Information Effect on Organic Vegetable Purchase Interest through Consumer Preferences and Awareness

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Abstract

This study aims to determine the effect of consumer preferences and awareness on interest in organic vegetables. Factors observed in this study were information, consumer preferences, consumer awareness, and consumer buying interest toward organic vegetables. This research uses descriptive quantitative method. The data sampling technique uses accidental sampling method. The data was collected from respondents consisted of 100 consumers of five major retailers in the city of Bogor in Indonesia. The respondents consist of 80 female (80%), and 57 respondents are 25–34 years old (57%). In terms of education, type of job and monthly income of respondent, the sample can be categorized as middle-class segment. The data obtained were analyzed using Structural Equation Modeling with Partial Least Square (SEM-PLS). The results of this study indicate that the information obtained by consumers significantly and positively affects consumer preferences and consumer awareness of organic vegetables. Then, consumer preferences and consumer awareness significantly and positively affect the interest of consumers to buy organic vegetables. Consumer preference for organic vegetables is still considered quite low. The factors that influence the low consumer preference are the price of organic vegetables, which is more expensive than non-organic vegetables and the unattractive packaging of organic vegetables.

Keywords: Organic Vegetable, Structural Equation Model, Consumer Preference, Consumer Awareness

JEL Classification Code: L81, M10, M31

1. Introduction

Plant cultivation using organic materials will produce organic products such as organic vegetables. The system used in organic vegetable farming cultivation are practices such as agricultural waste management, manure fertilizer, crop rotation, proper soil management, and prohibiting the use of synthetic fertilizers and pesticides. The advantages of organic vegetables are guaranteed healthy and freshness. The number of organic food producers in Indonesia in 2015 increased by about 56% compared to the previous year, as stated in the Indonesian Organic Survey (SPOI). Vegetable consumption in Indonesia is still classified as low and tends to fluctuate. The expansion of the market for organic products depends on an increase in income and education levels of consumers (David & Ardiansyah 2016). Organic food consumers in Indonesia currently consist of highly educated middle-class households (David & Ardiansyah, 2016).

Preference for healthy and safe food products depends on individual orientation and this is expected to increase public awareness of health and the desire to consume organic food products (Suharjo et al., 2016). Consumers of organic products, including organic vegetables, tend to be more selective in determining which products to buy. Consumer awareness is still not fully evenly distributed about organic vegetable products. The problem is the price of organic vegetables, which is considered high compared to non-organic vegetables. Information regarding organic vegetable products still needs to be improved. This is expected to increase people’s preference for organic vegetable products. Study conducted by Stanton et al. (2018) stated that people prefer non-organic vegetables
compared to organic vegetables because there is still a lack of public awareness about the benefits of organic vegetables for health, so it is not an important thing in purchasing decisions for organic vegetable products. Different result is stated by Janssen (2018), that consumers prefer organic products because they think organic vegetable products are safer and healthier, so that this is the most influential driver of consumer buying preferences and interest. One of the problems in the development of organic food is the lack of marketing efforts made by the organic food businessman (Kim et al., 2014).

Based on the background and problem formulations described, the purpose of this study was to analyze the impact of information on buying interest of organic vegetable products through consumer preferences and awareness. Indonesia as one of the agricultural countries need more explanation how to increase the demand of organic vegetable since those products are healthier. To increase the demand, producers and marketers should understand the factors affecting buying interest of consumers towards organic vegetables. Therefore, the research about consumer’s perception and awareness in relation with buying interest is important to provide the solution for organic producers in Indonesia.

2. Literature Review

2.1. Delivery of Information

Information is used to evaluate product and determining a purchase decision. Information search and evaluation are things that consumers do before making a purchase. Consumers will study and collect information about the products to be purchased. Consumer preferences and awareness of a product such as type, product origin, benefits or product advantages can be influenced by information received by consumers. Delivery of information needs to be improved in order to increase consumer buying interest in a product (Jang & Woo, 2015).

Sources of information through the media, brochures, newspapers, and relatives are sources of information that are often used in conveying information. Information sources that are considered reliable can increase the credibility of information (Liu et al., 2014). Secapramana and Ang (2019) stated that information conveyed through the media, labels, counters, brochures can form a mindset that can affect consumer trust and awareness. Information regarding the fact that organic products are safe, healthy and quality guaranteed are important factors that can influence consumer buying preferences and interests (Cam & Karakaya, 2018).

2.2. Consumer Preferences

Consumer preferences are defined as subjective individual tastes measured by the utility of various goods (Lee & Yun, 2015). Consumers generally make choices by considering information about a product, product attributes, and evaluating the consequences of using the product (Sivathanu 2015). Inci et al. (2014) stated that consumer preferences for organic vegetable products vary depending on demographic characteristics, educational background, occupation, age and income. Consumers also have different preferences for the price of a product, health, benefits, availability, and even the product packaging (Suharjo et al., 2016).

Migliore et al. (2015) stated that the quality of organic products is an indicator of urban consumer preferences in purchasing products. Consumer preferences for product quality differ for each region (Hempel & Ulrich, 2016). Consumers are aware of organic products, but not all consumers can be loyal to organic products (Chandrashekar, 2014). This is due to the lack of information and differences in consumer sensitivity to price and quality. Higuchi and Angel (2015) stated that differences in consumer preferences for price and quality and health benefits of a product have an impact on consumer buying interest. In this study, the dimensions of consumer preferences used are price, quality, availability and health benefit.

2.3. Consumer Awareness

Consumer awareness about a product is a factor that has an impact on the buying decision. Consumer awareness can be in the form of health, the benefits of the product to be purchased and importance of the product to oneself (Jayakumar & Pasupathi, 2019). The higher the level of consumer education will have a positive effect on awareness and perception of a product. Consumers with high knowledge will find it easier to understand the benefits of a product. Consumers realize that the high price of the product is worth the benefits it will get. Awareness of health factors, knowledge of product benefits are important factors for consumers in buying organic products (Brosekhan et al., 2013). Consumers who live in cities have a higher awareness of a product, because changes in healthy lifestyles are increased in society. Several previous studies confirmed that consumer awareness has positive influence on purchase interest.

2.4. Purchase Interest

Consumer purchase interest is the desire of consumers to buy a product or item without coercion or on their own awareness and willingness (Hwang et al., 2016). Consumer purchase interest can be determined by several factors, such as the price that is considered in accordance with the benefits of the product purchased, product quality, and consumer confidence in a product due to recommendations from relatives and exposure to information received (Sriwaranun et al., 2015). Singh and Rachna (2017) stated that there are several factors that influence consumer purchase interest,
namely, quality, health, and price. Phuong and Dat (2017) also stated that purchase interest is affected by consumer positive attitude toward product, brand, and social prestige perceived. Price is the most sensitive factor in consumer buying interest. Consumer preference for the high price of a product can determine consumer purchase interest. The sensitivity of consumers to prices varies greatly, especially for organic products. Skreli et al. (2017) state that there are consumers who are sensitive to price and product quality as well as prices to product varieties but overall affect consumer purchase interest. This study uses the dimensions of purchase interest in the form of price, product quality, and health.

2.5. Hypotheses

Based on the literature review above, we propose initial research model that will evaluated in this study using Structural Equation Model analysis. We argue that information is very important and it will give impact on consumer’s awareness and consumer’s preference. Both consumer’s awareness and consumer’s preferences have positive influence on consumer’s interest to buy organic vegetable. In this model, variable of information will influence purchase interest indirectly through consumer’s awareness and preference. The depiction of the order of the conceptual framework is shown in Figure 3.

H1: Delivery of information is significantly and positively related to consumer preferences.

H2: Delivery of information is significantly and positively related purchase intention.

H3: Consumer preferences is significantly and positively related purchase interest.

H4: Consumer awareness is significantly and positively related purchase interest.

3. Research Methods and Material

3.1. Data Collection

In this study, we used primary data obtained from the results of structured questionnaires filled out by respondents in the form of information from all independent and dependent variables. The total primary data used in this study were 100 samples of respondents. We applied purposive sampling technique to choose respondent in which researcher has certain criteria for respondents. The criteria of respondent applied in this study are those who have never bought organic vegetables. We collected respondent in modern retailer such as supermarket, hypermarket and specialty fruit and vegetable store located in Bogor. The data collection procedure was carried out by giving a questionnaire to respondent. In addition, in-depth interviews were conducted with respondents in order to sharpen the research findings.
The number of respondents in this study was 100. Respondents are consumers who frequently shop at the five modern retailers in Bogor City. Respondents in this study were respondents who had never bought organic vegetable products, but were interested in buying organic vegetables.

Table 2 presents the aspects of the respondents in this study. The characteristics of respondents are described through demographics including gender, age, latest education, occupation and monthly income. Information about the characteristics of respondents aims to understand the diversity of answers from various groups of respondents. In terms of gender, the majority of respondent (80%) is female, with the age majority about 25–34 years old (57%). It can be considered as productive age, and include in category of millennial generation. One of the characteristics of the millennial generation is that it is more aware about a healthy lifestyle. In terms of educational level, the majority (63%) has undergraduate certificate and most of them works as entrepreneurs (30%) and working in private companies (28%). In terms of education, type of job and monthly income of respondent, it can be categorized as middle-class segment.

### 4.2. Structural Equation Modeling

There are several tests to determine the validity and reliability of the data. The following are some of the validity and reliability tests in this study:
4.2.1. Average Variance Extracted (AVE) Validity Test

This test is used to see the average of the variance extracted from the calculation of the AVE value, which is calculated based on the formula with the help of Microsoft Excel. In this test, the AVE value is > 0.5 and the calculation results are presented in Table 3.

4.2.2. Construct reliability (CR) Test

Reliability test using construct reliability is used to see the reliability and consistency of data. The value of construct reliability from 0.6 to 0.7 is still acceptable if the indicators in the model are classified as good. The criteria in this test are the construct reliability value > 0.7. The calculation results are presented in Table 3.

Table 3 shows the CR value on each indicator > 0.7 and the AVE value on the variable > 0.5. So that all indicators in this study are said to be reliable.

4.3. Goodness of Fit

Model feasibility test or goodness of fit is carried out to determine the feasibility of a model. There are several methods used to see the feasibility of the model, namely, the Chi-Square statistical test, Root Mean Squares Error of Approximation (RMSEA), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Adjusted Goodness of Fit Index (AGFI), and Probability Level.

Table 4 shows that the results of the feasibility test of the model carried out in this study meet the criteria, so that it can be concluded that this research model is feasible. Chi-Square and Probability values are accepted marginally. The CMIN/DF value of 1.777 shows the results of the model fit equation. The model is feasible if one of the model’s feasibility test models is met. The Chi-Square value in this study was 263,030. The RMSEA suitability level obtained based on Table 16 is 0.062, so that the model can be accepted because the results are ≤ 0.08.

Other model fit measures are the Goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI). GFI is an index that describes the overall level of suitability of the model calculated from the squared residuals of the predicted model compared to the actual data. Meanwhile, AGFI is a measure of GFI that has undergone adjustment to the ratio of degrees of freedom. AGFI values are generally lower than GFI. The GFI value obtained is 0.875, which means the marginal fit and the AGFI value is 0.839, so it can be said that the model fit measure is good enough in describing the empirical data. The measurement of the suitability of the Comparative Fit Index (CFI) model compares how well the research model with the assumption of the observed variables is not correlated with each other. Based on the results of testing the CFI value is 0.969, which means that the model is in the good category (fit). Overall the results of the Goodness of Fit test are quite good. So, that the design of the research model can be used to analyze the effect of information, consumer preferences, public awareness of buying interest.

Table 3: AVE and CR Test Result

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Information</td>
<td>0.954</td>
<td>0.723</td>
</tr>
<tr>
<td>2</td>
<td>Consumer Preference</td>
<td>0.923</td>
<td>0.704</td>
</tr>
<tr>
<td>3</td>
<td>Consumer Awareness</td>
<td>0.902</td>
<td>0.697</td>
</tr>
<tr>
<td>4</td>
<td>Purchasing Intention</td>
<td>0.892</td>
<td>0.806</td>
</tr>
</tbody>
</table>

Table 4: Goodness of Fit

<table>
<thead>
<tr>
<th>Goodness of Fit Index</th>
<th>Cut of Value</th>
<th>Analysis</th>
<th>Model Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi Square</td>
<td>≤ 177.390</td>
<td>263.030</td>
<td>Marginal</td>
</tr>
<tr>
<td>Probability</td>
<td>≥ 0.05</td>
<td>0.000</td>
<td>Marginal</td>
</tr>
<tr>
<td>RMSEA</td>
<td>≤ 0.08</td>
<td>0.062</td>
<td>Fit</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>≤ 3.00</td>
<td>1.777</td>
<td>Fit</td>
</tr>
<tr>
<td>GFI</td>
<td>≥ 0.90</td>
<td>0.875</td>
<td>Marginal</td>
</tr>
<tr>
<td>AGFI</td>
<td>≥ 0.90</td>
<td>0.839</td>
<td>Marginal</td>
</tr>
<tr>
<td>CFI</td>
<td>≥ 0.90</td>
<td>0.969</td>
<td>Fit</td>
</tr>
</tbody>
</table>

Table 5: Relationship between Variables

<table>
<thead>
<tr>
<th>Relationship between variables</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R</th>
<th>P</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Information → consumer preferences</td>
<td>0.885</td>
<td>0.060</td>
<td>14.656</td>
<td>–</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2 Information → consumer awareness</td>
<td>0.904</td>
<td>0.065</td>
<td>13.996</td>
<td>–</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3 Consumer preferences → purchase intention</td>
<td>0.432</td>
<td>0.144</td>
<td>3.008</td>
<td>0.003</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4 Consumer awareness → purchase intention</td>
<td>0.650</td>
<td>0.142</td>
<td>4.590</td>
<td>–</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
4.4. Relations Between Variable

This study showed there is a relationship between variables, namely the relationship between information and consumer preferences, the relationship between information and public awareness, the relationship between consumer preferences and purchase intention and the relationship between public awareness of purchase intention. Based on the processed results on the relationship between these variables, the following results were obtained (see Table 5).

4.4.1. Relationship between Information and Consumer Preferences

Delivery of information is one of the variables in research that affects consumer preferences, where consumer preferences have an influence on consumer purchase interest. In this study, the results showed that information has a positive and significant effect on consumer preferences which can be seen in the table that the CR value is 14.656, where the value is greater than 1.96 and has a p-value less than 0.05. From this result it can be concluded that delivery of information significantly and positively affecting consumer preferences.

Information plays an important role in how consumers prefer a product. Based on the results of survey data, consumers agree that information related to a product to be purchased is important to know. Information about health is also important for consumers. Information conveyed or obtained by consumers can be in the form of a series of words, images or symbols with instruments through advertisements, brochures, or delivered in person.

Information about the benefits of organic vegetable products, especially for health, has a positive impact on consumer preferences. Consumers who are actively looking for information about organic products will prefer organic vegetable products to non-organic ones. However, consumer involvement in finding information and information provided about organic products is still relatively minimal.

4.4.2. Relationship between Information and Consumer Awareness

Information received by consumers affects consumer awareness. Measuring consumer awareness of a product is to determine the extent of consumer knowledge about the existence of a product. In this study, the results show that information has a positive and significant effect on public awareness because the CR value is 13.996, where the value is greater than 1.96. Besides that, the p-value is far less than 0.05. From this result it can be concluded that delivery of information significantly and positively affects consumer awareness. Awareness has an influence on the process of adopting a product or idea, including organic vegetable products. Consumers who have received information and know information about organic vegetable products are aware that organic vegetables have health benefits. The problem that often occurs is that consumers only know about vegetables as a healthy food and the nutrients needed for the body.

4.4.3. Relationship between Consumer Preference and Purchase Interest

The results show that consumer preferences have a positive and significant effect on buying interest in organic vegetables because the CR (Critical Response) value is 3.008, where the value is greater than 1.96. Beside that, the p-value is much smaller than 0.05. Consumer preferences affect consumer purchase interest in organic vegetables. From this result it can be concluded that consumer preferences significantly and positively affect consumer purchasing interest.

Demographics of respondents from this study indicate that the characteristics of consumers are quite widespread. So, there are many factors that determine the decision to buy organic vegetables. Most of the respondents do not agree that the price of organic vegetables is equal to the benefits provided. This shows that the price of food, especially organic vegetables, in the market is still high. Respondents felt that organic vegetables would be difficult to consume on a daily basis. Respondents also considered that the packaging of organic vegetables was not attractive, so that it did not attract buying interest from respondents to buy organic vegetables. Respondents tend to prefer products with good packaging. In addition, a good brand or label will also increase consumer buying interest. The availability of stocks of organic vegetables is also a determining factor in consumer buying interest. Consumers tend to prefer organic vegetables that are available in abundance.

4.4.4. Relationship between Consumer Awareness and Purchase Interest

This study showed that consumer awareness had a positive and significant effect on buying interest in organic vegetables because the CR value was 4.590, where the value was greater than 1.96. Besides that, the p-value is much smaller than 0.05. Consumer awareness affects consumer buying interest in organic vegetables. From this result it can be concluded that consumer awareness significantly and positively affects consumer purchasing interest.

The rapid development modern times has made it easier for people to get information about health. Public awareness of the importance of health makes a healthy lifestyle popular. One way to live a healthy lifestyle is to eat organic.
vegetables. Many people do not know the difference between conventional vegetables and organic vegetables. The culture of conventional vegetables that use hazardous chemicals as pesticides and their effect on consumers who consume them is not well known. The most important awareness for consumers is awareness of organic vegetables and the dangers of consuming food that is not good for health. With this awareness, consumers will replace the food they consume with healthy foods. This is supported by Pham (2020) research, which stated that awareness of decreasing one’s own health will motivate the purchase of organic food.

4.5. Managerial Implication

The level of consumer awareness of what is considered low can still be improved. This can be overcome if there are other parties who contribute to increasing consumer awareness of the importance of health and the benefits of organic vegetables. Parties that can play a role include business people, academics and the government as policymakers. Businessmen of organic vegetables, both producers and distributors, can help increase the availability of stocks of organic vegetables on the market. Thus, organic vegetables on the market can be cheaper and more attractive to the public. Then, make organic vegetable packaging more attractive so that it attracts consumers to buy organic vegetables. In this modern era, organic vegetable businessmen must be more able to utilize online media, which are the most effective means of disseminating information. Businessmen can effectively expand their business by promoting organic vegetables on social media. In addition, businesses should make ordering services and purchasing organic vegetables online.

Academics can assist in outreach in villages that have the potential to become organic vegetable producers. Villages that have succeeded in becoming producers can increase the availability of organic vegetable stocks on the market. Academics can also pay attention to villages or producers of organic vegetables, so producers can increase the efficiency of their production. In addition, academics can also help in efforts to further research the benefits of organic vegetables and participate in spreading the health benefits of organic vegetables.

The government as policymaker can help enforce regulations on the use of chemicals as a pest exterminator. The use of hazardous chemicals in the agricultural sector has actually been regulated by the government since 1973. However, because pest control and chemical fertilizers are still one of the most effective efforts to increase food production, the government has only limited their use. Therefore, the government also needs to make an effort to increase public awareness of the importance of a healthy lifestyle. For example, by making a public service advertisement that invites the public to get to know the benefits of organic products more. So that the trend in society will slowly change and more people choose to consume organic vegetables.

5. Conclusion

The results of this study indicate that the respondents’ enthusiasm for information about organic vegetables is considered quite high, even though respondents’ preference for organic vegetables is still considered quite low. The factors that influence the respondents’ low preference are the price of organic vegetables, which is higher than non-organic vegetables and the unattractive packaging of organic vegetables. Respondents’ level of awareness of organic vegetables is quite low. Respondents already know that organic vegetables are healthier than non-organic vegetables. Consumer preferences have a positive and significant effect on consumer interest to buy organic vegetables.

References


