

DOI: <https://doi.org/10.31933/dijms.v5i1>

Received: 1 October 2023, Revised: 8 October 2023, Publish: 9 October 2023

<https://creativecommons.org/licenses/by/4.0/>

Health versus Price: The Mediating Role of Attitudes in Organic Food Purchasing Decisions

Andika Andika¹, Della Nanda Luthfiana², Ridwan Ridwan³, Bestina Lendi Nur Khotimah⁴

¹ Janabadra University, Yogyakarta, Indonesia, andika@janabadra.ac.id

² Janabadra University, Yogyakarta, Indonesia, della@janabadra.ac.id

³ Janabadra University, Yogyakarta, Indonesia, ridwan@janabadra.ac.id

⁴ Janabadra University, Yogyakarta, Indonesia, lendinurkhotimah21@gmail.com

Corresponding Author: della@janabadra.ac.id

Abstract: Despite the rising global trend in organic food sales, they represent only 5% of the total food sales, a pattern mirrored in Indonesia. While Indonesians recognize the advantages of organic food, its perceived high cost remains a consumption barrier. This study employs the Theory of Reasoned Action (TRA) to explore determinants affecting consumers' Willingness to pay a premium for organic food, focusing on health concerns and price consciousness and considering the Attitude towards organic food as a mediating variable. Data from 230 Indonesian organic food market respondents was analyzed using Structural Equation Modeling (SEM). The results show that health concerns and price consciousness significantly influence consumer attitudes towards organic food. However, only price consciousness directly affects the Willingness to pay more, while health concerns do not. In contrast, positive attitudes towards organic food are essential in linking health concerns and price awareness with Willingness to pay more. These insights can assist industry stakeholders in devising more effective marketing and pricing strategies to increase organic food adoption, grow the industry, support sustainable agriculture, and benefit consumers and the environment.

Keyword: Consumer attitudes, Health concerns, Price consciousness, Theory of Reasoned Action, Willingness to pay more.

INTRODUCTION

In the age of globalization, alongside the rise of global health and climate change issues, consumer awareness about health and the environment has become increasingly significant. Consumers are now more informed about the risks of pesticide residues in food, the impact of carbon footprints on climate change, and the importance of preserving water quality for both consumption and ecosystems (Zhang et al., 2022). As a result, consumer preferences are leaning toward products perceived as eco-friendly and healthy, such as organic foods (X. Yang et al., 2021).

Consequently, global organic food sales have grown significantly over the past two decades (Shahbandeh, 2023). However, organic foods account for only about 5% of global agri-food sales (J. Wang et al., 2020). A similar trend is observed in Indonesia. Although the populace recognizes organic foods' health and environmental benefits, barriers remain to changing their consumption habits. One significant barrier is the perception of high prices (Najib et al., 2022)

Previous research offers inconsistent views on how price affects consumer decisions. Some studies suggest that premium pricing is a primary reason consumers hesitate to choose organic foods (Bernabéu et al., 2023; Carrión Bósquez et al., 2023; Eyinade et al., 2021; Gundala & Singh, 2021), while others indicate consumers are willing to pay more for better quality and benefits (Gill et al., 2005; Matharu et al., 2022). This gap signals the need for further research to understand the factors influencing consumer decisions in selecting organic foods.

Given the importance of this issue to the food industry and society, this research aims to (1) Examine the factors that influence consumers' Willingness to pay more for organic food, focusing on health concerns and price consciousness. (2) Recognize the role of consumers' positive attitudes towards organic food as a mediator between health concerns, cost perception, and Willingness to pay more.

Using the Theory of Reasoned Action (TRA) introduced by Fishbein and Ajzen (1975), this research delves into why consumers opt for organic food. TRA posits that intentions drive actions shaped by personal attitudes and perceptions of others' views (Vamvaka et al., 2020). In the context of organic food, consumers might be swayed to purchase it if they perceive it as healthier or experience social pressures (Gundala & Singh, 2021). The price is also a consideration; if the health or environmental benefits outweigh the cost, they may be willing to pay a premium (Yue et al., 2020). This study mainly explores consumers' Willingness to pay more for organic products.

With insights from this study, stakeholders, including manufacturers, distributors, marketers, and authorities, can design more effective marketing strategies that align with consumers' preferences and perceptions of organic food. In addition, a thorough analysis of consumers' Willingness to pay more can provide essential insights into optimal pricing strategies that promote affordability without compromising product quality and value. In the long run, this can not only increase the adoption of organic food on a larger scale but also strengthen the organic food industry as a whole, support sustainable agricultural practices, and contribute to consumer welfare and environmental sustainability.

METHOD

In this research, a quantitative approach with a descriptive design was employed to investigate the purchasing behaviors of Indonesian consumers towards organic food products. A total of 230 respondents were chosen using a nonprobability Consecutive Sampling method. This approach involved consecutively selecting participants who fulfilled specific criteria until the target sample size was achieved. Eligible participants were Indonesian residents aged 17 or older with prior experience consuming organic foods.

Data collection was facilitated through an online questionnaire created using Google Forms, which was disseminated via WhatsApp and Instagram between June 20 and August 8, 2023. This digital approach not only enhanced the accessibility for respondents but also ensured that their responses were automatically stored in the researcher's Google Drive. Subsequent data analysis was performed using the Partial Least Squares (PLS) approach within the Structural Equation Model (SEM) framework. The assessment procedures comprised the evaluation of the measurement model (Outer Model), structural model (Inner Model), and path coefficient analysis, adhering to the guidelines proposed by Hair et al. (2017).

RESULTS AND DISCUSSION

Results

Health Concern, Attitude, and Willingness to Pay More: The primary factor driving an individual to choose organic food is the recognition of the importance of a healthy lifestyle and an increased awareness of health (Rana & Paul, 2017; Śmiglak-Krajewska et al., 2020; Wojciechowska-Solis & Barska, 2021; Zámková et al., 2021). Numerous studies indicate that health concerns are the most reliable predictor of consumer attitudes toward organic food (Rana & Paul, 2017). Organic food is generally considered a healthier alternative to conventional food, and individuals who prioritize their health are more likely to purchase organic products due to the benefits offered by organic foods (Yogananda & Nair, 2019). Consequently, several studies establish a relationship between health concerns, perception, and the intention to purchase organic food, suggesting that individuals who prioritize their health have a more favorable attitude toward organic food (Dorce et al., 2021; Fleseriu et al., 2020; Rana & Paul, 2017; Singh & Verma, 2017). They are also willing to pay a higher price (Parashar et al., 2023; J. Wang et al., 2023). Based on the previous findings, the following hypotheses are proposed for this study:

H1: Health concerns have a significant effect on Attitude toward organic food

H2: Health concerns have a significant effect on Willingness to pay more

Price consciousness, Attitude, and Willingness to Pay More: Various factors influence consumer purchases of organic food products. While many factors support a positive view of the product, price often plays a negative role (Bernabéu et al., 2023). Generally, organic food comes at a higher price than conventional food (Suciu et al., 2019). This price difference can deter many potential buyers, especially those who prioritize cost efficiency in their purchasing decisions (Zhao et al., 2021). If consumers feel that the value derived from organic food is not worth the higher price, they may hesitate or even decide not to buy it (Aschemann-Witzel & Zielke, 2017).

A study by Katt and Meixner (2020) and Zheng et al. (2021) accentuates this behavior by identifying a negative relationship between price consciousness and the propensity to buy organic goods. In other words, individuals who are highly price-conscious and prioritize savings are less likely to buy organic products due to their typically higher prices.

However, this general observation does not apply to all demographic groups. For example, a recent study by Matharu et al. (2022) examined young university students in India. The study found that price consciousness did not significantly impact this group's Attitude or intention to buy organic food. This suggests that factors other than price, such as health benefits, environmental concerns, or social trends, may significantly influence young Indian university students' decision to buy organic food. In addition, Gilg et al. (2005) found that environmentally concerned consumers tend to buy green products based on their ecological credentials, so they focus less on price. Given the inconsistencies in previous research findings, this study aims to re-verify the relationship by proposing the following hypothesis:

H3: Price consciousness negatively influences consumer attitudes towards organic food.

H4: Price consciousness negatively influences Willingness to pay more for organic food.

Attitude and Willingness to Pay More: The essence of attitudes is entrenched in individuals' psychological and cognitive processes to form judgments about specific actions or behaviors (Hancock et al., 2023). This judgment is more than mere random contemplation; it culminates one's beliefs, experiences, cultural values, and personal preferences (Cornwell & Higgins, 2019). Attitudes act as mental filters that shape our reactions and decisions toward various situations or objects, including purchasing decisions (Leclercq-Machado et al., 2022).

Attitudes can be visualized on a spectrum. Individuals might perceive actions or objects positively, compelling them to approach or support them. Conversely, an opposing viewpoint might result in avoidance or rejection. The intensity and direction of these attitudes play a pivotal role in determining individual behavior, which is evident in consumer behavior studies (Albarracin & Shavitt, 2018). Grasping consumer attitudes is crucial, particularly when examining the environmentally-conscious market (Srisathan et al., 2023).

Research Kirmani and Khan (2018) emphasize this point, showcasing that positive attitudes towards organic food products can drive consumers to pay a premium, seeing the extra cost as an investment in the environment or their health. The rising global consciousness about environmental issues and sustainable practices fuels this perspective. Conversely, the study by Pilelienė and Tamulienė (2021) underlines the intricacies of the matter. Though positive trends are noticeable worldwide, regional disparities, cultural beliefs, or past experiences with green products can lead to diverse attitudes. For instance, in Lithuania, skepticism towards organic food might stem from consumers' limited understanding of the connection between organic products, health, and quality. This could make them reluctant to pay higher prices for organic food., perceived value, or perhaps a lack of awareness about the benefits of organic food.

A thorough investigation is imperative, considering the multifaceted character of attitudes and the diverse findings across regions. Therefore, our objective is to offer a comprehensive view of how attitudes influence the readiness of Indonesian consumers to pay a premium for organic food products. Based on this understanding, we propose the following hypotheses:

H5: Attitudes toward organic food are significantly correlated with consumers' Willingness to pay more

The mediating role of Attitude: A wide range of evidence shows a causal relationship between health concerns, price consciousness, attitudes towards green products, and Willingness to pay more. Researchers like Wang et al. (2023) and Gundala & Singh (2021) have shown a direct relationship between these variables, where health concerns and price consciousness affect attitudes, and attitudes directly impact Willingness to pay more. However, there has been no in-depth research on the mediating role of Attitude in linking health concerns, price consciousness, and Willingness to pay more. Previous research has shown that health concerns impact Willingness to pay more. Health concern and price consciousness have a positive influence on Attitude, and Attitude itself has a direct positive impact on Willingness to pay more. Attitude is recognized as a critical element and is often considered an intermediary in some studies (Domínguez-Valerio et al., 2019; Fawehinmi et al., 2022; Y. M. Wang et al., 2022). Therefore, based on this evidence, this study proposes the following hypotheses:

H6: Attitude mediates the effect of health concerns on consumers' Willingness to pay more

H7: Attitude mediates the negative effect of price consciousness on consumers' Willingness to pay more

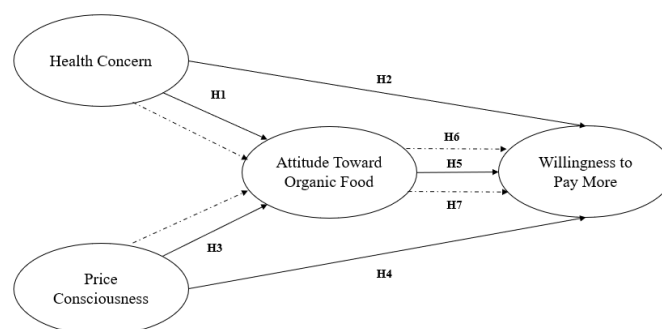


Figure 1. Research Framework

Respondent Characteristics

In Table 1, the demographic distribution of respondents is presented, segmented by gender, age, education level, income bracket, acceptable price difference, and provincial origin. A scrutiny of this table reveals that males constitute the majority at 56%. Most respondents fall within the 17-26 age bracket, accounting for 53%. When considering educational attainment, 41% have completed the DI-IV/S1 level. Regarding income, the predominant bracket is 1-3 million, comprising 44% of the sample. Notably, 45% of respondents tolerate a 10-20% price difference. Geographically, while the participants hail from 20 different provinces in Indonesia, the Special Region of Yogyakarta stands out as the primary source, with 46% representation. This distribution offers a fairly representative snapshot of organic food consumers in Indonesia.

Table 1. Sample Descriptions

| Category | Subcategory | Frequency | % | Cumulative percent | |
|---|----------------------------------|---------------------|-----|--------------------|-----|
| Gender | Men | 128 | 56% | 56% | |
| | Female | 102 | 44% | 100% | |
| Age | 17-26 | 122 | 53% | 53% | |
| | 27-42 | 58 | 25% | 78% | |
| | 43-58 | 39 | 17% | 95% | |
| | >58 | 11 | 5% | 100% | |
| | | | | | |
| Education Level | <High School | 17 | 7% | 7% | |
| | High School | 72 | 32% | 39% | |
| | Diploma | I/II/III/Bachelor's | 95 | 41% | 80% |
| | Degree | | | | |
| | Master's/Doctoral Degree | 46 | 20% | 100% | |
| Income Level | <1 million | 40 | 17% | 17% | |
| | 1-3 million | 101 | 44% | 61% | |
| | 4-8 million | 64 | 28% | 89% | |
| | >8 million | 25 | 11% | 100% | |
| | | | | | |
| Tolerable Price Difference | 10-20% | 103 | 45% | 45% | |
| | | | | | |
| | 25-35% | 84 | 37% | 82% | |
| | 40-50% | 32 | 14% | 96% | |
| | >50% | 11 | 4% | 100% | |
| The five provinces with the highest number of respondents | Central Java | | | 18 | |
| | South Sulawesi | | | 16 | |
| | Southeast Sulawesi | | | 26 | |
| | East Sulawesi | | | 6 | |
| | DIY (Daerah Istimewa Yogyakarta) | | | 106 | |
| | | | | | |

Data Analysis Results

Evaluating the measurement structure, called the Outer model or indicator assessment, yields insights into the model's credibility and authenticity. This evaluation is benchmarked against criteria such as discriminant validity, composite reliability, and convergent validity, as elaborated below:

Convergent Validity: This assessment gauges the correlation between indicator scores and their respective constructs. A correlation value surpassing 0.50 signifies an indicator's convergent validity. Indicators failing to attain this threshold ought to be excluded. Indicators manifesting loading factor values beyond 0.70 are deemed robust, while values surpassing 0.60 remain acceptable, as per Hair et al. (2017). Concerning Table 2's outer loadings for convergence scrutiny, every component displays values that satisfy the convergent validity criteria, crossing the 0.50 mark. Hence, the constructs are valid.

Composite Reliability: The depth of the constructed variable is demonstrated through its variable indicators, with its assessment achieved via composite reliability. If a construct's composite reliability value exceeds 0.70, it's deemed reliable, as articulated by Hair et al. (2017). Based on Table 2, each construct shows a composite reliability that exceeds 0.70. This signifies a high level of consistency and robustness in the use of the instrument, which confirms the instrument's reliability.

Discriminant Validity pertains to the clarity with which specific constructs are differentiated from others, validated through empirical benchmarks. The Average Variance Extracted (AVE) computation is a prevalent method, with values greater than 0.50 recommended, as per Hair et al. (2017). As depicted in Table 1, every indicator meets this validation criterion since the AVE for each surpasses the stipulated 0.50 boundary.

Table 2. Test Results of Indicators

| Construct | Indicator | Convergent | Discriminant | Composite |
|------------------------------|-----------|---------------|--------------|-----------|
| | | Outer Loading | AVE | CR |
| Health Concern | HC1 | 0.881 | 0.701 | 0.874 |
| | HC2 | 0.903 | | |
| | HC3 | 0.715 | | |
| Price Consciousness | PC1 | 0.515 | 0.506 | 0.8 |
| | PC2 | 0.733 | | |
| | PC3 | 0.791 | | |
| | PC4 | 0.771 | | |
| Attitude Toward Organic Food | ATOF1 | 0.855 | 0.687 | 0.897 |
| | ATOF2 | 0.876 | | |
| | ATOF3 | 0.866 | | |
| | ATOF4 | 0.706 | | |
| Willingness to Pay More | WTPM1 | 0.951 | 0.889 | 0.941 |
| | WTPM2 | 0.935 | | |

Evaluation of Model's Goodness and Fit

In the realm of Structural Equation Modeling (SEM), the Partial Least Squares (PLS) approach is adeptly designed for assessing theoretical constructs within a predictive research framework, with an emphasis on variance (Luthfiana et al., 2023). A myriad of metrics have been promulgated by scholars to ascertain the validity of specified models, encompassing R square, Q square, and Standardized Root Mean Residual (SRMR) (Hair et al., 2019). A comprehensive exposition of these metrics, supplemented by their relevant criteria, is presented below:

Hair et al. (2011) describe a qualitative interpretation of the R-squared metric by dividing the effect into several categories: 0.25 (minimal), 0.50 (moderate), and 0.75 (substantial). Our empirical analysis shows that health concerns and price consciousness have a minimal impact on attitudes toward organic consumer products, as indicated by the R-squared metric 0.489. Analogously, the influence of health considerations, price consciousness, and Attitude towards organic food on Willingness to pay more is also minimal, as evidenced by the R-squared metric of 0.488.

Furthermore, Hair et al. (2019) explained the qualitative interpretation of the Q-squared metric, specifying the echelons of influence as 0 (minimal), 0.25 (moderate), and 0.50 (substantial). Empirical evidence suggests a Q-squared metric of 0.321 when linking health concerns and price consciousness with attitudes. In the same way, the relationship between health concerns, price consciousness, and attitudes towards organic food on Willingness to pay more was recorded at 0.421. Given that this metric exceeds 0.25, it underscores the moderate predictive accuracy of this study.

A threshold of 0.10 or lower for the SRMR metric is considered an appropriate measure of model fit (Henseler et al., 2014). As a barometer of fit in PLS-SEM, SRMR helps prevent

model specification deviations. The estimated model yielding an SRMR of 0.094 indicates a good fit for the model. The empirical evidence collected in this study explains the interrelationships among the specified variables.

Results of Hypothesis Testing

This section illustrates the relationships among the constructs and offers insight into the correlations of the variables. The data displayed in Table 3 were obtained through the bootstrapping method, which incorporates 5000 resampling iterations following the guidelines set by Hair et al. (2017). Using a 5% error rate, this study's threshold values set for t-statistics were p-value <0.05 and t-value >1.96 (Sarstedt et al., 2017). The results of our hypothesis assessment revealed that, of all the hypotheses proposed, only one was not proven: the influence of health concerns on Willingness to pay more for organic food.

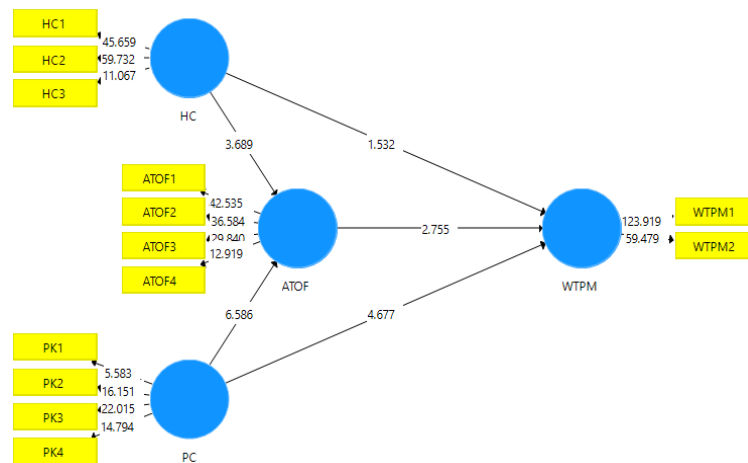


Figure 2. Final model

Table 3. Path coefficient results

| Construct | | Original Sample | T Statistics | P Values | Conclusion |
|-----------|--------------------|-----------------|--------------|----------|------------|
| Direct | ATOF -> WTPM | 0.255 | 2.755 | 0.006 | Accepted |
| | HC -> ATOF | 0.313 | 3.689 | 0.00 | Accepted |
| | HC -> WTPM | 0.132 | 1.532 | 0.126 | Rejected |
| | PC -> ATOF | 0.453 | 6.586 | 0.000 | Accepted |
| | PC -> WTPM | 0.401 | 4.677 | 0.000 | Accepted |
| Indirect | HC -> ATOF -> WTPM | 0.08 | 1.992 | 0.046 | Accepted |
| | PC -> ATOF -> WTPM | 0.115 | 2.605 | 0.009 | Accepted |

Discussion

Health Concerns on Attitude Toward Organic Food

The results of the analysis show that health problems have a significant effect on attitudes towards organic food. This means a strong relationship exists between a person's health concerns and how they perceive or respond to organic food. This finding aligns with Yazar & Burucuoglu's (2019) research, which found that health concerns positively and significantly research correlate with consumer attitudes in Turkey toward organic food. This is also similar to the findings of Gundala & Singh (2021) in the United States, which revealed that more health-conscious consumers are more likely to prioritize organic food choices due to the perceived benefits for personal well-being.

When people are conscious of their health, they are more likely to pay attention to what they consume (Pu et al., 2020). Organic foods, often perceived as free from harmful pesticides, artificial additives, and genetically modified organisms, naturally appeal to these

individuals as a healthier option (Pinto et al., 2021). The emphasis on health, as a result, drives the attitudes and purchasing behaviors related to organic foods.

However, it is essential to understand that while the correlation between health concerns and positive attitudes towards organic food is clear, the reasons for these attitudes may vary. Some people may choose organic food due to direct concerns over the impact of pesticides or chemicals on their health (Gundala & Singh, 2021). In contrast, others may be influenced by broader environmental concerns (Prado & Moraes, 2020), ethical considerations about farming practices (Kushwah et al., 2019), or even taste preferences (Nunes et al., 2021).

Nonetheless, the upward trend in organic food consumption appears to be influenced, at least in part, by growing health awareness among consumers. This trend is significant to marketers, policymakers, and health professionals as it offers insights into consumer behavior and potential strategies to support healthier eating habits. By capitalizing on the favorable outlook towards organic food, stakeholders can encourage the transition towards more sustainable and health-oriented consumption behaviors.

Health Concerns on Willingness to Pay More

The analysis results show that health concerns do not significantly affect Willingness to pay more for organic food. This may surprise some, given that much of the literature and marketing associates organic food with health benefits, like the research results of Wang et al. (2023) and Parashar et al. (2023).

However, despite a large body of literature stating that organic foods have better health benefits compared to conventional foods, it is possible that consumers may not fully believe these claims. This could be due to contradictory information in the marketplace (Hansmann et al., 2020) or a lack of education regarding organic food (Andika et al., 2023). In other words, while organic food may promote health and well-being, public perception may not fully reflect this understanding. In addition, economic factors may be a significant consideration for many consumers. Although organic food is perceived to be healthier, price considerations are often dominant in purchasing decisions (Wang et al., 2020), especially among consumers with economic limitations.

Price Consciousness on Attitude toward Organic Food and Willingness to Pay More

The analysis results show that price consciousness significantly affects consumer attitudes and Willingness to pay more for organic food. This indicates that for some consumers who prioritize the price aspect, the premium price often associated with organic food can be an obstacle that reduces their interest or even discourages them from buying the product. This finding indicates that price significantly shapes consumer perceptions and Willingness to buy organic food. This supports the findings of Katt & Meixner (2020) and Zheng et al. (2021), who found a negative correlation between price awareness and the Willingness to buy organic food. Consumers who are highly price-sensitive and tend to look for economic value are usually hesitant to choose organic products, which are often more expensive.

In a more profound understanding, price consciousness is closely related to how consumers perceive the value of their money. When it comes to organic food, consumers with high price consciousness may consider various considerations before making a purchase decision, including but not limited to quality, health benefits, and environmental impact (Kamboj et al., 2023).

Organic food usually costs more for specific reasons. The production process, which tends to involve sustainable farming methods, using organic fertilizers, and rejecting synthetic chemicals and GMOs, costs more. In addition, the cost of organic certification and a more efficient supply chain also contribute (Thompson, 2009). While many consumers

understand the benefits of organic food, price consciousness can be a barrier to buying at a higher price.

However, a group of consumers still choose organic food despite their high price consciousness. This may be due to their deep understanding of organic food's health benefits and environmental and ethical aspects (Gundala & Singh, 2021; Wang et al., 2020). Therefore, a marketing approach that educates consumers about the real benefits of organic food could be a solution to overcome price constraints.

From a business perspective, these findings highlight the importance of market segmentation. Stakeholders in the organic food industry should dig deeper into their consumer profiles and design customized marketing strategies. For example, discounts, promotions, or product bundling may be a practical approach for highly price-sensitive consumers (Hahnchen & Baumgartner, 2020).

Attitude Toward Organic Food on Willingness to Pay More

The results of the analysis show that attitudes toward organic food have a significant effect on Willingness to pay more. This means that consumers with a positive attitude towards organic food tend to be more willing to spend more when buying it. This positive Attitude may be based on various factors, such as the belief that organic food is healthier, more environmentally friendly, or has better quality than non-organic food. Consequently, consumers with this Attitude see the benefits of organic food as worth the higher price they have to pay. The results of this study support the findings of Kirmani & Khan (2018), which show that positive attitudes toward organic food products can encourage consumers to pay more, seeing the additional cost as an investment in the environment or their health. This finding also aligns with Gundala & Singh's (2021) research in the United States, which found that consumers with positive attitudes toward organic food are more willing to pay higher prices.

The high Willingness to pay more for organic food from consumers with positive attitudes confirms the importance of consumer perceptions in guiding their purchasing behavior. These perceptions are often based not only on the direct benefits of the product but also on the values associated with the product. In the case of organic food, such values include sustainability, animal welfare, and a more natural approach to farming without the use of synthetic chemicals (Gundala & Singh, 2021).

In a marketing context, these findings underscore the importance of education and awareness campaigns to build positive perceptions of organic food. Companies engaged in organic food can increase their sales by communicating the health, environmental, and social benefits of their products, as well as by showing how their products provide added value compared to conventional food.

The mediating role of Attitude toward Organic Food

1. Attitude mediates the effect of health concerns on consumers' Willingness to pay more

The results of the analysis show that attitudes towards organic food act as a significant mediator in linking the effect of health concerns to Willingness to pay more. In this context, health concerns influence a person's Attitude towards organic food. For example, someone concerned about their health may be more likely to view organic food as a healthier option. This positive attitude towards organic food increases his Willingness to pay more for such food (Radulescu et al., 2021).

To understand further, Health concerns are often one of the main reasons consumers are attracted to organic food. Anxiety about pesticides, hormones, antibiotics, and other chemicals in conventional foods can drive people to seek more natural and perceived healthier alternatives (Giampieri et al., 2022). A positive attitude towards organic food often emerges when people know their health concerns and want solutions (Gundala &

Singh, 2021). They may believe that organic food has better nutrition, is free from harmful chemicals, and is better for the environment. Having formed a positive attitude towards organic food, consumers tend to see the added value of the food, encouraging them to be willing to pay a higher price (Huo et al., 2023). This is also supported by the perception that organic food has higher production costs, supports local farmers, and contributes to environmental sustainability.

This kind of understanding is significant for organic food producers or marketers. They can target audiences more concerned about their health and highlight the health benefits of organic food in their marketing campaigns. In addition, by understanding the mediating role of attitudes towards organic food, marketers can develop strategies to shape or change consumer attitudes to be more positive towards organic food, increasing consumers' Willingness to pay more.

2. Attitude mediates the negative effect of price consciousness on consumers' Willingness to pay more.

The analysis shows that consumers' positive attitude towards organic food is a critical determinant that motivates them to be willing to pay more despite realizing the higher price potential of organic food. These results highlight how consumers' perceptions and values regarding organic food can influence their purchasing decisions.

In organic food, consumers are often faced with a dilemma between valuing the health benefits, dedication to the environment, and food quality versus the additional costs that may be incurred (Wang et al., 2019). Price consciousness refers to consumers' understanding of the price difference between organic and non-organic products. Although organic food is usually more expensive, this does not mean that consumers are automatically reluctant to pay more (Ismael & Ploeger, 2020). Several factors, particularly their attitudes towards organic food, are often crucial considerations (Kirmani & Khan, 2018).

For example, consumers who believe in the advantages of organic food in terms of health, environmental impact, and taste quality are more likely to put aside the price difference and choose organic products (Akter et al., 2023). Such beliefs and positive attitudes may be influenced by various sources of information, previous consumption experiences, or advice from close people (Wang et al., 2023; Yang et al., 2023). However, it is essential to note that while there is a tendency to be willing to pay more for organic food, most respondents emphasized that a price increase of around 10-20% over conventional products is an acceptable limit.

Based on these results, there are significant implications for organic food producers and marketers. To increase product attractiveness, in addition to cultivating and maintaining positive consumer attitudes, they must pay attention to the limit of price increases that are still acceptable to consumers, which is around 10-20%. This can be achieved by providing education on the advantages of organic food, implementing appropriate marketing strategies, and offering quality products with intelligent pricing.

CONCLUSION

The analysis showed a significant relationship between health concerns and attitudes towards organic food but did not affect Willingness to pay more. At the same time, price consciousness affects consumers' attitudes and Willingness to pay more for organic food. A positive attitude towards organic food increases consumers' Willingness to pay more. There is a mediating role of attitude towards organic food in linking the effects of health concerns and price consciousness with the Willingness to pay more.

Implications of Findings: (1) For Marketers and Manufacturers: The increased consumption of organic food due to health concerns indicates an excellent opportunity to promote organic food as a healthier alternative. Nonetheless, price consciousness is still a

dominant factor in consumer decisions. Therefore, marketing strategies should ensure competitive pricing while communicating the added value of organic food. (2) For Policy Makers: The results of this study can be used as a reference in formulating policies that support the expansion of the organic food industry. This could include educational initiatives to increase consumer understanding of the advantages of organic food or providing incentives for organic food producers.

Based on the above findings, there are several recommendations for future research: (1) Consumer understanding of the benefits of organic food: Given that health concerns influence attitudes towards organic food but do not directly affect Willingness to pay more, in-depth research on consumers' understanding of the real benefits of organic food could provide further insights. (2) Analysis of Economic Factors: Health concerns influence positive attitudes toward organic food, but economic factors dominate purchasing decisions. Further research into how economic factors, such as income and price consciousness, influence organic food purchase decisions could provide valuable insights. (3) Influence of Information Sources: How information sources (e.g., advertising, social media, friend recommendations) influence consumers' perceptions of organic food and their Willingness to pay more. (4) Studies on Price Cap: Given that many consumers are willing to pay a 10-20% premium for organic food, further research on how this price threshold is determined and whether there is elasticity in Willingness to pay could be relevant.

REFERENSI

- Akter, S., Ali, S., Fekete-Farkas, M., Fogarassy, C., & Lakner, Z. (2023). Why Organic Food? Factors Influence the Organic Food Purchase Intension in an Emerging Country (Study from Northern Part of Bangladesh). *Resources*, 12(1). <https://doi.org/10.3390/resources12010005>
- Albarracín, D., & Shavitt, S. (2018). Attitudes and Attitude Change. *Annual Review of Psychology*, 69, 299–327. <https://doi.org/10.1146/annurev-psych-122216-011911>
- Andika, Luthfiana, D. N., Nadia, & Kartinah. (2023). Green purchase behavior: The role of green advertising, green awareness, and eco-literacy. *IOP Conference Series: Earth and Environmental Science*, 1181(1), 1–6. <https://doi.org/10.1088/1755-1315/1181/1/012025>
- Aschemann-Witzel, J., & Zielke, S. (2017). Can't Buy Me Green? A Review of Consumer Perceptions of and Behavior Toward the Price of Organic Food. *Journal of Consumer Affairs*, 51(1), 211–251. <https://doi.org/10.1111/joca.12092>
- Bernabéu, R., Brugarolas, M., Martínez-Carrasco, L., Nieto-Villegas, R., & Rabadán, A. (2023). The Price of Organic Foods as a Limiting Factor of the European Green Deal: The Case of Tomatoes in Spain. *Sustainability (Switzerland)*, 15(4), 1–15. <https://doi.org/10.3390/su15043238>
- Carrión Bósquez, N. G., Arias-Bolzmann, L. G., & Martínez Quiroz, A. K. (2023). The influence of price and availability on university millennials' organic food product purchase intention. *British Food Journal*, 125(2), 536–550. <https://doi.org/10.1108/BFJ-12-2021-1340>
- Cornwell, J. F. M., & Higgins, E. T. (2019). Sense of Personal Control Intensifies Moral Judgments of Others' Actions. *Frontiers in Psychology*, 10(October), 1–14. <https://doi.org/10.3389/fpsyg.2019.02261>
- Domínguez-Valerio, C. M., Moral-Cuadra, S., Medina-Viruel, M. J., & Orgaz-Agüera, F. (2019). Attitude as a mediator between sustainable behaviour and sustainable knowledge: An approximation through a case study in the Dominican Republic. *Social Sciences*, 8(10). <https://doi.org/10.3390/socsci8100288>
- Dorce, L. C., da Silva, M. C., Mauad, J. R. C., de Faria Domingues, C. H., & Borges, J. A. R. (2021). Extending the theory of planned behavior to understand consumer purchase

- behavior for organic vegetables in Brazil: The role of perceived health benefits, perceived sustainability benefits and perceived price. *Food Quality and Preference*, 91(December 2020). <https://doi.org/10.1016/j.foodqual.2021.104191>
- Eyinate, G. A., Mushunje, A., & Yusuf, S. F. G. (2021). The Willingness to consume organic food: A review. *Food and Agricultural Immunology*, 32(1), 78–104. <https://doi.org/10.1080/09540105.2021.1874885>
- Fawehinmi, O., Yusliza, M. Y., Ogbeibu, S., Tanveer, M. I., & Chiappetta Jabbour, C. J. (2022). Academic employees' green behaviour as praxis for bolstering environmental sustainable development: A linear moderated mediation evaluation. *Business Strategy and the Environment*, 31(7), 3470–3490. <https://doi.org/10.1002/bse.3095>
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research* (Social Psy). MA: Addison-Wesley. <https://people.umass.edu/aizen/f&a1975.html>
- Fleseriu, C., Cosma, S. A., & Bocănet, V. (2020). Values and planned behaviour of the Romanian organic food consumer. *Sustainability (Switzerland)*, 12(5), 1–21. <https://doi.org/10.3390/su12051722>
- Giampieri, F., Mazzoni, L., Cianciosi, D., Alvarez-Suarez, J. M., Regolo, L., Sánchez-González, C., Capocasa, F., Xiao, J., Mezzetti, B., & Battino, M. (2022). Organic vs conventional plant-based foods: A review. *Food Chemistry*, 383(July 2021). <https://doi.org/10.1016/j.foodchem.2022.132352>
- Gilg, A., Barr, S., & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, 37(6), 481–504. <https://doi.org/10.1016/j.futures.2004.10.016>
- Gundala, R. R., & Singh, A. (2021). What motivates consumers to buy organic foods? Results of an empirical study in the United States. *PLoS ONE*, 16(9 September), 1–17. <https://doi.org/10.1371/journal.pone.0257288>
- Hahnchen, A., & Baumgartner, B. (2020). The Impact of Price Bundling on the Evaluation of Bundled Products: Does It Matter How You Frame It? *Schmalenbach Business Review*, 72(1), 39–63. <https://doi.org/10.1007/s41464-020-00082-2>
- Hair, J. F., Hult, Ringle, & Sarstedt. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). In *Asia-Pacific Pte. Ltd* (Second). SAGE Publications, Inc.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hancock, G. M., Dudley, K. D., Long, D., & Lowe, C. G. (2023). An etiological examination of behavioral intentions to support shark and stingray conservancy: the effects of beliefs in elasmobranchs' cognitive and affective capacities. *Frontiers in Marine Science*, 10(June), 1–14. <https://doi.org/10.3389/fmars.2023.1178539>
- Hansmann, R., Baur, I., & Binder, C. R. (2020). Increasing organic food consumption: An integrating model of drivers and barriers. *Journal of Cleaner Production*, 275, 123058. <https://doi.org/10.1016/j.jclepro.2020.123058>
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J., Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common Beliefs and Reality About PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, 17(2), 182–209. <https://doi.org/10.1177/1094428114526928>
- Huo, H., Jiang, X., Han, C., Wei, S., Yu, D., & Tong, Y. (2023). The effect of credence attributes on Willingness to pay a premium for organic food: A moderated mediation

- model of attitudes and uncertainty. *Frontiers in Psychology*, 14(February), 1–12. <https://doi.org/10.3389/fpsyg.2023.1087324>
- Ismael, D., & Ploeger, A. (2020). Consumers' emotion attitudes towards organic and conventional food: A comparison study of emotional profiling and self-reported method. *Foods*, 9(1). <https://doi.org/10.3390/foods9010079>
- Kamboj, S., Matharu, M., & Gupta, M. (2023). Examining consumer purchase intention towards organic food: An empirical study. *Cleaner and Responsible Consumption*, 9(January), 100121. <https://doi.org/10.1016/j.clrc.2023.100121>
- Katt, F., & Meixner, O. (2020). Is it all about the price? An analysis of the purchase intention for organic food in a discount setting by means of structural equation modeling. *Foods*, 9(4), 1–13. <https://doi.org/10.3390/foods9040458>
- Kirmani, M. D., & Khan, M. N. (2018). Decoding Willingness of Indian consumers to pay a premium on green products. *South Asian Journal of Business Studies*, 7(1), 73–90. <https://doi.org/10.1108/SAJBS-11-2016-0091>
- Kushwah, S., Dhir, A., & Sagar, M. (2019). Ethical consumption intentions and choice behavior towards organic food. Moderation role of buying and environmental concerns. *Journal of Cleaner Production*, 236. <https://doi.org/10.1016/j.jclepro.2019.06.350>
- Leclercq-Machado, L., Alvarez-Risco, A., Gómez-Prado, R., Cuya-Velásquez, B. B., Esquerre-Botton, S., Morales-Ríos, F., Almanza-Cruz, C., Castillo-Benancio, S., Anderson-Seminario, M. de las M., Del-Aguila-Arcenales, S., & Yáñez, J. A. (2022). Sustainable Fashion and Consumption Patterns in Peru: An Environmental-Attitude-Intention-Behavior Analysis. *Sustainability (Switzerland)*, 14(16), 1–18. <https://doi.org/10.3390/su14169965>
- Luthfiana, D. N., Andika, A., Najmudin, M., & Purwanto, J. (2023). Socialization of Taxation As A Moderating Variable in The Application of The Theory of Planned Behavior to Taxpayer Compliance. *Dinasti International Journal of Economics, Finance & Accounting*, 4(3), 434–453.
- Matharu, G. K., von der Heide, T., Sorwar, G., & Sivapalan, A. (2022). What Motivates Young Indian Consumers to Buy Organic Food? *Journal of International Consumer Marketing*, 34(5), 497–516. <https://doi.org/10.1080/08961530.2021.2000919>
- Najib, M., Sumarwan, U., Septiani, S., Waibel, H., Suhartanto, D., & Fahma, F. (2022). Individual and Socio-Cultural Factors as Driving Forces of the Purchase Intention for Organic Food by Middle Class Consumers in Indonesia. *Journal of International Food and Agribusiness Marketing*, 34(3), 320–341. <https://doi.org/10.1080/08974438.2021.1900015>
- Nunes, F., Madureira, T., & Veiga, J. M. (2021). The Organic Food Choice Pattern: Are Organic Consumers Becoming More Alike? *Foods*. <https://doi.org/10.3390/foods10050983>
- Parashar, S., Singh, S., & Sood, G. (2023). Examining the role of health consciousness, environmental awareness and intention on purchase of organic food: A moderated model of attitude. *Journal of Cleaner Production*, 386(December 2022), 135553. <https://doi.org/10.1016/j.jclepro.2022.135553>
- Pilelienė, L., & Tamulienė, V. (2021). Consumer attitudes and behavior towards organic products: Evidence from the Lithuanian market. Management and Innovation. *Journal of Entrepreneurship, Business and Economics*, 17(1), 269–299. <https://doi.org/https://doi.org/10.7341/20211719>
- Pinto, V. R. A., Campos, R. F. de A., Rocha, F., Emmendoerfer, M. L., Vidigal, M. C. T. R., da Rocha, S. J. S. S., Lucia, S. M. Della, Cabral, L. F. M., de Carvalho, A. F., & Perrone, Í. T. (2021). Perceived healthiness of foods: A systematic review of qualitative studies. *Future Foods*, 4(March). <https://doi.org/10.1016/j.fufo.2021.100056>

- Prado, N. B. do, & Moraes, G. H. S. M. de. (2020). Environmental awareness, consumption of organic products and gender. *Revista de Gestao*, 27(4), 353–368. <https://doi.org/10.1108/REGE-11-2019-0120>
- Pu, B., Zhang, L., Tang, Z., & Qiu, Y. (2020). The relationship between health consciousness and home-based exercise in china during the covid-19 pandemic. *International Journal of Environmental Research and Public Health*, 17(16), 1–18. <https://doi.org/10.3390/ijerph17165693>
- Radulescu, V., Cetina, I., Cruceru, A. F., & Goldbach, D. (2021). Consumers' attitude and intention towards organic fruits and vegetables: Empirical study on romanian consumers. *Sustainability (Switzerland)*, 13(16), 1–14. <https://doi.org/10.3390/su13169440>
- Rana, J., & Paul, J. (2017). Consumer behavior and purchase intention for organic food: A review and research agenda. *Journal of Retailing and Consumer Services*, 38(June), 157–165. <https://doi.org/10.1016/j.jretconser.2017.06.004>
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial Least Squares Structural Equation Modeling. In *Handbook of Market Research* (Issue September). Springer International Publishing. https://doi.org/https://doi.org/10.1007/978-3-319-05542-8_15-1
- Shahbandeh, M. (2023). *Worldwide sales of organic foods 1999-2021*. Statista. <https://www.statista.com/statistics/273090/worldwide-sales-of-organic-foods-since-1999/>
- Singh, A., & Verma, P. (2017). Factors influencing Indian consumers' actual buying behaviour towards organic food products. *Journal of Cleaner Production*, 167, 473–483. <https://doi.org/10.1016/j.jclepro.2017.08.106>
- Śmiglak-Krajewska, M., Wojciechowska-Solis, J., & Viti, D. (2020). Consumers' purchasing intentions on the legume market as evidence of sustainable behaviour. *Agriculture (Switzerland)*, 10(10), 1–20. <https://doi.org/10.3390/agriculture10100424>
- Srisathan, W. A., Wongsachia, S., Gebombut, N., Naruetharadhol, P., & Ketkaew, C. (2023). The Green-Awakening Customer Attitudes towards Buying Green Products on an Online Platform in Thailand: The Multigroup Moderation Effects of Age, Gender, and Income. *Sustainability (Switzerland)*, 15(3). <https://doi.org/10.3390/su15032497>
- Suciu, N. A., Ferrari, F., & Trevisan, M. (2019). Organic and conventional food: Comparison and future research. *Trends in Food Science and Technology*, 84, 49–51. <https://doi.org/10.1016/j.tifs.2018.12.008>
- Thompson, P. (2009). Philosophy of Agricultural Technology. In *Philosophy of Technology and Engineering Sciences* (Vol. 9). Elsevier B.V. <https://doi.org/10.1016/B978-0-444-51667-1.50048-3>
- Vamvaka, V., Stoforos, C., Palaskas, T., & Botsaris, C. (2020). Attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention: dimensionality, structural relationships, and gender differences. *Journal of Innovation and Entrepreneurship*, 9(1). <https://doi.org/10.1186/s13731-020-0112-0>
- Wang, J., Pham, T. L., & Dang, V. T. (2020). Environmental consciousness and organic food purchase intention: A moderated mediation model of perceived food quality and price sensitivity. *International Journal of Environmental Research and Public Health*, 17(3), 1–18. <https://doi.org/10.3390/ijerph17030850>
- Wang, J., Xue, Y., & Liu, T. (2023). Consumer motivation for organic food consumption: Health consciousness or herd mentality. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.1042535>
- Wang, X., Pachon, F., Liu, J., & Kajungiro, R. (2019). Factors influencing organic food purchase intention in Tanzania and Kenya and the moderating role of knowledge. *Sustainability (Switzerland)*, 11(1). <https://doi.org/10.3390/su11010209>

- Wang, Y. M., Zaman, H. M. F., & Alvi, A. K. (2022). Linkage of Green Brand Positioning and Green Customer Value With Green Purchase Intention: The Mediating and Moderating Role of Attitude Toward Green Brand and Green Trust. *SAGE Open*, 12(2). <https://doi.org/10.1177/21582440221102441>
- Wojciechowska-Solis, J., & Barska, A. (2021). Exploring the preferences of consumers' organic products in aspects of sustainable consumption: The case of the polish consumer. *Agriculture (Switzerland)*, 11(2), 1–17. <https://doi.org/10.3390/agriculture11020138>
- Yang, Q., Al Mamun, A., Naznen, F., Siyu, L., & Mohamed Makhbul, Z. K. (2023). Modelling the significance of health values, beliefs and norms on the intention to consume and the consumption of organic foods. *Heliyon*, 9(6), e17487. <https://doi.org/10.1016/j.heliyon.2023.e17487>
- Yang, X., Chen, Q., Xu, Z., Zheng, Q., Zhao, R., Yang, H., Ruan, C., Han, F., & Chen, Q. (2021). Consumers' preferences for health-related and low-carbon attributes of rice: A choice experiment. *Journal of Cleaner Production*, 295, 126443. <https://doi.org/10.1016/j.jclepro.2021.126443>
- Yazar, E. E., & Burucuoglu, M. (2019). Consumer Attitude towards Organic Foods: A Multigroup Analysis across Genders. *Istanbul Business Research*. <https://doi.org/10.26650/ibr.2019.48.0001>
- Yogananda, A. P. Y., & Nair, P. B. (2019). Green food product purchase intention: Factors influencing Malaysian consumers. *Pertanika Journal of Social Sciences and Humanities*, 27(2), 1131–1144.
- Yue, Sheng, She, & Xu. (2020). Impact of consumer environmental responsibility on green consumption behavior in China: The role of environmental concern and price sensitivity. *Sustainability (Switzerland)*, 12(5), 1–16. <https://doi.org/10.3390/su12052074>
- Zámková, M., Rojík, S., Pilař, L., Chalupová, M., Prokop, M., Stolín, R., Dziekański, P., & Maitah, M. (2021). Customer preferences for organic agriculture produce in the czech republic: 2016 and 2019. *Agriculture (Switzerland)*, 11(10). <https://doi.org/10.3390/agriculture11100968>
- Zhang, L., Xu, M., Chen, H., Li, Y., & Chen, S. (2022). Globalization, Green Economy and Environmental Challenges: State of the Art Review for Practical Implications. *Frontiers in Environmental Science*, 10(March), 1–9. <https://doi.org/10.3389/fenvs.2022.870271>
- Zhao, H., Yao, X., Liu, Z., & Yang, Q. (2021). Impact of Pricing and Product Information on Consumer Buying Behavior With Customer Satisfaction in a Mediating Role. *Frontiers in Psychology*, 12(December), 1–11. <https://doi.org/10.3389/fpsyg.2021.720151>
- Zheng, G. W., Akter, N., Siddik, A. B., & Masukujjaman, M. (2021). Organic foods purchase behavior among generation y of bangladesh: The moderation effect of trust and price consciousness. *Foods*, 10(10). <https://doi.org/10.3390/foods10102278>