

Analysis of the Effect of Brand Equity on Purchasing Decision towards Organic Rice in Special Region of Yogyakarta

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Abstract. The community's need for organic rice increases every year along with changes in people's lifestyles towards a healthy lifestyle. This has made many organic rice brands appear on the market. Each of these brands needs to implement the right marketing strategy to increase its competitive advantage. The study aims to analyze the influence of brand equity elements (brand awareness, brand association, perceived quality, and brand loyalty) on purchasing decisions for organic rice. The Structural Equation Modeling-Partial Least Square (SEM-PLS) is used to analyze the data, with a purposive sampling data collection technique. Respondents in this study were 105 consumers of organic rice "Lingkar Organik". The "Lingkar Organik" brand was chosen because it is the market leader in the branded organic rice market in Special Region of Yogyakarta. Based on the results of the study, it was found that the perceived quality and brand loyalty variables have a significant effect on the purchase decision towards organic rice. Brand association and brand awareness variables have no significant effect on purchasing decisions.

1. Introduction

The community's need for organic rice increases yearly along with changes in people's lifestyles towards a healthy lifestyle. The Covid-19 pandemic has made people more careful in choosing food that is safe for their health. This lifestyle toward a healthier society is one of the reasons for the existence of an organic farming system.

The organic farming system is farming that returns to nature without using chemical fertilizers or pesticides [1]. In 2010, the government issued a program called Go Organic through the Ministry of Agriculture. This program is a support for organic farming because it is considered more beneficial to health and the environment. The concern of the government to support organic farming programs can be seen in the policies written in the Nawacita Program until 2020. The Indonesian government launched the establishment of 100 Organic Villages, consisting of 600 Organic Food Villages, 250 Organic Horticulture Villages, and 150 Organic Plantation Villages to support the growth of the organic farm in Indonesia. [2].

The Special Region of Yogyakarta is a province starting to develop organic farming. The Kulon Progo

Regency Government produce organic rice with a land area of 24 hectares in 2021 [3]. On the other hand, in 2022, Sleman Regency also cultivates organic rice with a total area of 20 hectares [4]. The increase in the area of land for organic rice has led to the emergence of more organic rice brands in the organic rice market in the Special Region of Yogyakarta. The branding of agricultural commodities, especially organic rice, is one of the efforts made by producers to provide added value to products [5]. However, the consumption of organic rice in DIY is still relatively low, only around 0.5% of total rice consumption [6].

One of the brands that have become a market leader in the organic rice market is organic rice with the Lingkar Organik brand from PT Lingkar Organik Indonesia. The company is engaged in the packaging and marketing industry for organic products, including organic rice. Lingkar Organik sells its products to several resellers and retailers across the Special Region of Yogyakarta. Therefore, researchers are interested in examining the effect of brand equity on purchasing decisions toward organic rice in the Special Region of Yogyakarta.

2. Theoretical Framework and Hypothesis Formulation

There are several studies that use the similar variables as the variables used in this study. Shafi & Madhaviaiah's research (2013) concerning the effect of brand equity on consumer behavior of organic products in India uses brand awareness, brand loyalty perceived quality, and brand association as variables of brand equity. Firmansyah et al's research (2021) concerning on marketing mix, brand equity, and purchase decision of packaged rice products, mentions purchasing decisions as one of the variables. Nonetheless, previous studies

about the effect of brand equity on purchasing decision towards organic rice have not been discussed. This study aims to analyze the effect of brand equity on purchasing decisions for organic rice in the Special Region of Yogyakarta. This research is based on brand equity theory by Aaker (1991) which consists of several variables including brand awareness, brand association, perceived quality, brand loyalty, and other proprietary brands. However, this research has some limitations such as 1) The research was conducted on consumers of branded organic rice in the Special Region of Yogyakarta., 2) The organic rice brand was selected based on the market leader in the organic rice market in

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DIY, namely "Lingkar Organic" organic rice, 3) The research consists of four elements of brand equity, namely brand awareness, brand association, perceived quality, and brand loyalty. The research framework will be figured out in Figure 1. The arrow shows the relationship between exogenous latent variables (brand awareness, brand association, perceived quality, and brand loyalty) and endogenous latent variables (purchasing decision). The hypothesis of this study are:

H1: Brand Awareness has a significant effect on purchasing decisions towards organic rice

H2: Brand Association has a significant effect on purchasing decisions towards organic rice

H3: Perceived Quality has a significant effect on purchasing decisions towards organic rice

H4: Brand Loyalty has a significant effect on purchasing decisions towards organic rice

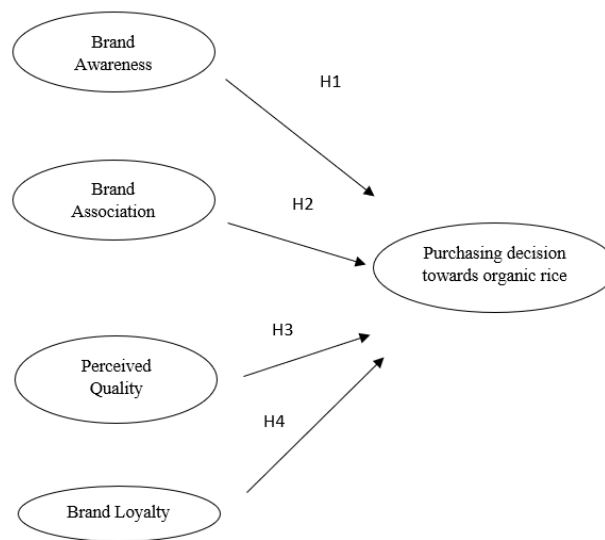


Fig 1. Research Framework

3. Research Method

The data used for this research paper was collected through an online questionnaire. The organic rice brand tested for brand equity is organic rice with the “Lingkar Organik” brand. The brand was chosen because the brand is the market leader in the branded organic rice market based on the results of market survey that have been conducted. It was found that “Lingkar Organik” has sales consistency in various retailers, even distribution of products, and is a popular and best-selling product in e-commerce. Data were obtained from 105 respondents who consumed organic rice branded "Lingkar Organic". The respondents criteria are (1) Domiciled in Special Region of Yogyakarta, (2) Male or Female aged 17 years and above, (3) Have consciously and intentionally purchased “Lingkar Organik” Organic Rice products in the last one year.

The data processing method uses the Partial Least Structural Equation Modeling method. The SEM-PLS method is used because this method can perform 3 activities together, such as checking the validity and reliability of the instrument which is a function of Confirmatory Factor Analysis (CFA), testing the relationship between latent variables (path analysis),

and obtaining a model that is useful for forecasting (regression analysis) [7].

This method was applied to examine the measurement model (outer model) and structural model (inner model). Evaluation of the measurement model (outer model) is carried out by conducting validity and reliability tests. The inner model is called the structural model that connects latent variables. At this stage, the evaluation of the structural model (inner model) is carried out by paying attention to the R-square (R^2) value.

4. Result

According to the respondents' profiles, the study found the majority (78%) were female, in the 25 – 34 year age group (42%), lives in Sleman (56%), education Undergraduate degree (51.4%), private employee (40%), salary Rp. 1.500.000 – Rp3.000.000 per month (39%), and purchase frequency between 1 – 3 times per month (85.7%). The demographic information of the respondents is shown in Table 1.

Table 1: Demographic information of the respondents

Characteristics	Category	Frequency	%
Gender	Male	82	78%
	Female	23	22%

Age	17 – 24 years old	43	41%
	25 – 34 years old	44	42%
	35 – 44 years old	8	8%
	45 – 55 years old	6	6%
	> 55 years old	4	4%
Domicile	Sleman Regency	59	56%
	Yogyakarta City	23	22%
	Bantul Regency	13	12%
	Gunungkidul Regency	9	9%
	Kulon Progo Regency	1	1%
Education	Senior High School	32	30.5%
	Diploma/Academy	4	3.8%
	Bachelor degree	54	51.4%
	Master degree	15	14.3%
Occupation	Private employee	42	40%
	College Student	32	30%
	Entrepreneur	11	10%
	Civil servant	6	6%
	House wife	6	6%
	Teacher/lecturer	4	4%
	Other	4	4%
	Salary (per month)	<Rp.1.500.000	27
Rp1.500.000 - Rp3.000.000		41	39%
Rp3.000.001 - Rp5.000.000		23	22%
> Rp5.000.000		14	13%
Purchase frequency (per month)	1 - 3	90	85.7%
	4 – 6	10	9.5%
	>6	5	4.8%

In evaluating the measurement model (outer model) there are three tests, which are convergent validity, composite reliability, and discriminant validity. Convergent validity is calculated using the loading factor value and the average variance extracted value. Table 2 shows the value of the loading factors; Loading factors value is used to determine whether the statement items reflect the variables under study. Items are valid if the value > 0.7 [8], so all items are said to be valid. The expected Average Variance Extracted (AVE) value is > 0.5. AVE is the average squared loading of the construct indicators. An AVE value of 0.5 or greater

indicates that on average a construct explains more than half of the variance of its indicators. Based on the calculation results, all latent variables already have a value > 0.5, so all the items are valid. The composite reliability value in Table 2 is said to be reliable if it has a value of more than 0.7 [8]. Based on the table 2, all variables have a value of more than 0.7, so it can be concluded that all variables are reliable or able to explain the variance of each indicator that measures them.

Table 2. Summary Result of the measurement model

Variable	Items	Loadings Factor	AVE	R - Square	Composite Reliability
Brand Awareness	AW1	0.885	0.729	-	0.915
	AW2	0.847			
	AW3	0.859			
	AW4	0.825			
Brand Association	AS1	0.887	0.809	-	0.895
	AS2	0.912			
Percieved Quality	PQ1	0.882	0.671	-	0.890
	PQ2	0.847			
	PQ3	0.788			
	PQ5	0.753			
Brand Loyalty	BL1	0.883	0.634	-	0.873
	BL2	0.717			
	BL3	0.833			
	BL4	0.743			

Purchase Decision	PD2	0.757	0.624	0.649	0.869
	PD4	0.789			
	PD6	0.737			
	PD8	0.760			

Discriminant validity is done to ensure that each concept of each latent model is different from other variables. Discriminant validity can be seen from the Fornell Larcker Criterion values in Table 3. All variables are valid based on the values in the

Fornell Larcker table because the Fornell Larcker value in the target variable is greater than the Fornell Larcker value in the other variables. Based on this calculation, all items are valid.

Table 3. Discriminant validity

Latent Variable	AS	AW	PD	BL	PQ
Brand Associaton (AS)	0.900				
Brand Awareness (AW)	0.603	0.854			
Purchase Decision (PD)	0.600	0.597	0.790		
Brand Loyalty (BL)	0.569	0.681	0.701	0.797	
Perceived Quality (PQ)	0.642	0.563	0.735	0.614	0.819

Structural model evaluation (inner model) is calculated by calculating the R square value. Based on Table 2, the R-Square value of 0.649 means that brand awareness, brand associations, perceived quality, and brand loyalty can explain the purchasing decision variable of 64.9%. Other variables outside this research model explain the remaining 35.1%. Based on Fig.2, the path coefficient value can be seen from the arrows connecting exogenous latent variables to endogenous variables. The positive value obtained

indicates that the related variables have a positive effect.

The bootstrapping analysis is used to test hypotheses and determine the significance of the effect of exogenous variables (Brand Awareness, Brand Association, Perceived Quality, Brand Loyalty) on endogenous variable (Purchase Decision). This test uses a significance level of 0.05, and the hypothesis is accepted if the result is greater than the t-table, which is 1.96. The results of the bootstrapping test are shown in Table 4 and Figure 2.

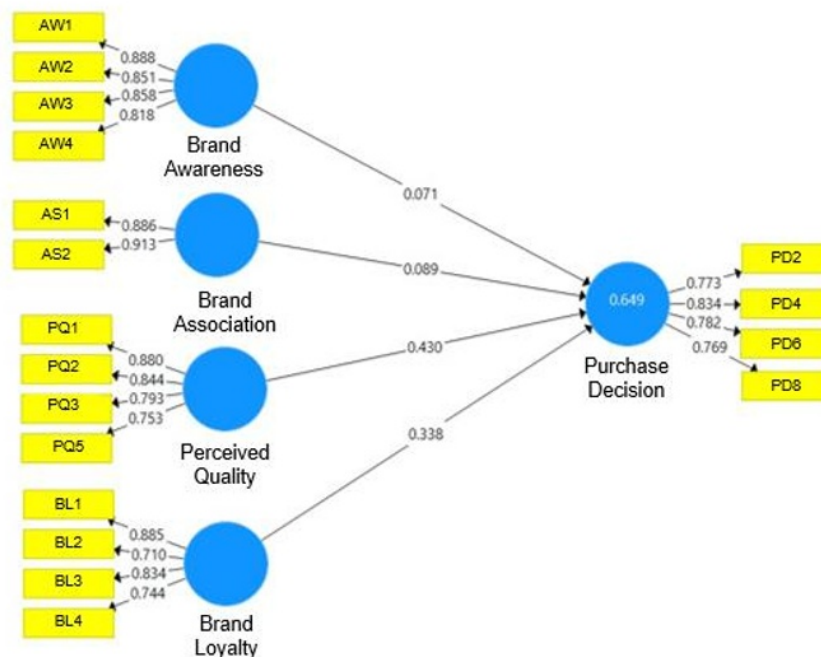


Fig 2. Path Analysis

Table 4. Summary of Findings

Latent Variable	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>t - table</i>	<i>t- statistics</i>	<i>Hypothesis</i>
Brand Awareness → Purchase decision (Hypothesis 1 (H1))	0.071	0.072	1,96	0.678	Not Significant
Brand Association → Purchase decision (Hypothesis 2 (H2))	0.089	0.081	1,96	0.945	Not Significant
Perceived quality → Purchase decision (Hypothesis 3 (H3))	0.430	0.428	1,96	4.067	Significant
Brand Loyalty → Purchase decision (Hypothesis 4 (H4))	0.338	0.348	1,96	3.066	Significant

The brand awareness variable has no significant effect on the purchase decision variable with a t-statistics value of $0.678 < t\text{-table (1.96)}$. This hypothesis does not follow the hypothesis that brand awareness influences purchasing decisions. These results can occur because brand awareness is not the main factor in consuming healthy foods such as organic products [9]. Limited promotions also makes brand awareness among costumers limited [10]. In the brand awareness variable, what is distinctive about organic products and can differentiate organic products from non-organic products is the presence of an organic label on the packaging. This organic label is a physical characteristic that consumers of an organic rice brand can quickly capture and realize quickly. This label can increase consumer confidence and increase purchasing power [11]. Building awareness of organic products can be done based on health awareness. Therefore, an approach can be taken based on consumer habits in consuming organic products [12].

The brand association variable has no significant effect on the purchasing decision variable with a t-statistics value of $0.945 < t\text{-table (1.96)}$. However, this is not in accordance with the hypothesis which states that brand association affects purchasing decisions. Building positive brand associations will have a direct effect on purchasing decisions. In the brand association variable, what is unique about organic products and can differentiate organic products from non-organic products is building strong brand associations for organic products. Brand association with organic products can be done by positioning products as natural, healthy, and environmentally friendly organic products that must be present in marketing communications [13].

The perceived quality variable has the highest path coefficient value of the other variables, with a value of 0.430. This value indicates that the perceived quality variable positively affects the purchasing decision

variable. The perceived quality variable also significantly affects purchasing decisions with a t-statistics value of $4.067 > t\text{-table (1.96)}$. The most influential indicator in the perceived quality variable is the PK1 indicator (quality organic rice "Lingkar Organik"), with a loading factor value of 0.880. In the perceived quality variable, the characteristic of organic products that can be a differentiator between organic and non-organic products is the quality of the products obtained according to organic product processing procedures. Processing of organic products must follow the procedures for organic farming systems regulated in SNI 6729: 2016 concerning organic farming systems. Perceived quality in organic products is essential. Perceived quality is a consumer's assessment of the overall superiority of a product [14]. The market for organic products is consumers who desire to improve their health because quality organic products are perceived as healthier than other products [15]. This study's results follow previous studies showing that the quality of organic products has a significant effect on purchasing decisions. Organic products can provide more benefits than non-organic products, so consumers decide to buy products [16]

The brand loyalty variable has a path coefficient value of 0.430. This value indicates that the brand loyalty variable positively affects the purchasing decision variable. The brand loyalty variable also significantly affects purchasing decisions with a t-statistics value of $3.066 > t\text{-table (1.96)}$. The most influential indicator of the brand loyalty variable is BL1 (loyal consumers to organic rice brand "Organic Circle"), with a loading factor value of 0.885. In the brand loyalty variable, what is unique about organic products and can differentiate organic products from non-organic products is building brand loyalty based on consumer confidence in the quality of organic products. This result is in line with previous research on brand loyalty, which states that consumers who have confidence in the quality of a brand tend to be loyal [17]

5. Conclusion

Variables that have a positive and significant effect on purchasing decisions for organic rice are perceived quality and brand loyalty. Brand awareness and brand association variables have no significant effect on purchasing decisions for organic rice.

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