interest and Ethical Standards

The authors certify that in this research, there are no conflicts of interest within their current organization, and no unethical practices, such as plagiarism, were followed during the research.

References


