Indonesian consumers’ awareness towards organic coffee

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Abstract. Organic farming is growing. Consumers' knowledge of environmental friendly products and consumer awareness of health have caused the market for agricultural products to start growing in Indonesia. Initially, agricultural products were in food crops and horticulture. However, the market growth has resulted in several agricultural products in the plantation sector, such as coffee, which have started the organic coffee certification process. This study aimed to analyse the factors influencing the awareness level of Indonesian consumers towards organic coffee. Respondents in this study assessed 766 samples. Respondents were selected using accidental sampling technique. Furthermore, the respondent's data were processed using structural equation model. The results showed that health factors, environmental factors and supporting factors for local farmers had a significant effect on the awareness of Indonesian consumers towards organic coffee. Although some of these factors influenced the awareness of consumers towards organic coffee, the awareness level of coffee consumers towards organic coffee was still relatively low, only 17.89% of respondents were able to show the right organic certification logo.

1. Introduction
Consumers' awareness of the products has increased [1]. The increase in consumer income and the availability of varied foodstuffs causes consumers to be more selective with the edible products [2]. Consumers prefer natural, healthy, organic foods that do not have a negative impact on the environment [3]. Consumers believe that products produced using chemical pesticides and fertilizers will have a negative impact on health and the environment [4]. Therefore, the market for organic products continues to increase.

Especially for Indonesia, the organic market has increased by 15% every year. The increase in the organic market is still dominated by horticultural products. Therefore, Indonesian consumers have a level of awareness on organic horticultural products. On the other hand, organic certification is not only given to horticultural products in Indonesia, but also in the plantation sector. Nowadays, the plantation commodity having organic certification is coffee. The existence of organic certification on coffee is expected to increase the value of coffee.

Consumers’ awareness of organic coffee is not as big as Indonesian consumers' awareness of horticultural and food products. Consumer awareness is the first step in developing the demand for
organic products [5]. If consumer awareness of organic products is still low, it means that organic coffee business stakeholders must make more efforts to increase consumer awareness of organic coffee in Indonesia as an effort to develop the organic coffee market in Indonesia. Several studies have identified preferences, behaviour and consumer awareness of organic coffee [6,7]. This study aimed to analyse the factors influencing consumer awareness of Indonesian coffee towards organic coffee.

2. Data and methods
The research data were obtained from direct interviews with consumers in 2020. Medan City was chosen as the research location. This was because Medan city had a heterogeneous society, so that it could be a picture of heterogeneous Indonesian consumers. The selection of respondents was carried out using non-probability sampling with accidental sampling technique. The selected respondents were coffee consumers, so that they could provide clear information about their understanding of organic coffee. As many as 850 respondents were randomly selected, then after data clearing was done, 766 respondents were left. The questionnaire was compiled based on the results of a literature review [1]. Data from interviews with respondents were a type of ordinal data using a 1-7 Likert scale.

To analyse consumer awareness, it could use several analytical tools such as logistic analysis [2,8], multinomial logit analysis [5,6] and analysis of Structural Equation Model [9,10]. This research used Structural Equation Model (SEM) analysis because the variables used in this study required the help of indicator variables to explain the existing latent variables. In this study, the variables Health Reason, Environment, and Local Origin were used as exogenous variables, and Consumer Awareness to Organic Coffee played role as endogenous variables [11].

2.1. Hypothesis testing
H1. Health reason had a significant effect on consumer awareness.
H2. Environment reason had a significant effect on consumer awareness.
H3. Local origin reason had a significant effect on consumer awareness.

![Figure 1. Conceptual framework of the study](image)

3. Results and discussion
3.1. Demographic of respondents
The majority of respondents were the consumers aged 20-30 years as many as 572 respondents (74.7%). This age range illustrates that the majority of respondents in this study were millennial consumers having specific consumption preferences. Of the 766 respondents, 417 respondents (54.4%) were female and the remaining 349 respondents (45.6%) were male. The highest education level of the respondents was PhD, while the lowest was elementary school, but the number was not too much when compared to the education level of other respondents. The education level of the most respondents was high school graduates with 490 respondents (63.9%) followed by 196 respondents
(25.59%) with a bachelor education level. The level of consumer awareness of organic coffee could be said to be quite low. This is because the majority of coffee consumers in Indonesia still did not know the organic logo on coffee products. The majority of coffee consumers chose the organic logo number 2. If we refer to the Indonesian organic institute, a product logo that has been certified organic will have a logo like number 1 in Table 1.

**Table 1. Consumer awareness of organic logo**

| Respondent's Choice | 137 (17.89%) | 347 (45.30%) | 99 (12.92%) | 183 (23.89%) |
|---------------------|--------------|--------------|-------------|--------------|

3.2. Measurement model

Construct Validity is an analysis tool to measure the suitability of the model in the SEM-PLS test [12]. The construct validity analysis is seen from the average variance extracted (AVE) and composite reliability (CR) values. Furthermore, to measure the loading factor as an indicator of the suitability of the questions on the indicator variable towards the latent variable. The loading factor value can be seen in Figure 2. The AVE value should be in the range 0.4-0.6, or a value greater than 0.5 means a better variable validity. The CR value should be above 0.7 [13,14]. The loading factor value had a value of more than 0.5, meaning that each question in the questionnaire was able to explain the latent variables that existed. In research using a questionnaire which is still in the process of developing the loading factor, the value of 0.4 can still be used.

From Figure 2, it can be seen that all indicator variables had a loading factor value greater than 0.4, so that all indicator variables were able to explain latent variables well. If the loading factor value was not below 0.4, then in this model there was no indicator variable that had to be deleted.

![Figure 2. The estimation of structural equation model result](image)

Table 2 presents the values of AVE and CR as an indicator of the validity and reliability of the questionnaire. From Table 2, it can be seen that the AVE value in all variables had a value greater than...
0.5 and a CR value was greater than 0.7. The AVE value and CR value state that the questions used in this study were valid and reliable for use in other studies.

Table 2. Construct reliability and validity

| Variable                | Cronbach’s alpha | Average Variance Extracted (AVE) | Composite Reliability (CR) |
|-------------------------|------------------|---------------------------------|-----------------------------|
| Health Reason           | 0.826            | 0.742                           | 0.896                       |
| Environment Reason      | 0.752            | 0.801                           | 0.890                       |
| Local Origin Reason     | 0.897            | 0.906                           | 0.951                       |

3.3. Hypothesis testing

The values in Table 3 explain the direct effect of each of the variables for health reason, environment reason and local reason on consumer awareness. All hypotheses built in this study were acceptable because they had a significant value smaller than 0.05. It supports by the coefficient value of the model. Overall coefficients in this study had positive values, meaning that the higher consumer knowledge of health reasons, environmental reasons and local origin reasons would increase consumer awareness of organic coffee [1,15].

Table 3. Hypothesis testing

| Hypothesis | Model                                   | Coefficients | Sig.* | Accept/ Reject |
|------------|-----------------------------------------|--------------|-------|----------------|
| H1         | Health Reason – Consumer Awareness      | 0.245        | <0.01 | Accept         |
| H2         | Environment Reason – Consumer Awareness | 0.098        | 0.09  | Accept         |
| H3         | Local Origin Reason – Consumer Awareness| 0.048        | <0.01 | Accept         |

*) α:0.05

The positive value of the health reasons on consumer awareness is consistent with the results of the study [15]. In this study, health reason had the largest contribution to the level of consumer awareness. Whereas in this study the biggest influence was Environment Reason. This was because the majority of consumers knew that the organic farming system was an effort to improve environmental condition, so that environmental reason greatly affected consumer awareness of organic coffee.

4. Conclusions

In this study, it was found that the level of Indonesian consumers’ awareness of organic coffee was still relatively low, this was indicated by the ability of consumers to choose an organic logo that was in accordance with organic certification in Indonesia. Only 137 respondents (17.89%) were able to recognize the right organic logo. This research had succeeded in proving the hypothesis built. The factors of health reason, environment reason and local origin reason had a positive influence on the level of consumer awareness of organic coffee. The unique result of this study was that the Environment Reason was a factor providing the greatest contribution to consumer awareness of organic coffee.

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