Consumer Attitudes Toward Organic Products in Jakarta: The Interplay of Knowledge, Quality Perception, and Health Consciousness

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DOI: https://doi.org/10.51244/IJRSI.2025.12120063

Received: 24 December 2025; Accepted: 31 December 2025; Published: 05 January 2026

ABSTRACT

This study aims to examine the influence of knowledge about organic products, perception of product quality, and health awareness on attitudes towards organic products among consumers of organic products in Jakarta. A quantitative research approach was employed to objectively measure the relationships among the variables. Primary data were collected through an online questionnaire distributed via Google Forms to organic product consumers, with a total of 128 valid responses obtained using accidental nonprobability sampling.

Data were analyzed using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) technique, which allows for simultaneous evaluation of the measurement and structural models. The measurement model was assessed through tests of convergent validity, discriminant validity, and reliability, while the structural model was evaluated using path coefficients, R-Square values, T-statistics, and p-values obtained through bootstrapping. The results indicate that the model demonstrates strong predictive power, with the endogenous construct explaining a substantial proportion of variance.

The findings reveal that health awareness and perception of product quality have a positive and statistically significant effect on attitudes towards organic products, whereas knowledge about organic products does not exhibit a significant direct influence. These results suggest that affective and perceptual factors play a more dominant role than cognitive factors in shaping consumer attitudes toward organic products. The study provides important theoretical and managerial insights for developing effective marketing strategies in the organic product market.

Keywords: consumer attitudes, knowledge, quality perception, health consciousness

INTRODUCTION

The global growth of organic food consumption reflects increasing public concern regarding the long-term health and environmental consequences of conventional agricultural practices, particularly the intensive use of chemical fertilizers, pesticides, and industrial farming systems. Organic products are commonly perceived as healthier, safer, and more environmentally sustainable due to their production processes that exclude synthetic inputs and emphasize ecological balance. These perceptions have been further reinforced by recurring food safety incidents and global health crises such as the COVID-19 pandemic, which heightened consumer demand for clean, chemical-free, and immunity-supportive foods (Widyasari & Haryanto, 2010; Aertsens et al., 2011; Basha et al., 2015; Darsono et al., 2018; Jonathan & Tjokrosaputro, 2021; Brata et al., 2022; Tejaswini et al., 2023; Homiga et al., 2024).

Despite growing awareness and favorable perceptions, a substantial body of literature consistently reports a persistent attitude–behavior gap in organic food consumption. Consumers frequently express positive attitudes toward organic products without translating these attitudes into regular purchasing behavior (Aertsens et al., 2011). This inconsistency is particularly evident in emerging and transition economies, where high prices, limited availability, weak distribution systems, and low institutional trust continue to constrain market participation (Suharjo et al., 2016; Ishak et al., 2021; Miftari et al., 2022; Bazhan et al., 2024; Aydın Eryılmaz, 2025). These findings suggest that favorable attitudes alone are insufficient to drive consumption and that organic food adoption is shaped by a complex interaction of cognitive, evaluative, and contextual factors.

At the individual level, prior studies emphasize that health consciousness represents one of the most influential motivational drivers of organic food attitudes. Consumers who prioritize personal well-being are more likely to associate organic products with disease prevention, nutritional benefits, and improved quality of life (Yazar & Burucuoğlu, 2019; Siwalette et al., 2024; Budiarti et al., 2025). In parallel, knowledge of organic products, encompassing both subjective understanding and objective information, enhances consumers' evaluative capacity, reduces uncertainty, and strengthens confidence in organic claims, whereas insufficient knowledge remains a significant barrier to favorable attitudes (Aertsens et al., 2011; Lian & Rajadurai, 2020; Fatha & Ayoubi, 2023). Furthermore, perceived product quality plays a central role in shaping consumer evaluations, particularly in markets where quality consistency and authenticity are questioned (Cheah & Aigbogun, 2022; Rutelionė & Bhutto, 2024).

Trust-related mechanisms further mediate the relationship between consumer evaluations and attitudes toward organic products. In many countries, skepticism toward national certification systems and labeling practices undermines confidence in organic claims, increasing perceived purchase risk (Lian & Rajadurai, 2020; Wong & Tzeng, 2021). Certification logos and labeling transparency therefore serve as important informational cues that influence perceptions of authenticity, safety, and quality, especially in contexts characterized by weak regulatory enforcement or repeated food safety concerns (Miftari et al., 2022; Tejaswini et al., 2023). These dynamics highlight the need to consider trust as a contextual factor reinforcing cognitive evaluations rather than as an isolated determinant.

Although global demand for organic products continues to expand, significant regional disparities persist. In several developing economies, including Indonesia, interest in organic food has increased—particularly among urban and health-conscious consumers—yet overall consumption remains limited due to knowledge gaps, price sensitivity, inconsistent quality perceptions, and uneven market development (Suharjo et al., 2016; Ishak et al., 2021; Homiga et al., 2024). This divergence underscores the importance of context-specific empirical investigations that account for local market structures and consumer characteristics.

In Jakarta, growing concern over health risks, environmental degradation, and chemical-intensive agriculture has heightened public interest in organic food. Nevertheless, actual consumption remains relatively low, indicating that positive perceptions have not fully translated into sustained purchasing behavior. Prior studies suggest that limited knowledge regarding organic product characteristics and certification standards, together with inconsistent perceptions of product quality, continue to weaken consumer confidence. At the same time, Jakarta's increasingly health-conscious urban population represents a strategically important segment in which health awareness may function as a key motivational driver of organic food attitudes.

Grounded in this context, the present study conceptualizes knowledge of organic products, perceived product quality, and health awareness as core determinants of consumer attitudes toward organic products. By empirically examining these relationships among consumers in Jakarta, this study seeks to clarify the underlying sources of the attitude–behavior gap and to generate insights that may support the development of more effective strategies for strengthening organic food acceptance and market growth in Indonesia's capital city.

LITERATURE REVIEW

Growing global interest in organic food consumption has been largely driven by increasing consumer concerns regarding health risks, food safety, environmental degradation, and the adverse effects of chemical-intensive agricultural practices. Across diverse contexts, organic foods are widely perceived as healthier, safer, and of higher quality, reinforcing their association with sustainable consumption patterns. Nevertheless, empirical studies consistently report a persistent attitude–behavior gap, whereby positive attitudes toward organic food do not necessarily translate into actual purchasing behavior (Basha et al., 2015; Darsono et al., 2018; Cheah &

Aigbogun, 2022). This gap reflects the influence of multiple structural, psychological, and informational barriers that shape consumer decision-making processes (Rutelionė & Bhutto, 2024; Homiga et al., 2024).

In emerging markets such as Indonesia, Malaysia, India, Iran, and Kosovo, this inconsistency is particularly pronounced. Consumers in these contexts often face limited product availability, high price sensitivity, and low familiarity with certification systems, which suppress purchase intentions despite growing awareness of health and sustainability issues (Ishak et al., 2021; Miftari et al., 2022; Bazhan et al., 2024). Consequently, the literature increasingly emphasizes the need to examine key cognitive and evaluative determinants—specifically knowledge, perceived product quality, and health awareness—that underpin the formation of consumer attitudes toward organic products (Aertsens et al., 2011; Fatha & Ayoubi, 2023).

Knowledge of Organic Products and Attitudes Toward Organic Products

Knowledge of organic products constitutes a fundamental cognitive resource that shapes how consumers evaluate product attributes, benefits, and credibility. The literature consistently identifies knowledge as a critical determinant of positive attitudes, as it reduces uncertainty and strengthens consumers' ability to distinguish organic products from conventional alternatives (Aertsens et al., 2011). However, numerous studies indicate that consumers often possess limited or inaccurate knowledge regarding organic production methods, certification standards, and associated health benefits, leading to reliance on heuristics rather than informed evaluation (Irine Jiji & Guna Priya, 2019; Fatha & Ayoubi, 2023).

Both objective and subjective knowledge play distinct roles in attitude formation. Objective knowledge enables consumers to assess organic claims based on verifiable information, thereby enhancing attitude strength, while subjective knowledge may influence evaluations even when misconceptions persist (Aertsens et al., 2011; Septiani et al., 2024). Empirical evidence from Indonesia, Iran, and Malaysia demonstrates that higher levels of consumer knowledge significantly strengthen attitudes and purchase intentions toward organic food (Suharjo et al., 2016; Ishak et al., 2021; Bazhan et al., 2024). Furthermore, knowledge contributes indirectly by reinforcing trust in certification mechanisms and reducing skepticism toward organic claims (Lian & Rajadurai, 2020; Wong & Tzeng, 2021).

Collectively, these findings indicate that knowledge operates as a multidimensional driver influencing attitudes, intentions, and actual purchasing behavior across cultural contexts (Darsono et al., 2018; Siwalette et al., 2024). Accordingly, the following hypothesis is proposed:

H1: Knowledge of organic products has a positive and significant relationship with attitudes toward organic products.

Perceived Product Quality and Attitudes Toward Organic Products

Perceived product quality represents a key evaluative dimension through which consumers assess organic food. Prior research consistently shows that organic products are associated with expectations of superior quality, including safety, freshness, nutritional value, and absence of harmful chemicals (Basha et al., 2015; Brata et al., 2022). These quality perceptions are often shaped not only by intrinsic attributes but also by extrinsic cues such as certification labels, packaging, and branding (Lian & Rajadurai, 2020).

Studies conducted in Indonesia, India, and other developing markets confirm that perceived product quality significantly strengthens consumer attitudes and purchase intentions (Septiani et al., 2024; Siwalette et al., 2024). Certification labels, in particular, function as important quality signals that reduce perceived risk and enhance consumer confidence, especially in markets characterized by regulatory uncertainty or food safety concerns (Wong & Tzeng, 2021; Miftari et al., 2022). The COVID-19 pandemic further amplified health-driven quality perceptions, reinforcing beliefs that organic products offer higher protective and safety value (Brata et al., 2022).

Moreover, perceived product quality interacts with other determinants such as knowledge and health awareness. Consumers with greater knowledge are better equipped to evaluate quality claims, while health-conscious consumers tend to prioritize quality attributes related to safety and purity (Yazar & Burucuoğlu, 2019; Basha et al., 2015). Thus, perceived product quality plays a central role in shaping favorable consumer attitudes across diverse contexts. Therefore, the following hypothesis is proposed:

H2: Perceived product quality has a positive and significant relationship with attitudes toward organic products.

Health Awareness and Attitudes Toward Organic Products

Health awareness is widely recognized as one of the most powerful motivational drivers of organic food consumption. It reflects individuals' concern for physical well-being, disease prevention, and long-term health outcomes. Across cultures, health-conscious consumers are more likely to associate organic food with reduced chemical exposure, improved nutrition, and enhanced quality of life (Basha et al., 2015; Yazar & Burucuoğlu, 2019).

Empirical studies in Indonesia, India, Malaysia, Iran, and Kosovo consistently demonstrate that higher levels of health awareness significantly strengthen attitudes toward organic products and increase purchase intentions (Darsono et al., 2018; Ishak et al., 2021; Miftari et al., 2022; Septiani et al., 2024). The COVID-19 pandemic further intensified health-related motivations, leading consumers to place greater emphasis on food safety and immunity-enhancing properties, attributes commonly associated with organic products (Jonathan & Tjokrosaputro, 2021; Brata et al., 2022).

Health awareness also interacts with knowledge and perceived quality, reinforcing cognitive evaluations and strengthening attitude formation. Health-conscious individuals tend to engage in active information-seeking behaviors and exhibit heightened sensitivity to quality cues, resulting in more favorable attitudes (Widyasari & Haryanto, 2010; Siwalette et al., 2024). Additionally, health awareness has been shown to exert both direct and indirect effects on attitudes through mediating mechanisms such as trust and quality perception (Wong & Tzeng, 2021; Aydın Eryılmaz, 2025). Therefore, based on the synthesized literature, the following hypothesis is proposed:

H3: Health awareness has a positive and significant relationship with attitudes toward organic products.

Based on the results of the literature review, a conceptual framework was developed to describe the relationship between knowledge about organic products, perception of product quality, and health awareness on attitudes toward organic products among consumers of organic products in Jakarta. This framework explains the main pathways through which knowledge about organic products, perception of product quality, and health awareness on attitudes toward organic products among consumers of organic products are influenced. The proposed research framework is presented as follows:

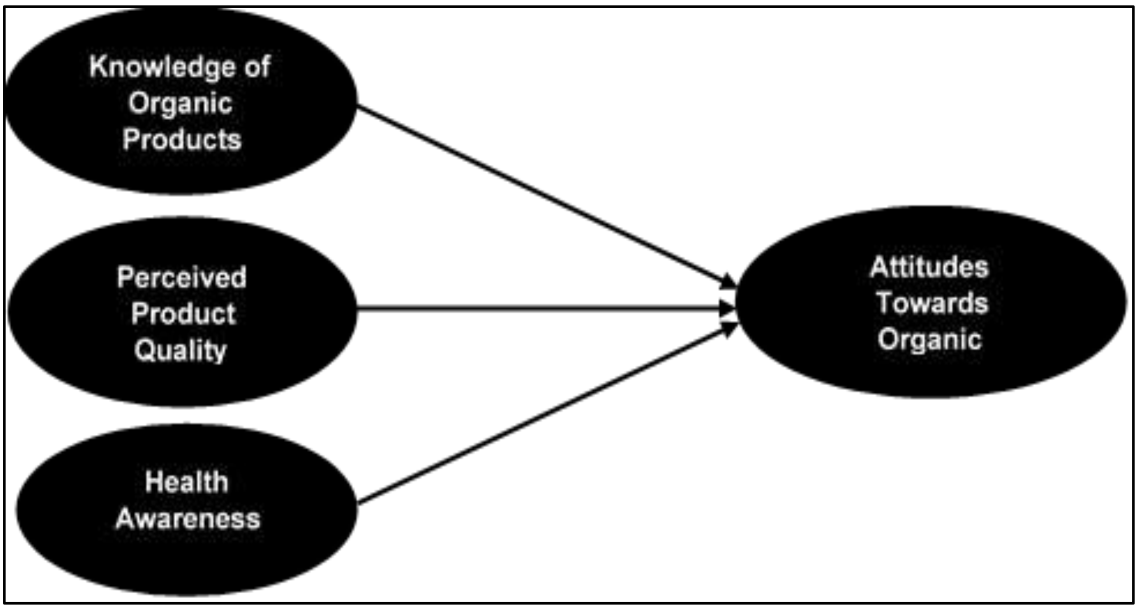

Figure 1. Proposed Framework

Research Method.

This study uses a quantitative approach to objectively and measurably measure the relationship and influence of the variables of knowledge about organic products, perception of product quality, and health awareness on attitudes towards organic products among consumers of organic products. Primary data was collected through an online questionnaire distributed using google forms. The questionnaire was distributed to organic product consumers in Jakarta. This study is expected to provide a deeper understanding of the factors influencing consumer behavior towards organic products.

The sampling technique used was nonprobability sampling, which is accidental sampling. This means that anyone who happens to meet the researcher can be used as a sample, provided they are deemed suitable as a data source. Sekaran & Bougie (2016) state that Roscoe (1975) proposed a rule of thumb for determining sample size: Sample sizes larger than 30 and less than 500 are appropriate for most research. In this study, the target sample size was 128 respondents.

The questionnaire statement indicators were adapted from previous research to ensure the instrument's reliability and validity. Measurements were conducted using a Likert scale ranging from 1 to 5, where 1 indicates "strongly disagree" and 5 indicates "strongly agree."

The data obtained from the questionnaire were then analyzed using the Partial Least Squares (PLS) method. PLS is a component-based Structural Equation Modeling (SEM) technique that is highly suitable for predictive research and models involving multiple latent variables and indicators. This method allows researchers to test the measurement model (outer model) and the structural model (inner model) simultaneously.

The data analysis stages in this study included:

a. Validity Testing, consisting of: first, Convergent Validity Testing to assess the extent to which indicators represent the latent constructs measured using factor loadings with a minimum cut-off value of 0.70 and Average Variance Extracted (AVE) with a minimum cut-off value of 0.50. Second, Discriminant Validity Testing to ensure that each construct has distinct characteristics. Testing is conducted using cross-loading, where each indicator must have the highest loading value on the construct it represents. The Fornell-Larcker Criterion, which is the square root of a construct's AVE, must be greater than its correlation with other constructs.

b. Reliability testing aims to assess the internal consistency of the construct using Cronbach's Alpha with a minimum cut-off value of 0.70, and Composite Reliability (rho_a and rho_c) with a minimum cut-off value of 0.70, which aims to demonstrate internal measurement stability.

c. The Coefficient of Determination (R-Square/R^2) demonstrates the model's increasing predictive ability.

d. Path Coefficients are used to test the strength and significance of the relationships between constructs in the model. A relationship is considered significant if the p-value is <0.05.

e. Model Fit testing aims to assess the extent to which the proposed structural model is able to represent empirical data. Although PLS-SEM places more emphasis on the prediction and exploration aspects, model fit evaluation is still necessary to ensure that the relationships between variables in the model accurately reflect the underlying theoretical structure.

RESULTS AND DISCUSSION

Respondent Profiles and Descriptive statistics

This study employs a cross-sectional research design. The data were collected through a manually administered survey using google form. A total of 127 respondents participated in the study, all of whom were customers who had recently consumed organic products. The demographic and usage profiles of the respondents, who constituted the research sample, are summarized and illustrated in the figure 2.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

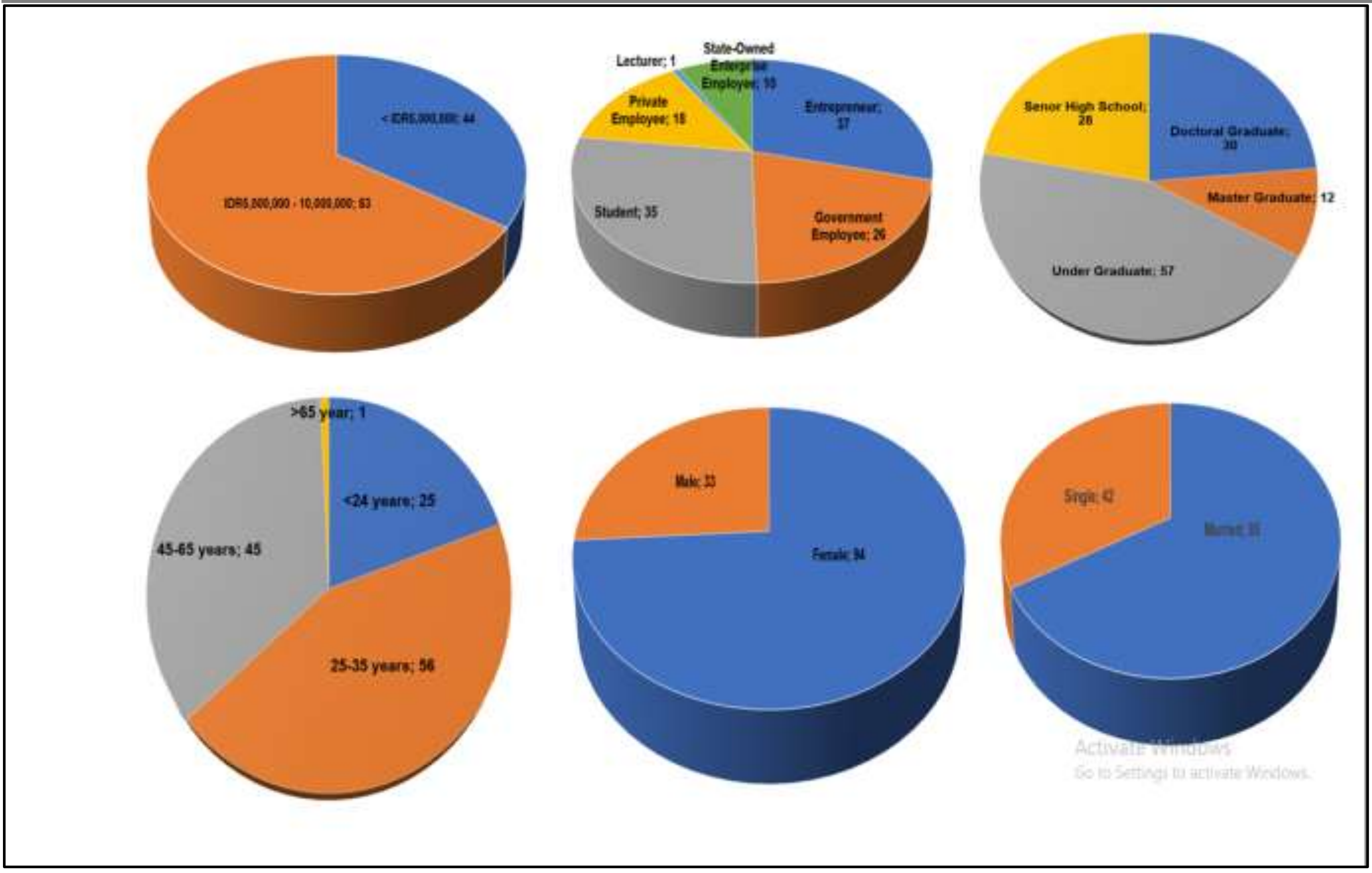

Figure 2: Respondent Profile

Descriptive Statistics

Descriptive statistics of the variables knowledge about organic products, perception of product quality, health awareness, and attitudes towards organic products are presented in the following table.

Table 1: Descriptive statistics

Variable	Count (N)	Mean	Std. Deviation	Minimum	Q1 (25%)	Median (50%)	Q3 (75%)	Maximum
Knowledge about Organic Products	127	4.86	0.43	3.00	5.00	5.00	5.00	5.00
Perception of Product Quality	127	4.86	0.44	3.00	5.00	5.00	5.00	5.00
Health Awareness	127	4.92	0.30	3.00	5.00	5.00	5.00	5.00
Attitudes towards Organic Products	127	4.90	0.34	3.00	5.00	5.00	5.00	5.00

Table 1 presents the descriptive statistics of the study variables based on 127 valid responses. The analysis includes measures of central tendency and dispersion, namely the mean, standard deviation, minimum and maximum values, as well as the first quartile (25%), median (50%), and third quartile (75%), providing a comprehensive overview of the distribution of the data.

The descriptive results indicate that knowledge about organic products has a high mean value (M = 4.86), suggesting that respondents generally possess a strong level of understanding regarding organic products. The relatively low standard deviation (SD = 0.43) implies limited variability among respondents. Furthermore, the quartile distribution shows that the 25th, 50th, and 75th percentiles all attain the highest scale value, indicating that most respondents reported high knowledge levels. Perception of product quality demonstrates a high mean score (M = 4.86) with a standard deviation of 0.44, reflecting consistently positive perceptions of organic product quality. The concentration of responses at the upper quartiles suggests that respondents largely agree on the superior quality of organic products, with minimal dispersion across the sample. Health awareness records the highest mean among all variables (M = 4.92) and the lowest standard deviation (SD = 0.30), indicating a very strong and homogeneous level of health consciousness among respondents. The quartile values further confirm that the majority of respondents exhibit high health awareness, with responses clustered at the upper end of the measurement scale. Attitudes towards organic products show a favorable overall evaluation, as reflected by a mean value of 4.90 and a relatively small standard deviation of 0.34. The distribution of responses suggests that respondents predominantly hold positive attitudes toward organic products, with little variation observed across individuals.

Overall, the descriptive statistics presented in table 2 reveal that all variables are skewed toward higher values on the Likert scale, indicating generally positive knowledge, perceptions, awareness, and attitudes among respondents. This pattern suggests a strong baseline for examining the structural relationships among the constructs in subsequent PLS-SEM analysis.

Model Evaluation

The evaluation of the Partial Least Squares Structural Equation Modeling (PLS-SEM) model is conducted through three main stages, namely the assessment of the measurement model, the evaluation of the structural model, and the examination of the overall model fit. This sequential evaluation approach is applied to ensure that the model is both statistically sound and theoretically robust.

Measurement Model Evaluation

The measurement model is evaluated by examining the reliability and validity of the constructs used in the study. Construct validity is assessed through convergent and discriminant validity tests. Convergent validity is evaluated by examining the factor loadings of each indicator and the Average Variance Extracted (AVE). Factor loadings are required to meet or exceed the recommended threshold of 0.70, indicating that the indicators adequately represent their respective latent constructs. In addition, AVE values are expected to be at least 0.50, signifying that the construct explains more than half of the variance of its indicators.

Discriminant validity is assessed using the Fornell–Larcker criterion and cross-loading analysis. The Fornell–Larcker criterion requires that the square root of the AVE for each construct is greater than its correlations with other constructs, thereby confirming construct distinctiveness. Cross-loading analysis further ensures that each indicator loads more strongly on its associated construct than on other constructs in the model.

Reliability is assessed using composite reliability, with a minimum acceptable value of 0.70, indicating satisfactory internal consistency among the indicators measuring each construct (Hair et al., 2021). The results of the validity and reliability assessments are presented in table 2.

Table 2. Outer Loadings/Loadings Factor and Average Variance Extracted (AVE)

Indicator	Attitudes Towards Organic Products	Health Awareness	Knowledge About Organic Products	Perception Of Product Quality
a1	0,954			
a2	0,909			
a3	0,952			

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a4	**0,913**			
a5	**0,915**			
a6	**0,928**			
h1		**0,924**		
h2		**0,889**		
h3		**0,848**		
h4		**0,900**		
h5		**0,956**		
k1			**0,959**	
k2			**0,924**	
k3			**0,902**	
k4			**0,843**	
p1				**0,971**
p2				**0,941**
p4				**0,956**
Average Variance Extracted (AVE)	**0,862**	**0,817**	**0,824**	**0,914**

Convergent validity refers to the extent to which multiple indicators of a construct converge to measure the same underlying concept. In this study, convergent validity was assessed using outer loadings and Average Variance Extracted (AVE), following the guidelines recommended in the PLS-SEM literature. As presented in Table 2, all indicators exhibit outer loading values exceeding the recommended threshold of 0.70, indicating that each indicator adequately represents its respective latent construct. The outer loading values range from 0.843 to 0.971 across all constructs, demonstrating strong relationships between the indicators and their corresponding constructs. These results confirm that the indicators show a high degree of convergence in measuring the intended constructs. In addition to outer loadings, convergent validity was further evaluated using the Average Variance Extracted (AVE). The AVE values for attitudes towards organic products (0.862), health awareness (0.817), knowledge about organic products (0.824), and perception of product quality (0.914) all exceed the recommended minimum value of 0.50. This indicates that each construct explains more than half of the variance of its indicators.

Table 3. Fornell–Larcker / HTMT / Cross-loadings

Fornell-Larcker Criterion				
	Attitudes Towards Organic Products	**Health Awareness**	**Knowledge About Organic Products**	**Perception Of Product Quality**
Attitudes Towards Organic Products	0,929			
Health Awareness	0,889	0,904		
Knowledge About Organic Products	0,869	0,810	0,908	
Perception Of Product Quality	0,950	0,808	0,882	0,956
Cross Loadings				
	Attitudes Towards Organic Products	**Health Awareness**	**Knowledge About Organic Products**	**Perception Of Product Quality**
a1	0,954	0,846	0,846	0,895
a2	0,909	0,700	0,839	0,940

a3	0,952	0,861	0,764	0,873
a4	0,913	0,815	0,718	0,847
a5	0,915	0,848	0,880	0,920
a6	0,928	0,880	0,789	0,818
h1	0,727	0,924	0,641	0,630
h2	0,693	0,889	0,677	0,651
h3	0,770	0,848	0,613	0,598
h4	0,885	0,900	0,809	0,878
h5	0,903	0,956	0,877	0,844
k1	0,838	0,748	0,959	0,877
k2	0,787	0,698	0,924	0,796
k3	0,713	0,646	0,902	0,792
k4	0,806	0,835	0,843	0,732
p1	0,924	0,760	0,903	0,971
p2	0,934	0,789	0,798	0,941
p4	0,865	0,767	0,829	0,956
Heterotrait-Monotrait Ratio (HTMT)				
	Attitudes Towards Organic Products	**Health Awareness**	**Knowledge About Organic Products**	**Perception Of Product Quality**
Attitudes Towards Organic Products				
Health Awareness	**0,921**			
Knowledge About Organic Products	**0,913**	0,852		
Perception Of Product Quality	**0,988**	**0,840**	**0,937**	

Discriminant validity was assessed to ensure that each latent construct in the measurement model is empirically distinct from the other constructs. Following established PLS-SEM guidelines, discriminant validity was evaluated using three complementary approaches: the Fornell–Larcker criterion, cross-loadings analysis, and the Heterotrait–Monotrait ratio (HTMT). The results of these analyses are presented in Table 3.

Fornell–Larcker Criterion

According to the Fornell–Larcker criterion, the square root of the Average Variance Extracted (AVE) for each construct should be greater than its correlations with other constructs. As shown in Table 3, the diagonal elements—representing the square roots of AVE—are higher than the corresponding inter-construct correlation values for all constructs. Specifically, the square roots of AVE for attitudes towards organic products (0.929), health awareness (0.904), knowledge about organic products (0.908), and perception of product quality (0.956) exceed their respective correlations with other constructs. These results indicate that each construct shares more variance with its own indicators than with other constructs, thereby satisfying the Fornell–Larcker criterion and supporting discriminant validity.

Cross-Loadings

Discriminant validity was further examined through cross-loadings analysis. As presented in Table 3, each indicator loads highest on its intended construct compared to the other constructs in the model. The differences between the primary loadings and cross-loadings are sufficiently large, indicating that the indicators are not ambiguously associated with multiple constructs. This pattern confirms that each indicator uniquely measures its designated construct and provides additional empirical support for discriminant validity.

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Heterotrait–Monotrait Ratio (HTMT)

Finally, discriminant validity was assessed using the HTMT ratio, which is considered a more stringent criterion. As shown in Table 3, most HTMT values are below the commonly accepted threshold of 0.90, indicating adequate discriminant validity among the constructs. Although some HTMT values slightly exceed the conservative threshold of 0.85 and approach the upper limit, they remain within acceptable bounds under the more liberal criterion of 0.90. This result is theoretically justifiable given the conceptual relatedness of the constructs examined in this study.

Reliability is assessed using composite reliability, requiring a value greater than 0.70 (Hair et al., 2021). The findings from these validity and reliability assessments are detailed in the following table.

Table 4. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability
Attitudes Towards Organic Products	0,968	0,968	0,974
Health Awareness	0,944	0,952	0,957
Knowledge About Organic Products	0,928	0,931	0,949
Perception Of Product Quality	0,953	0,954	0,969

Internal consistency reliability was assessed to evaluate the degree to which the indicators of each construct consistently measure the same underlying concept. In this study, internal reliability was examined using Cronbach's Alpha and Composite Reliability (CR), as recommended in the PLS-SEM literature. Both measures provide complementary evidence of reliability, with threshold values of 0.70 or higher indicating satisfactory internal consistency.

As presented in Table 4, the construct attitudes towards organic products demonstrates excellent internal consistency, with a Cronbach's Alpha value of 0.968 and a Composite Reliability value of 0.974. These results indicate a very high level of consistency among the indicators measuring this construct. The construct health awareness exhibits strong internal reliability, as reflected by a Cronbach's Alpha of 0.944 and a Composite Reliability of 0.957. Both values exceed the recommended thresholds, confirming that the indicators reliably capture the health awareness construct. The construct knowledge about organic products also shows robust internal consistency, with a Cronbach's Alpha value of 0.928 and a Composite Reliability of 0.949. These results indicate that the indicators associated with this construct are highly consistent and reliable.

Cronbach's Alpha and Composite Reliability values above the recommended minimum level. These findings confirm that the measurement model demonstrates satisfactory internal consistency reliability and is suitable for subsequent structural model analysis.

Evaluation of Structural Models

The evaluation of the structural model aims to assess the predictive capability of the model in explaining the causal (cause-and-effect) relationships among latent variables. In the context of Partial Least Squares–Structural Equation Modeling (PLS-SEM), the structural (inner) model focuses on examining how well the exogenous latent variables explain the variance in endogenous latent variables and whether the hypothesized relationships are empirically supported.

Structural model evaluation involves the assessment of several key statistical criteria, including R-Square (R^2), path coefficients, T-statistics and p-values, and model fit indices. The R-Square (R^2) value is used to measure the proportion of variance in the endogenous latent variable that is explained by its exogenous predictors. Higher R^2 values indicate stronger explanatory power of the model. In PLS-SEM, R^2 values are commonly interpreted as substantial, moderate, or weak, depending on their magnitude, thereby offering insight into the overall predictive performance of the structural model.

Path coefficients represent the magnitude and direction of the relationships between latent variables. These

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coefficients indicate whether the hypothesized relationships are positive or negative and reflect the relative importance of each predictor within the model. To assess whether these relationships are statistically meaningful, T-statistics and p-values obtained through a bootstrapping procedure are employed. A path coefficient is considered statistically significant when its T-statistic exceeds the critical threshold (e.g., 1.96 for a two-tailed test at the 5% significance level), thereby supporting the corresponding research hypothesis.

In addition, model fit indices are examined to evaluate how well the proposed structural model represents the observed data. Although PLS-SEM is primarily prediction-oriented, global model fit measures provide supplementary evidence regarding the adequacy of the model structure.

One of the primary indicators used to assess this capability is the coefficient of determination (R-Square or R^2). The R-Square value reflects the proportion of variance in an endogenous latent variable that can be explained by its exogenous predictors included in the structural model.

The use of R-Square is particularly relevant in PLS-SEM due to its prediction-oriented nature, where the primary objective is to maximize the explained variance of the dependent constructs. In addition to R-Square, researchers commonly report the Adjusted R-Square, which accounts for the number of predictor variables in the model and provides a more conservative estimate of explanatory power. This adjustment is especially important in models with multiple independent variables, as it helps to reduce potential overestimation of the model's predictive strength.

Evaluating both R-Square and Adjusted R-Square allows researchers to assess the overall adequacy of the structural model before interpreting individual path coefficients and hypothesis testing results. Therefore, these metrics serve as a fundamental basis for determining whether the proposed model sufficiently explains the underlying causal relationships among the latent constructs.

Table 5. R Square

	R Square	**R Square Adjusted**
Attitudes Towards Organic Products	0,945	0,944

As presented in Table 5 (R Square), the endogenous construct Attitudes Towards Organic Products exhibits an R-Square value of 0.945 and an Adjusted R-Square value of 0.944. These results indicate that 94.5% of the variance in consumers' attitudes toward organic products is jointly explained by the exogenous constructs included in the model, namely Health Awareness, Knowledge About Organic Products, and Perception of Product Quality. The remaining 5.5% of the variance can be attributed to other factors not captured within the scope of this study. An R-Square value of 0.945 represents a substantial level of explanatory power. According to commonly accepted PLS-SEM guidelines, R-Square values exceeding 0.75 are considered strong, suggesting that the structural model demonstrates excellent predictive performance. This finding confirms that the selected predictor variables collectively play a critical role in shaping consumers' attitudes toward organic products.

To examine the statistical significance of the relationships among variables in the structural model, particularly in assessing whether the estimated path coefficients exert a meaningful influence, the T-Statistics approach is employed. This procedure is conducted through a bootstrapping technique, which generates empirical sampling distributions of the path coefficients. The resulting T-Statistics values are then compared against critical threshold values to determine the significance of each hypothesized relationship. In general, a path coefficient is considered statistically significant when the T-Statistics value exceeds 1.96 at a 5% significance level (two-tailed test). The outcomes of this significance testing are systematically are presented in figure 3 and summarized and presented in Table 6, providing empirical evidence to support or reject the proposed hypotheses within the structural model.

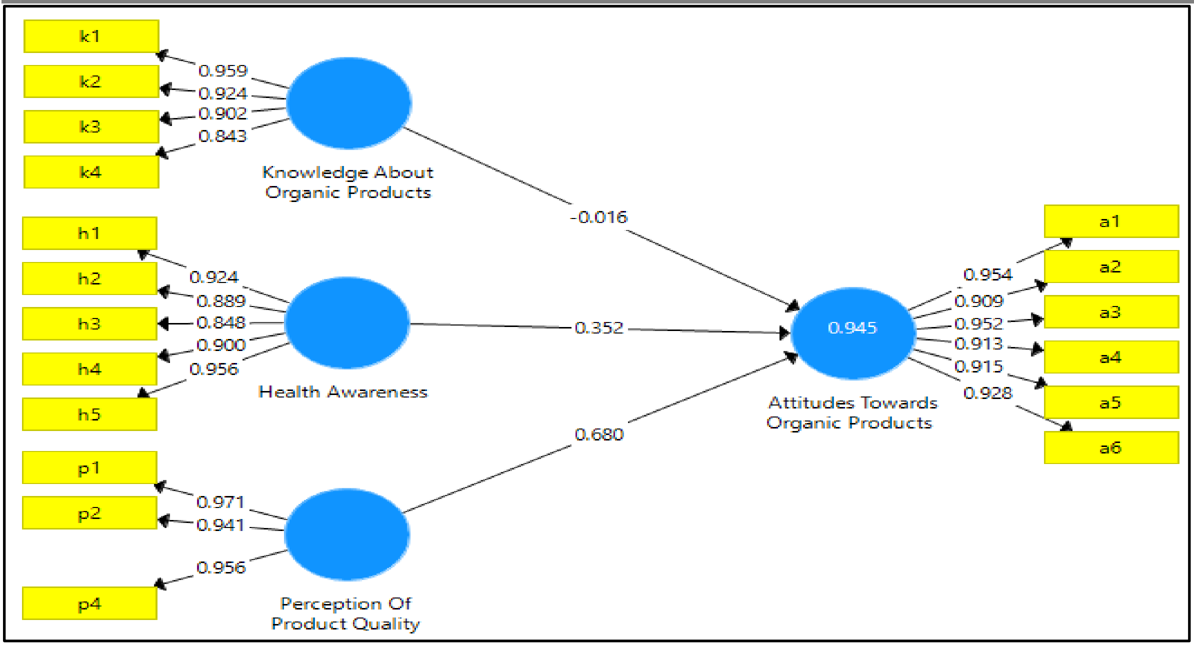

Figure 3. Structural Model of the Research Framework with Path Coefficients

Table 6. Hypothesis Testing Results Based on T-Statistics and P-Values

	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T Statistics (|O/STDEV|)**	**P Values**
Health Awareness -> Attitudes Towards Organic Products	0,352	0,385	0,178	1,982	**0,048**
Knowledge About Organic Products -> Attitudes Towards Organic Products	-0,016	-0,015	0,247	0,064	**0,949**
Perception Of Product Quality -> Attitudes Towards Organic Products	0,680	0,647	0,300	2,264	**0,024**

Hypothesis testing in this research was conducted through the analysis of the structural model using the partial least squares–structural equation modeling (pls-sem) approach. The significance of the relationships among latent variables was assessed using t-statistics and p-values obtained from the bootstrapping procedure. The detailed results of the hypothesis testing are presented in table 5: hypothesis testing results based on t-statistics and p-values.

Table 6 shows that the relationship between health awareness and attitudes towards organic products demonstrates a positive and statistically significant effect. The path coefficient for this relationship is 0.352, indicating a moderate positive influence. The t-statistic value of 1.982 exceeds the critical threshold of 1.96, and the corresponding p-value of 0.048 is below the 0.05 significance level. These results suggest that consumers with higher levels of health awareness tend to develop more favorable attitudes toward organic products. This finding supports the notion that health-related considerations play a crucial role in shaping consumer attitudes in the context of organic product consumption.

In contrast, the relationship between knowledge about organic products and attitudes towards organic products is found to be statistically insignificant. The estimated path coefficient is very small and negative ($\beta = -0.016$), accompanied by a t-statistic of 0.064 and a p-value of 0.949, which is far above the acceptable significance threshold. This result indicates that consumers' knowledge regarding organic products does not directly influence their attitudes toward such products. It implies that possessing information or awareness about organic products alone may not be sufficient to generate a positive attitude unless it is reinforced by other experiential or perceptual factors.

Meanwhile, perception of product quality exhibits the strongest influence on attitudes towards organic products among the tested relationships. The path coefficient for this relationship is 0.680, reflecting a substantial positive effect. The corresponding t-statistic of 2.264 and p-value of 0.024 confirm the statistical significance of this relationship at the 5% level. This finding suggests that consumers who perceive organic products as having superior quality—such as better taste, safety, or overall value—are more likely to hold positive attitudes toward these products.

The results presented in table 6 indicate that health awareness and perception of product quality are significant determinants of attitudes towards organic products, whereas knowledge about organic products does not have a significant direct effect. These findings highlight the importance of affective and perceptual factors over purely cognitive factors in shaping consumer attitudes toward organic products. From a managerial perspective, this implies that marketing strategies for organic products should emphasize health benefits and quality attributes rather than focusing solely on informational or educational campaigns.

Table 7. Model fit indices

	Saturated Model	Estimated Model
SRMR	0,084	0,084

As shown in Table 7 (Model Fit Indices), the SRMR value for both the Saturated Model and the Estimated Model is 0.084. This result indicates that the average discrepancy between the observed correlations and the model-implied correlations is relatively small and remains consistent across both model specifications. The identical SRMR values suggest that the inclusion of structural relationships does not introduce additional model misspecification beyond what is present in the measurement model. Although the SRMR value of 0.084 slightly exceeds the commonly recommended threshold of 0.08, it remains very close to the acceptable range. In the context of PLS-SEM, such a value is often interpreted as indicating a marginal but acceptable model fit, particularly when the primary objective of the analysis is prediction rather than strict model confirmation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study was conducted to analyze the factors influencing consumers' attitudes toward organic products, focusing on health awareness, knowledge about organic products, and perception of product quality. Using a quantitative approach and the PLS-SEM method, the study provides empirical evidence regarding both the explanatory and predictive capabilities of the proposed structural model.

The evaluation of the structural model demonstrates a very strong predictive performance, as indicated by an R-Square value of 0.945 for the endogenous construct *Attitudes Towards Organic Products*. This result implies that 94.5% of the variance in consumer attitudes is explained by the three exogenous variables included in the model. Such a high R-Square value confirms that the model is robust and highly effective in capturing the determinants of consumer attitudes toward organic products.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XII December 2025

Hypothesis testing results reveal that health awareness has a positive and statistically significant influence on attitudes toward organic products. This finding indicates that consumers who are more conscious of health-related issues tend to develop more favorable attitudes toward organic products, which are commonly perceived as healthier, safer, and more natural alternatives to conventional products. Health considerations therefore emerge as a key motivational factor driving positive consumer attitudes in the organic product market.

Similarly, perception of product quality is found to have the strongest and most significant effect on attitudes toward organic products. This result suggests that consumers' evaluations of product attributes—such as freshness, taste, safety, and overall quality—play a dominant role in shaping favorable attitudes. The strong influence of perceived quality highlights the importance of experiential and perceptual factors in consumer decision-making processes related to organic products.

In contrast, knowledge about organic products does not have a statistically significant direct effect on attitudes toward organic products. This finding indicates that merely possessing information or factual knowledge about organic products is not sufficient to foster positive attitudes. Without being supported by perceived benefits or personal relevance, knowledge alone may not translate into favorable consumer evaluations.

Overall, the results of this study demonstrate that affective and perceptual factors, particularly health awareness and perceived quality, are more influential than purely cognitive factors in shaping consumer attitudes toward organic products. These findings contribute to the existing literature by providing empirical evidence that supports the dominance of experiential and value-based considerations in the context of organic consumption.

Recommendations

Based on the findings and conclusions, several practical and theoretical recommendations can be proposed.

From a managerial and practical perspective, producers and marketers of organic products should prioritize strategies that emphasize health benefits and product quality attributes. Marketing communications should focus on highlighting the health advantages of organic products, such as the absence of harmful chemicals, nutritional benefits, and long-term wellness impacts. These messages should be conveyed clearly through packaging, advertising, and digital marketing platforms to strengthen consumers' health-related motivations.

Firms should invest in maintaining and improving perceived product quality, including product freshness, taste, safety, and overall reliability. Quality certifications, organic labels, and transparent production processes can help reinforce consumers' trust and enhance their perception of product superiority. Since perceived quality has the strongest influence on attitudes, ensuring consistent quality delivery is essential for sustaining positive consumer evaluations and long-term market competitiveness.

Although knowledge about organic products was not found to have a direct significant effect, educational efforts should not be entirely neglected. Instead, information campaigns should be integrated with experiential elements, such as product trials, testimonials, and storytelling, to transform knowledge into meaningful consumer experiences. This approach may help bridge the gap between cognitive awareness and affective response.

Theoretically, future research is encouraged to incorporate additional variables that may explain the remaining variance in consumer attitudes, such as environmental concern, price perception, social influence, or trust in organic certification. Including these variables may provide a more comprehensive understanding of consumer behavior in the organic product context. Future studies could employ probability sampling techniques or expand the research scope to other cities or regions to enhance the generalizability of the findings. Longitudinal research designs may also be considered to examine changes in consumer attitudes over time and to better capture causal dynamics.

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