Unraveling the complexity of the organic food market: Indonesian consumer perspective on price and product knowledge

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Abstract

In the past decade, the organic food industry has witnessed a tremendous surge in popularity as consumers increasingly perceive it as a healthier, more natural, and more environmentally friendly alternative to conventional foods. This trend has prompted extensive research into consumer behavior towards organic food, mainly focusing on the factors that drive its acceptance. Despite its growing interest, the adoption of organic food faces considerable challenges, mainly due to its higher price. This study examines Indonesian consumers' willingness to pay more for organic food (WTPM) by examining the role of product knowledge (PK), consumer attitude (CA), and price consciousness (PC). Data was collected from 250 respondents representing consumers in Indonesia through an online survey. Descriptive Statistical Analysis and Structural Equation Modeling (SEM) are used to test hypotheses and understand relationships between variables. The results show that PK significantly affects CA towards organic food but does not directly affect WTPM. In addition, CA emerged as a significant mediator between PK and WTPM, indicating that consumers with positive CA towards organic food tend to pay more, as they see the cost as an investment for environmental sustainability and health. However, this relationship is moderated by PC, which indicates that price sensitivity may reduce the effect of positive CA on WTPM. The findings of this study underscore the need for a multifaceted approach to promoting organic food. To increase consumer acceptance and uptake, strategies should include education initiatives, awareness raising, and addressing issues related to price and perceived value.

Introduction

Global perceptions of environmental challenges have been significantly influenced by climate change, air and water pollution, the accumulation of waste, and the increased occurrence of natural disasters (Shivanna, 2022). This has sparked widespread attention from the academic community, governing bodies, and international organizations, making environmental issues a central focus in global discourse (Patterson et al., 2017). In response to these changes, consumer awareness and concern for environmental issues have increased dramatically, reflected by a growing preference for sustainable and 'green' products (Ogiemwonyi et al., 2023). This trend has driven significant growth in organic food consumption, which is considered one of the solutions to environmental challenges (Akter et al., 2023). Organic food, produced through sustainable cultivation practices prioritizing environmental conservation, has become a top choice for environmentally conscious consumers (Tandon et al., 2020). Organic farming, with the use of organic techniques and the rejection of synthetic pesticides, showed their contribution to the security of food, the quality of food products, and enhanced sustainability (Smith et al., 2019).

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The global organic food market has experienced substantial expansion, dramatically increasing its value from USD 18 billion in 2000 to USD 132.74 billion in 2021 (Shahbandeh, 2023). Projections indicate that this value will continue to rise, potentially reaching USD 294.54 billion by 2023 (The Business Research Company, 2023). While significant, this growth must be understood in a broader context, including regional dynamics and diverse economic conditions that affect specific consumer consumption patterns. Organic food has become popular in developed countries, such as Europe and North America, due to better income levels and improved health and environmental awareness. Conversely, in developing countries, factors such as affordability, availability, and cultural norms play a crucial role in determining the accessibility and acceptance of organic food products (Dangi et al., 2020; Najib et al., 2022).

As one of Asia's leading organic food producers, Indonesia ranks fourth in organic food production in the region (FiBL, 2021). The recent expansion in organic farming presents a significant opportunity for Indonesia to strengthen its position as a major producer (Najib et al., 2022). Indonesia has 326 manufacturers and 655 companies that process organic food (FiBL, 2021). According to data from the Indonesian Organic Alliance (AOI), the domestic organic food market structure is dominated by vegetables and fruits, accounting for 21% of the total, followed by rice (20%) and honey. However, despite the enormous potential, the affordability of organic products remains a significant challenge in Indonesia. A Rakuten Insight survey in 2023 showed that approximately 91% of respondents in Indonesia prefer organic food, particularly vegetables and fruits, yet only 34% regularly purchase such products (Nurhayati-Wolff, 2023b, 2023a). This data highlights the gap between interest in and the purchasing behavior of organic food in Indonesia. Given the significant growth potential and the socioeconomic and cultural dynamics of the Indonesian market, further research into the factors that drive the purchasing behavior of organic food in this market is crucial.

Recent studies in the fields of marketing and consumer behavior have underscored the importance of knowledge about organic food, primarily driven by increasing health and environmental concerns (Wang et al., 2020). Understanding the environmental impact of organic food is essential in enhancing consumers' beliefs and appreciation of its intrinsic value (Jiang et al., 2023). Meanwhile, a significant barrier for consumers in choosing organic foods is often a need for more information and difficulty distinguishing organic products' unique attributes from those grown conventionally (Sultan et al., 2021). Despite the active promotion of organic farming by the government and various NGOs in Indonesia, consumer awareness of organic food needs to be higher (David & Ardiansyah, 2017). This situation underscores the need for further research into the factors inhibiting organic food adoption in Indonesia.

Previous research has shown a correlation between awareness of the benefits of organic food and a positive attitude toward its consumption (Barua et al., 2023; Kamboj et al., 2023). However, observations suggest a significant discrepancy between these pro-consumption attitudes and actual buying behavior, especially in scenarios where price factors are the primary determinant (Gundala & Singh, 2021; Mkhize & Ellis, 2020). The study confirms that while awareness of the benefits of organic food has the potential to positively influence consumer attitudes, perceptions of higher prices often act as a substantial barrier (Gundala & Singh, 2021; Wang et al., 2020). In this context, consumer attitudes act as a critical mediator, bridging the gap between product knowledge and willingness to pay more. This mediation occurs because well-informed consumers, understanding organic food's health and environmental benefits, can develop a favorable disposition towards such products. Such positive attitudes are critical in reducing the deterrent effect of perceived higher prices, thereby facilitating greater willingness to pay more. When consumers are informed about the health and environmental benefits of organic food, this knowledge has a positive impact on their attitudes towards the product (Fathaa & Ayoubib, 2023). A positive attitude becomes a key factor motivating consumers to overcome the perceived barrier of higher prices, leading to an increase in WTPM (Singh & Verma, 2017). The importance of this mediating effect lies in a deeper understanding of how the added value of organic food, communicated through product information, can manifest in actual purchase behavior despite a price premium, especially in markets with high price sensitivity. Therefore, further research is

urgently needed to explore how price consciousness affects the interaction between consumer attitudes and WTPM, particularly in developing countries with price-sensitive markets. This demands a deeper examination of how the moderating role of price affects the strength and direction of the mediating effect, suggesting that price perception itself may alter the impact of consumer attitudes on WTPM (Bósquez et al., 2023). Most of the current literature tends to focus on the context of developed countries (Gundala & Singh, 2021; Wang et al., 2020), which confirms the importance of research in emerging markets to identify different dynamics. Furthermore, empirical studies on the effect of knowledge of organic food attributes on consumer WTPM have shown significant variability in results (Rousseau & Vranken, 2013; Wijaya & Sukidjo, 2017), reinforces the need for further research in assessing whether the provision of additional information on health and environmental benefits can be effective in improving consumer attitudes and, as a result, their WTPM to organic food products.

WTPM is used as a proxy of buying interest (Wei et al., 2018). Several studies, including Li et al. (2012) and Maojie (2023), have highlighted WTPM as a crucial area of research. The significance of this field in marketing is an essential aspect, especially in estimating and calculating consumer WTPM to project demand for products at various price levels (Jamil et al., 2022). In the context of organic food products, current studies include Knaggs et al. (2022); it has been found that consumer preferences for organic foods vary based on sociodemographic factors such as education level, cultural background, family size, economic status, and behavioral factors such as level of awareness. Furthermore, these variations in WTPM have been proposed to be analyzed using sociodemographic, cultural, and behavioral perspectives (Sreen et al., 2018).

Considering the challenges and opportunities in Indonesia's organic food market, this study aims to deeply explore and understand the dynamics between PK, PC, CA, and WTPM regarding organic food products. The specific objectives of this study include: (1) identify the effect of knowledge about organic food on CA and WTPM; (2) evaluate how CA mediates the relationship between PK and WTPM; (3) evaluate how price awareness moderates the relationship between CA and WTPM; and (4) analyze differences in WTPM based on demographic factors and consumer behavior. The results of this study are expected to provide new insights for marketers to formulate more effective strategies in promoting organic food products, thus contributing to the increased adoption of organic food amidst price-sensitive markets such as Indonesia. This research not only aims to enrich the existing literature by focusing on emerging markets but also provides practical recommendations for organic food producers and marketers to understand and respond to consumer preferences and barriers more effectively.

Literature Review and Hypotheses Development

Theory of Planned Behavior (TPB) and Customer Value Theory

To understand the dynamics between PK towards consumer attitudes and PC-moderated WTPM, this study adopts a theoretical lens from planned behavior theory and customer value theory. The theory of planned behavior (Ajzen, 1991) provides a basis for understanding how consumers' knowledge and attitudes shape their purchase intentions. Product knowledge is considered the main prerequisite influencing consumer attitudes, where accurate and relevant information about the product can strengthen consumers' confidence in the value and benefits of the product, thereby increasing their willingness to pay more (Yuan et al., 2024). Furthermore, value theory (Zeithaml, 1988) emphasizes the understanding that consumers evaluate products based on the perception of the value they receive, which is influenced not only by the quality and benefits of the product but also by price. In this context, price acts as a moderating variable that influences the relationship between consumer attitudes and WTPM, assuming that a higher value perception of the product will encourage consumers to pay more despite being faced with higher prices (Lavuri, 2022). This integration between consumer behavior theory and value theory allows for a deeper understanding of the dynamics behind consumers' willingness to pay more, considering the influence of product knowledge and price factors.

Product Knowledge of Organic Food (PK)

The interest of researchers in understanding how customer information influences purchase decisions has been well-documented (Nguyen et al., 2019). As consumers continuously acquire information during product evaluation and selection, their interpretation of labels, tags, and points of sale becomes critical, ultimately shaping their purchasing choices (Oh & Abraham, 2016). Given rapid economic growth, heightened market competition, and information overload, product knowledge acquisition has become more crucial than ever. This knowledge significantly impacts customers' purchasing intentions (Reddy & Thanigan, 2023). Tandon et al. (2020) noted that a deep understanding of environmental issues can boost customer confidence, amplifying organic food's perceived benefits. This finding highlights the vital role of customer awareness and understanding in the decision-making process related to purchasing organic food (Yiridoe et al., 2005). Insufficient information, knowledge, and confidence among customers often lead to reluctance to purchase organic food, sustaining its low market demand (Britwum et al., 2021). The absence of awareness and information has been identified by Wang et al. (2020) as significant impediments to the purchase of organic food, as they prevent customers from appreciating its distinctive features in contrast to conventional food (Sultan et al., 2021). Conversely, Demirtas (2019) has found that increased awareness positively influences consumption patterns.

Previous studies have established a significant correlation between knowledge of organic foods and positive consumer attitudes. Fathaa and Ayoubib's (2023) research in Lebanon demonstrated that consumers' attitudes are positively influenced by their understanding of organic food. This is echoed in the findings of Gundala and Singh (2021) in the United States, where consumer knowledge was similarly observed to impact attitudes towards organic food choices. Conversely, Mai et al. (2023) found that consumer knowledge did not significantly affect attitudes towards organic food in Vietnam. These discrepancies highlight a need for further research in this area. Consequently, the following hypothesis is proposed:
H_1: PK has a significant influence on CA toward organic food

In addition, prior studies have established a significant correlation between consumer knowledge and WTPM for organic food. For instance, Li et al. (2019) identified consumer knowledge as a pivotal factor influencing WTPM for organic food in China. Research by Eyinade et al. (2021) indicated a similar impact of consumers' knowledge on their WTPM for organic food. Conversely, a more recent investigation by Grimm et al. (2023) reported that in Indonesia, consumer knowledge does not directly impact WTPM. This discrepancy highlights the necessity for additional research. Consequently, this study aims to investigate and reconcile these variations in prior findings, proposing the following hypothesis:
H_2: PK has a significant influence on consumers' WTPM for organic food

Consumers' Attitudes (CA) and Willingness to Pay More (WTPM)

An individual's attitude towards a specific behavior, whether positive or negative, represents an evaluative judgment (Ajzen & Driver, 1991). This relational construct emerges from an individual's interactions with their activities or environment (Säfvenbom et al., 2015). For instance, a more favorable attitude towards a product may enhance a consumer's propensity to purchase it (Ajzen & Driver, 1991). In organic food, attitude is a pivotal factor influencing purchasing intentions (Zhang et al., 2018). According to Persaud and Schillo (2017), it can substantially change buying behavior toward organic products. Feil et al. (2020) observed that consumer perspectives are formed through complex interactions among various elements, including individual characteristics, environmental context, and product attributes (Shen & Wang, 2022).

Previous research has established a notable connection between CA and WTPM. For instance, Kirmani and Khan (2018) observed that in the Indian context, consumers who held positive perceptions of organic food were more willing to invest in it by paying higher prices, seeing this extra cost as a valuable commitment to environmental and personal well-being. Similarly, Eyinade et al. (2021) illustrated that consumer attitudes significantly influence their readiness to pay more for organic food. In contrast, Pileliene and Tamuliene (2021) detected differing trends in

Lithuania, where customers generally maintain a pessimistic outlook on organic food and exhibit reluctance toward paying premium prices. This relationship remains to be determined with these diverse findings regarding the interplay between customer attitudes and WTPM for organic food. Consequently, we present the following hypothesis to delve deeper into this association:
H_3: CA has a significant influence on consumer WTPM for organic food

Several research investigations have established a causal relationship between PK, CA, and WTPM. For example, Li et al. (2019), Fathaa and Ayoubib (2023), and Eyinade et al. (2021) have demonstrated a direct relationship among these variables. Their research has revealed a significant impact of PK on CA and WTPM. In addition, CA has been observed to influence WTPM significantly. Nonetheless, previous studies have yet to comprehensively analyze the role of CA as a mediator in the relationship between PK and WTPM. CA is often considered a potential mediator in other research contexts (Huo et al., 2023; Riskos et al., 2021). This study postulates that CA may act as a mediating factor in the relationship between PK and WTPM, particularly in the case of organic food. Therefore, we propose the following hypothesis:
H_4: CA significantly mediates the effect of knowledge related to organic food on WTPM

Price Consciousness (PC)

Price consciousness is the tendency of consumers to actively seek, consider, and utilize price information in the purchasing decision-making process (Petit et al., 2022). This concept identifies individuals who place price as a top priority over other factors in purchasing, such as quality or brand (Rihn et al., 2018). Price consciousness can be interpreted as a unidimensional construct that highlights the influence of price on purchasing decisions (Graciola et al., 2018). However, this concept can also be interpreted from a multidimensional perspective, covering various aspects of consumer perception and response to prices, including evaluating the value of money and price comparison behavior (Levrini & dos Santos, 2021). This study uses a multidimensional perspective on price consciousness to more accurately describe the complexity of consumer behavior, which is not only influenced by price aspects alone but also by value evaluation and price comparison strategies they do. This approach allows for a more in-depth analysis of how consumers weigh prices relative to other aspects, such as quality and environmental impact, providing more comprehensive insight into their purchasing decisions. The implications of this price consciousness are significant, affecting not only consumers' purchasing choices but also the overall market strategy (Akter et al., 2023; Petit et al., 2022). For companies, a deep understanding of price consciousness enables more effective market segmentation and the development of appropriate marketing strategies to attract price-sensitive consumers without compromising profit margins (Islami et al., 2020).

In the context of organic food purchases, several factors have been identified as having a positive influence on consumer attitudes and intentions. However, the price was a negative factor (Joshi & Rahman, 2015). Organic foods, generally priced higher than conventional foods, are often considered a significant barrier to purchase (Pandey et al., 2020). Research conducted by Tandon et al. (2021) and Nguyen et al. (2019) shows that price awareness is becoming a significant obstacle in adopting organic food purchases. When the perceived cost by consumers exceeds their willingness to pay, price becomes a significant limitation (Aschemann-Witzel & Zielke, 2017). Consumers with a high price awareness tend to be reluctant to bear additional costs for organic food, leading to a negative relationship between price awareness and willingness to buy organic food (Zheng et al., 2021). Therefore, price plays a moderating role in shaping purchasing attitudes. High levels of price awareness among consumers can mitigate the impact of their attitudes toward a willingness to pay more for organic food. Therefore, we formulate the hypothesis as follows:
H_5: PC weakens the effect of CA on WTPM

The preceding sections provided a succinct introduction to the variables relevant to this research. Consequently, this section will elaborate on these variables within the study's theoretical framework or model.

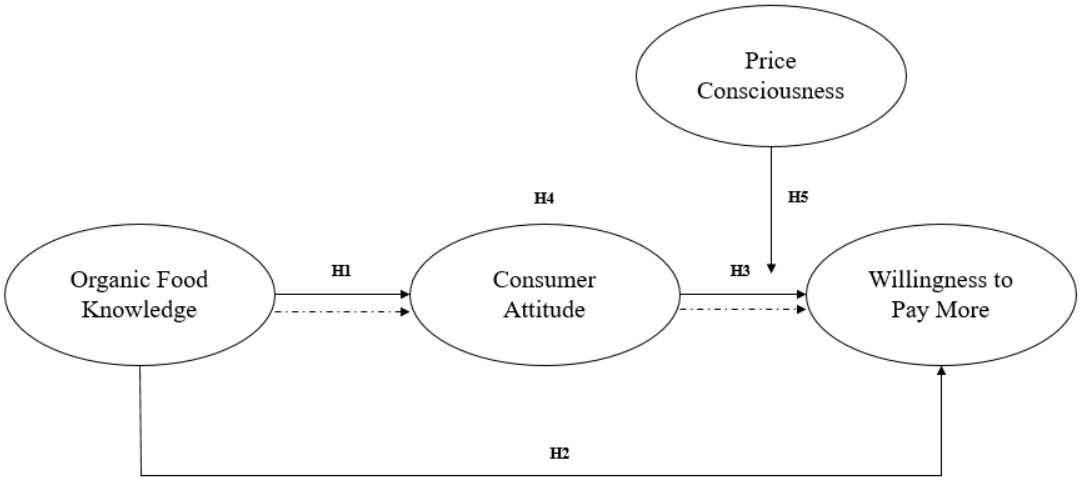

Figure 1. Research Model

Research Methods

Table 1. Research Operational Variables

Construct	Item Code	Questionnaire Items	Source
Willingness to Pay More	WTPM	1. I am willing to pay more for organic food than non-organic food. 2. I will pay more for organic food because the cost of production is higher. 3. The price difference that I consider reasonable for eating organic food compared to non-organic food is (10-20%, 25-35%, 40-50% or >50%).	(Anselmsson et al., 2014)
Consumer Attitude	CA	1. I believe organic food is very beneficial for fulfilling nutritional needs. 2. Organic food is of higher quality than non-organic food. 3. It makes sense to eat organic food. 4. I still choose organic food as long as the price difference is reasonable.	(Singh & Verma, 2017)
Price consciousness	PC	1. I choose the product with the best benefit for the money I spend. 2. When I buy organic food, the price does not matter. 3. I find it natural to pay more when choosing organic foods over non-organic foods. 4. I am very concerned about how much money I spend.	(Matharu et al., 2022; Xing et al., 2022)
Product knowledge	PK	1. Compared to regular food, I have a good understanding of organic food. 2. I can tell the difference between organic food and non-organic food. 3. I feel satisfied buying and eating organic food because I know about this product. 4. I realized that organic food is safer to consume.	(Eberle et al., 2022)

This research investigates the growing trend of organic food consumption in Indonesia, focusing on individuals interested in incorporating organic foods into their diets. As the exact number of consumers interested in organic food is uncertain, determining the minimum sample size is based on the methodology recommended by Chin (1998), which emphasizes the importance of statistical power analysis. This approach is applied using the G*Power software (Faul et al., 2007), and the results indicate the necessity of at least 193 participants to achieve a statistical power of 0.80. The sample is collected through purposive sampling, with specific criteria, including (1) Participants should originate from the main islands in Indonesia, such as Java, Kalimantan, Nusa Tenggara, Papua, Sumatra, Sulawesi, Bali, Bangka Belitung, and Maluku; (2) Participants must be at least 17 years old. The distribution of questionnaires is conducted via the WhatsApp application

using Google Forms. The questionnaire comprises 14 questions rated on a four-point Likert scale, ranging from "strongly disagree" to "strongly agree". This process yields 250 responses, including 96 from men and 154 from women, meeting the minimum recommended sample size criteria. The collected data are analyzed using the Partial Least Squares (PLS) technique within the framework of the Structural Equation Model. The evaluation process involves three stages: measurement (outer model), structural (inner model), and path coefficient analysis. These stages align with the guidelines proposed by Hair et al. (2017). The operational variables of this study are presented in Table 1.

Results and Discussion

Table 2 displays the breakdown of survey participants' characteristics, encompassing gender, age, educational attainment, income, marital status, and the range of acceptable prices. Each category is clearly defined. The data reveals that most respondents are women, constituting 62%. The age group of 17-26 years is the most prominently represented, accounting for 60% of the respondents. Concerning educational background, 44% of participants have completed education up to the Diploma I-IV/Bachelor level. The IDR 1 to 3 million income bracket displays the most significant variability, representing 46% of the sample. In terms of marital status, 65% of respondents are single. Furthermore, 47% of respondents are WTPM for organic food, with a price difference of 10-20% compared to conventional food. This distribution provides a realistic visual depiction of the profile of organic food consumers in Indonesia.

Table 2. Respondent Characteristics

Category	Subcategory	Frequency	%	Cumulative %
Gender	Male	96	38	38
	Female	154	62	100
Age (years old)	17 - 26	151	60	60
	27 - 42	65	26	86
	43 - 58	27	11	97
	>58	7	3	100
Education level	≤High School	104	42	42
	Diploma I-IV/Bachelor	111	44	86
	Master	32	13	99
	Doctoral	3	1	100
Income level (IDR)	<1 million	59	24	24
	1 million - 3 million	116	46	70
	4 million - 8 million	55	22	92
	>8 million	20	8	100
Marital status	Single	162	65	65
	In Relationship	85	34	99
	Divorce	3	1	100
Reasonable price difference	10 - 20%	117	47	47
	25 - 35%	84	34	81
	40 - 50%	33	13	94
	>50%	16	6	100

Source: Primary data processed, 2023

Measurement Model

In this research, we conducted a measurement model assessment by examining the validity and reliability of 14 items categorized into four variables. This assessment considers the unique characteristics of these variables, the reliability of composite measurements, and the consistency of measurements to evaluate their validity. According to the data presented in Table 3, the composite reliability (CR) values for each construct surpass the recommended threshold of 0.70, as suggested by Hair et al. (2017). This demonstrates strong consistency and reliability in using this instrument, confirming its dependability. On convergent validity, in the first test, the outer loading values of

the 14 indicators showed that there was one indicator that did not meet the criteria, namely PC4 (0.017 < 0.60), so it had to be excluded and retested, and after retesting, the results, as shown in Table 3, ranged from 0.64 to 0.947, indicating their effectiveness. This shows that all items are appropriate and meet the outer loading criteria, with values exceeding the threshold of 0.60 set by Hair et al. (2017). Additionally, the discriminant validity analysis reveals that each indicator meets the established criteria, with the average variance extracted (AVE) for each indicator exceeding the 0.50 threshold, in line with the recommendations of Hair et al. (2017). This suggests that the measurement models employed in the study are robust and reliable, providing a solid foundation for further analysis and interpretation of the research results.

Table 3. Indicator Test Results

Variables	Items	Description	Loading	CR	AVE
Willingness to Pay More	WTPM1	I am willing to pay more for organic food than non-organic food.	0.947	0.94	0.886
	WTPM2	I will pay more for organic food because the cost of production is higher.	0.935		
Consumer Attitude	CA1	I believe organic food is very beneficial for fulfilling nutritional needs.	0.851	0.89	0.671
	CA2	Organic food is of higher quality than non-organic food.	0.862		
	CA3	It makes sense to eat organic food.	0.835		
	CA4	I still choose organic food as long as the price difference is reasonable.	0.72		
Product Knowledge	PK1	Compared to regular food, I have a good understanding of organic food.	0.778	0.878	0.644
	PK2	I can tell the difference between organic food and non-organic food.	0.768		
	PK3	I feel satisfied buying and eating organic food because I know about this product.	0.875		
	PK4	I realized that organic food is safer to consume.	0.785		
Price Consciousness	PC1	I choose the product with the best benefit for the money I spend.	0.64	0.823	0.611
	PC2	When I buy organic food, the price does not matter.	0.87		
	PC3	I find it natural to pay more when choosing organic foods over non-organic foods.	0.817		

Evaluation of Model's Goodness and Fit

The Partial Least Squares (PLS) method has undergone significant advancements in Structural Equation Modeling (SEM) when exploring theoretical frameworks in predictive research, mainly focusing on capturing variability. In order to establish the validity of the derived model, various metrics, such as R-squared and Q-squared, can be utilized (Hair et al., 2019). According to Hair et al. (2011), the qualitative interpretation of the R-squared statistic categorizes its impact as either low (0.25), moderate (0.50), or high (0.75). Table 4 illustrates that PK and CA have a limited influence on WTPM, as indicated by R-squared values of 0.456. Similarly, the effect of PK on CA also demonstrates a minimal impact, with an R-squared value of 0.402. Additionally, Hair et al. (2019) provide qualitative explanations for the Q-squared measure, categorizing its impact levels as low (0), moderate (0.25), and significant (0.50). Our research findings indicate Q-squared values of 0.264 for the relationship between PK and CA and 0.379 for the relationship between PK and consumer WTPM. Since these values exceed 0.25, it confirms that this study possesses moderate predictive accuracy.

Table 4. R Square and Q Square Test Results

	R Square	Q Square
Willingness to Pay More (WTPM)	0.456	0.379
Consumer Attitude (CA)	0.402	0.264

Hypothesis Testing

In this research, we proposed five cause-and-effect relationships. After conducting a statistical analysis, four of them were validated, while one was disproven. Hypothesis testing was performed using the T-statistic and P-value, SmartPLS 3.3 software, and bootstrapping method. The success criteria were defined as follows: the T-statistic value exceeding 1.96, the P-value being less than 0.05 (5%), and the presence of a positive beta coefficient. The detailed results can be found in Table 5.

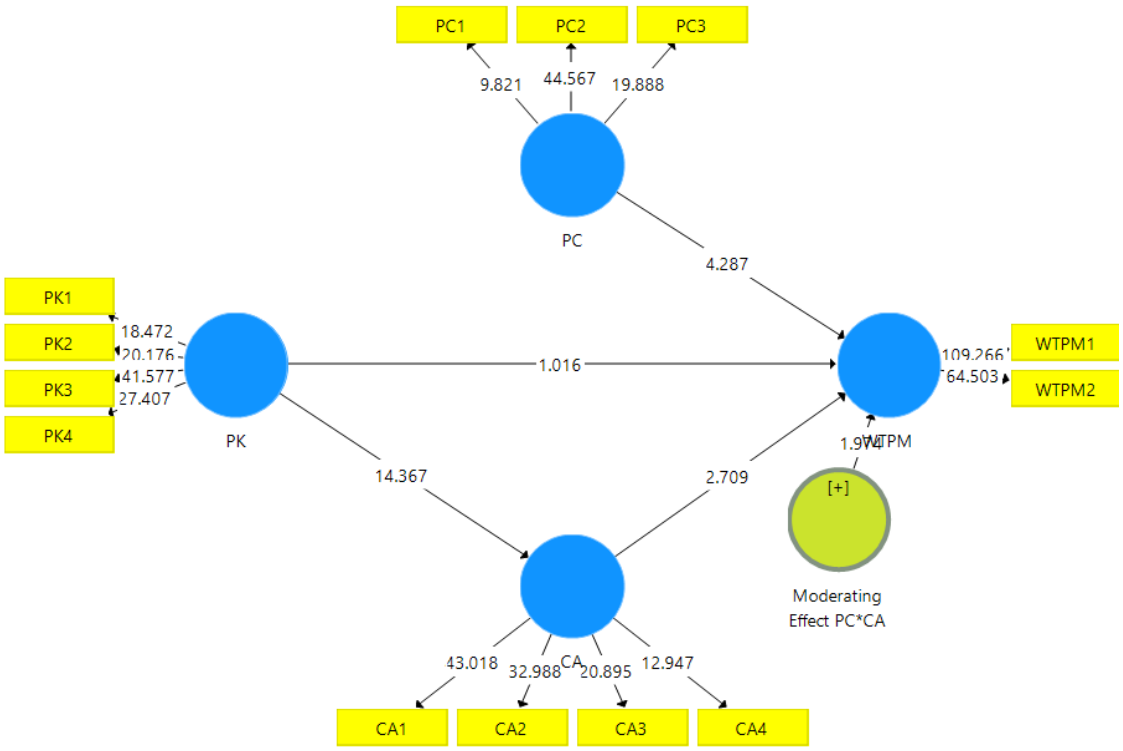

Figure 2. Model Result

Table 5. Hypothesis Test Result

	Construct Interrelationship	Original Sample	Standard Deviation	T Statistic	P Value
H1	PK → WTPM	0.114	0.113	1.016	0.310
H2	PK → CA	0.634	0.044	14.367	0.000
H3	CA → WTPM	0.25	0.092	2.709	0.007
H4	PK → CA → WTPM	0.158	0.064	2.486	0.013
H5	Interaction PC*CA → WTPM	0.091	0.046	1.974	0.048

These are the explanations for the hypothesis test results in Table 5:

Hypothesis 1: Our examination has revealed that the impact of PK on WTPM is positive. However, it is worth noting that the significance value exceeds 0.05, and the t-statistic is less than 1.96. This implies that PK, particularly in the context of organic food, does not have a statistically significant effect on WTPM. Therefore, H1 is rejected.

Hypothesis 2: Our analysis found that PK positively affects CA, with a significance value below 0.05 and t-statistic above 1.96. This indicates that product knowledge about organic food significantly affects CA. Thus, H2 is accepted.

Hypothesis 3: The analysis shows that CA positively affects WTPM, with a significance value below 0.05 and t-statistic above 1.96. This indicates that consumer attitudes towards organic food significantly influence WTPM. Therefore, H3 is accepted.

Hypothesis 4: The analysis shows that CA is a significant mediator between PK and WTPM. This is evidenced by the positive path analysis value, significance below 0.05, and t-statistic above 1.96. Thus, H4 is accepted.

Hypothesis 5: The analysis shows that PC moderates the relationship between CA and WTPM. This is characterized by a positive path analysis value, significance below 0.05, and t-statistic above 1.96, which indicates that price consciousness weakens the effect of consumer attitudes on WTPM. Thus, H5 is accepted.

Discussion

Our first hypothesis investigates how consumer knowledge of organic food affects WTPM. Although our analysis found an influence of knowledge about organic food, it did not significantly correlate with WTPM. These unexpected results contradict our initial hypothesis, which suggested that product knowledge does not substantially affect WTPM. Other factors, such as price issues and socio-cultural factors, are highly significant in determining what consumers purchase. In line with previous research by Khoirunnisa and Albari (2023) and Grimm et al. (2023), both of these factors indicate that having a comprehensive understanding of a product does not necessarily lead to a higher tendency to purchase it. In the context of organic food, consumers may understand its benefits but feel that there needs to be added value to justify the higher price. This could be because they must consider benefits relevant to their current needs or priorities.

Hypothesis second tested the relationship between consumers' PK and CA towards organic food. Our analysis showed a significant correlation between PK and CA regarding organic food. This finding aligns with research conducted by Fathaa and Ayoubib (2023) and Gundala and Singh (2021), which also found that consumers' understanding of organic food has a positive and significant impact on their attitudes. Those with a deeper understanding of organic food are more likely to consider it a healthier option. They believe that organic food contains more nutrients, fewer harmful additives, and is generally safer, thus influencing their preference for organic food.

Our third hypothesis aimed to investigate the connection between CA and WTPM for organic food. Our analysis revealed a significant correlation between CA and WTPM in the context of organic food. This result aligns with the findings of Kirmani and Khan (2018) as well as Eyinade et al. (2021), both of which indicated that a positive CA towards organic food products could incentivize consumers to be more willing to pay higher prices. They view the extra cost as an investment in the environment or their health. A favorable CA towards organic food encompasses the belief that it is healthier, safer, and more eco-friendly. This positive CA subsequently boosts WTPM for organic food. Consumers who believe in the advantages of organic food perceive added value in paying a premium price.

Our fourth hypothesis tested the mediating role of CA in the relationship between PK and WTPM. Our results show that CA can significantly mediate between PK and WTPM. This means that consumers' PK about organic food does not directly affect their WTPM but through their positive CA towards organic food. This finding is consistent with research conducted by Gundala and Singh (2021) and Bhakar et al. (2023), which showed that consumers' positive CA towards organic food is a potential mediator in linking PK with WTPM. This finding emphasizes the importance of CA in the consumer decision-making process. Despite having extensive knowledge, consumers may only pay a higher price if they have a positive attitude towards organic food. Therefore, to increase WTPM towards organic food, interventions should focus more on forming positive CA through increasing knowledge and awareness. This can be done through information campaigns, consumer education, or direct experience with the product.

Our fifth hypothesis tested how PC moderates the relationship between CA towards organic food and their WTPM. Our analysis shows that PC significantly weakens the effect of consumers' positive attitudes on WTPM for organic food. This finding aligns with the study by Smoluk-Sikorska et al. (2024), which found that price is a significant barrier to purchasing organic

food. This is reinforced by research by Barbarossa and Pastore (2015) and Shen et al. (2019), which shows that organic food is often perceived as less attractive due to its higher price than conventional food, even among individuals who prioritize health and environmental well-being. For highly price-sensitive consumers, an increase in positive attitudes toward organic products may not translate into a significant increase in their WTPM. This is due to their focus on price overriding the value they place on the benefits of organic food. In other words, although they appreciate the positive aspects of organic food, their tendency to look for savings or best value reduces their likelihood of paying a higher price (Aschemann-Witzel & Zielke, 2017).

However, respondents still consider the various advantages of organic food, including health and environmental benefits. Most respondents confirmed they would still prioritize organic food over conventional food wildly if the price difference ranged from 10% to 20%. This finding is, therefore, significant for organic food producers and retailers. Organic food producers and retailers should not only focus on consumers who positively perceive organic food but also consider attractive pricing and marketing strategies, especially for highly price-sensitive consumers. This could include offering discounts.

Implication and Conclusion

The conclusion of this discussion reveals that the relationship among PK, CA, PC, and WTPM for organic food is complex and multifaceted. Knowledge about organic food directly and significantly affects CA but does not directly influence WTPM. Additionally, CAs towards organic food are critical in the relationship between PK and WTPM. Consumers with a positive attitude towards organic food are more willing to pay additional costs, perceiving these costs as an investment in health and environmental sustainability. However, PC moderates this relationship, indicating that price sensitivity may diminish the impact of positive attitudes on WTPM.

Drawing upon the theoretical foundations outlined in the literature review and the development of hypotheses, this study significantly advances the scholarly understanding of the intricate interplay between PK, CA, and WTPM within the organic food consumption context. Through the synergistic application of the Theory of Planned Behavior and Customer Value Theory, this investigation not only corroborates the pivotal role of PK and CA in shaping consumer purchase intentions but also unveils the moderating influence of price consciousness on this dynamic. The novel contribution of this work resides in its meticulous dissection of how PC moderates the positive effect of CA on WTPM, thereby offering a more granular comprehension of the consumer decision-making process. This research's value is further magnified by its actionable insights for marketers and policymakers, who may harness these findings to devise more efficacious strategies to foster organic food consumption among price-sensitive demographics. By presenting a fresh lens through which to examine the nexus among knowledge, attitudes, and pricing strategies, this study enriches the theoretical discourse with robust empirical evidence, bridging a notable void in existing literature.

In light of these insights, organic food producers and retailers must craft comprehensive strategies that transcend mere awareness and knowledge enhancement concerning organic food's benefits and also encompass solutions for overcoming price barriers. Initially, an extensive educational initiative is paramount, aimed at cultivating favorable consumer attitudes via informational campaigns, workshops, and collaborations with health and environmental advocates. Furthermore, businesses should contemplate adaptable pricing models to mitigate price sensitivity, incorporating discounts, loyalty incentives, or bundle offerings to cater to varied consumer groups. Accentuating organic food's intrinsic value, including its quality, authenticity, and environmental benefits, may amplify perceived value among consumers. Moreover, forging partnerships with local suppliers and optimizing supply chain efficiency can reduce production expenses, lower consumer prices, and broaden organic food's appeal across diverse demographic segments. By executing these strategies, organic food entities can enhance market penetration and consolidate their competitive standing.

Although this study has provided important insights into the dynamics of PK, CA, PC, and WTPM towards organic food, some limitations need to be addressed in future research. First, this

study only focused on the variables of knowledge and consumer attitudes towards organic food, without taking into account external factors such as economic, social, and environmental factors that can influence purchasing decisions. Therefore, future research may investigate how these external factors interact with consumers' knowledge and attitudes to influence their WTPM. Second, the study used a limited sample in terms of demographics and geographic location. Future research may adopt a more inclusive approach by targeting more diverse populations from diverse backgrounds and locations to enrich the understanding of consumer behavior towards organic food. Third, future research directions may also involve developing and testing interventions designed to increase consumer awareness and knowledge of the benefits of organic foods. This could include educational campaigns that target common myths about organic food, as well as providing accessible information about the health and environmental benefits of choosing organic foods. Research can also explore the effectiveness of various communication channels, such as social media, workshops, and school programs, in increasing knowledge and positive attitudes towards organic food.

Fourth, given the finding that high price awareness can reduce WTPM, even if consumers have a positive attitude towards organic food, future research needs to investigate strategies that can reduce this price perception. This could include research on the effects of price tags, where showing long-term cost comparisons between organic and non-organic foods can change perceptions of value. In addition, research could focus on developing new business models or pricing strategies that make organic food more affordable and attractive to price-sensitive consumers. Lastly, understanding the dynamics behind organic purchasing decisions requires a multidisciplinary approach that combines insights from consumer psychology, behavioral economics, and environmental studies. Therefore, future research can leverage interdisciplinary cooperation to develop more comprehensive and effective strategies for driving organic food adoption among consumers. Through more in-depth and targeted research, we can better understand how to motivate consumers to make more sustainable choices and support organic farming, which in turn can provide benefits to public health and the environment.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179–211. https://doi.org/10.47985/dcidj.475

Ajzen, I., & Driver, B. L. (1991). Prediction of leisure participation from behavioral, normative, and control beliefs: An application of the theory of planned behavior. *Leisure Sciences*, *13*(3), 185–204. https://doi.org/10.1080/01490409109513137

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

Anselmsson, J., Bondesson, N. V., & Johansson, U. (2014). Brand image and customers' willingness to pay a price premium for food brands. *Journal of Product and Brand Management*, *23*(2), 90–102. https://doi.org/10.1108/JPBM-10-2013-0414

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

Barbarossa, C., & Pastore, A. (2015). Why environmentally conscious consumers do not purchase green products: A cognitive mapping approach. *Qualitative Market Research: An International Journal*, *18*(2), 188-209. https://doi.org/10.1108/QMR-06-2012-0030

Barua, S., Satyapriya, Kumar, R., Sangeetha, V., Muralikrishan, L., & Wason, M. (2023). Knowledgeability about organic food consumption and the factors behind it. *Frontiers in Nutrition*, *10*(April), 1–7. https://doi.org/10.3389/fnut.2023.1125323

Bhakar, S., Bhakar, S. S., & Bhakar, S. (2023). Consumer knowledge, environmental concerns and subjective norms as predictors of consumer attitude and purchase intention: A study of organic food. *International Journal of Trade and Global Markets*, *17*(2), 133–150. https://doi.org/10.1504/IJTGM.2023.130739

Bósquez, N. G. C., 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

Britwum, K., Bernard, J. C., & Albrecht, S. E. (2021). Does importance influence confidence in organic food attributes? *Food Quality and Preference*, *87*(January 2020), 104056. https://doi.org/10.1016/j.foodqual.2020.104056

Chin, W. W. (1998). The Partial Least Squares Approach to Structural Formula Modeling. In Marcoulides, G. A. (Ed.), *Modern Method for Business Research*. New Jersey: Psychology Press.

Dangi, N., Narula, S. A., & Gupta, S. K. (2020). Influences on purchase intentions of organic food consumers in an emerging economy. *Journal of Asia Business Studies*, *14*(5), 599–620. https://doi.org/10.1108/JABS-12-2019-0364

David, W., & Ardiansyah. (2017). Organic agriculture in Indonesia: Challenges and opportunities. *Organic Agriculture*, *7*(3), 329–338. https://doi.org/10.1007/s13165-016-0160-8

Demirtas, B. (2019). Assessment of the impacts of the consumers' awareness of organic food on consumption behavior. *Food Science and Technology (Brazil)*, *39*(4), 881–888. https://doi.org/10.1590/fst.10518

Eberle, L., Milan, G. S., Borchardt, M., Pereira, G. M., & Graciola, A. P. (2022). Determinants and moderators of organic food purchase intention. *Food Quality and Preference*, *100*(April), 104609. https://doi.org/10.1016/j.foodqual.2022.104609

Eyinade, 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

Fathaa, L., & Ayoubib, R. (2023). A revisit to the role of gender , age , subjective and objective knowledge in consumers ' attitudes towards organic food. *Journal of Strategic Marketing*, *31*(3), 499–515. https://doi.org/10.1080/0965254X.2021.1939405

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. https://doi.org/https://doi.org/10.3758/BF03193146

Feil, A. A., da Silva Cyrne, C. C., Sindelar, F. C. W., Barden, J. E., & Dalmoro, M. (2020). Profiles of sustainable food consumption: Consumer behavior toward organic food in southern region of Brazil. *Journal of Cleaner Production*, *258*, 120690. https://doi.org/10.1016/j.jclepro.2020.120690

FiBL. (2021). The World of Organic Agriculture: Statistics and Emerging Trends 2021. In Willer, H., Trávníček, J., Meier, C., & Schlatter, B. (Eds.), *International Journal of Sustainability in Higher Education* (Vol. 10, Issue 1). FiBL and IFOAM – Organics International, Frick and Bonn: Taylor and Francis Group. https://doi.org/10.1108/ijshe.2009.24910aae.004

Graciola, A. P., De Toni, D., de Lima, V. Z., & Milan, G. S. (2018). Does price sensitivity and price level influence store price image and repurchase intention in retail markets? *Journal of Retailing and Consumer Services*, *44*(May), 201–213. https://doi.org/10.1016/j.jretconser.2018.06.014

Grimm, M., Luck, N., & Steinhübel, F. (2023). Consumers' willingness to pay for organic rice: Insights from a non-hypothetical experiment in Indonesia. *The Australian Journal of Agricultural and Resource Economics (AJARE)*, *67*(1), 83–103.

https://doi.org/https://doi.org/10.1111/1467-8489.12501

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

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (2nd Edition). California: SAGE Publications.

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

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

Islami, X., Mustafa, N., & Topuzovska Latkovikj, M. (2020). Linking Porter's generic strategies to firm performance. *Future Business Journal*, *6*(1), 1–15. https://doi.org/10.1186/s43093-020-0009-1

Jamil, K., Dunnan, L., Gul, R. F., Shehzad, M. U., Gillani, S. H. M., & Awan, F. H. (2022). Role of social media marketing activities in influencing customer intentions: A perspective of a new emerging era. *Frontiers in Psychology*, *12*(January), 1–12. https://doi.org/10.3389/fpsyg.2021.808525

Jiang, Y., Abdullah, S. I. N. W., Lim, B. H. J., Wang, R., & Phuah, K. T. (2023). The role of marketing stimuli and attitude in determining post-COVID buying decisions toward organic food products: evidence from retail consumers in Beijing, China. *Frontiers in Sustainable Food Systems*, *7*(May), 1–14. https://doi.org/10.3389/fsufs.2023.1051696

Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, *3*(1–2), 128-143. https://doi.org/10.1016/j.ism.2015.04.001

Kamboj, S., Matharu, M., & Gupta, M. (2023). Examining consumer purchase intention towards organic food: An empirical study. *Cleaner and Responsible Consumption*, *9*(September 2022), 100121. https://doi.org/10.1016/j.clrc.2023.100121

Khoirunnisa, D., & Albari. (2023). The effect of brand image and product knowledge on purchase intentions with e-WOM as a mediator variable. *International Journal of Research in Business and Social Science, 12*(1), 80–89. https://doi.org/10.20525/ijrbs.v12i1.2256

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

Knaggs, J., Pruitt, J. R., Anderson, L., & Palma, M. (2022). Influence of social status, physical activity, and socio-demographics on willingness to pay for a basket of organic foods. *Agricultural and Food Economics*, *10*(1). https://doi.org/10.1186/s40100-022-00233-8

Lavuri, R. (2022). Organic green purchasing: Moderation of environmental protection emotion and price sensitivity. *Journal of Cleaner Production*, *368*(March), 133113. https://doi.org/10.1016/j.jclepro.2022.133113

Levrini, G. R. D., & dos Santos, M. J. (2021). The influence of price on purchase intentions: Comparative study between cognitive, sensory, and neurophysiological experiments. *Behavioral Sciences*, *11*(2). https://doi.org/10.3390/bs11020016

Li, G., Li, G., & Kambele, Z. (2012). Luxury fashion brand consumers in China: Perceived value, fashion lifestyle, and willingness to pay. *Journal of Business Research*, *65*(10), 1516–1522. https://doi.org/10.1016/j.jbusres.2011.10.019

Li, R., Lee, H. Y., Lin, Y. T., Liu, C. W., & Tsai, P. F. (2019). Consumers' willingness to pay for organic foods in China: Bibliometric review for an emerging literature. *International Journal of Environmental Research and Public Health*, *16*(10). https://doi.org/10.3390/ijerph16101713

Mai, N. T., Phuong, T. T. L., Dat, T. T., & Truong, D. D. (2023). Determinants of organic food purchasing intention: An empirical study of local consumers in Da Nang city, Central Vietnam. *Frontiers in Sustainable Food Systems*, *7*. https://doi.org/10.3389/fsufs.2023.1180612

Maojie, Z. (2023). The impact of anchor characteristics on consumers' willingness to pay a premium for food—an empirical study. *Frontiers in Nutrition*, *10*(September). https://doi.org/10.3389/fnut.2023.1240503

Matharu, G. K., von der Heidt, 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

Mkhize, S., & Ellis, D. (2020). Creativity in marketing communication to overcome barriers to organic produce purchases: The case of a developing nation. *Journal of Cleaner Production*, *242*, 118415. https://doi.org/https://doi.org/10.1016/j.jclepro.2019.118415

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

Nguyen, H. V., Nguyen, N., Nguyen, B. K., Lobo, A., & Vu, P. A. (2019). Organic food purchases in an emerging market: The influence of consumers' personal factors and green marketing practices of food stores. *International Journal of Environmental Research and Public Health*, *16*(6). https://doi.org/10.3390/ijerph16061037

Nurhayati-Wolff, H. (2023a). *Frequency of purchasing organic food among among consumers in Indonesia as of September 2023*. Statista.Com. Retrieved from https://www.statista.com/statistics/1010612/frequency-buying-organic-food-indonesia/

Nurhayati-Wolff, H. (2023b). *Preferred organic food categories among consumers in Indonesia as of September 2023*. Statista.Com. Retrieved from https://www.statista.com/statistics/1010657/indonesia-most-important-organic-food-categories-among-consumers/

Ogiemwonyi, O., Alam, M. N., Alshareef, R., Alsolamy, M., Azizan, N. A., & Mat, N. (2023). Environmental factors affecting green purchase behaviors of the consumers: Mediating role of environmental attitude. *Cleaner Environmental Systems*, *10*(June), 100130. https://doi.org/10.1016/j.cesys.2023.100130

Oh, K., & Abraham, L. (2016). Effect of knowledge on decision making in the context of organic cotton clothing. *International Journal of Consumer Studies*, *40*(1), 66–74. https://doi.org/10.1111/ijcs.12214

Pandey, S. K., Gupta, A. K., & Sharma, D. P. (2020). Perceived risk reduction strategies for organic food customers. *Journal of Food Products Marketing*, *26*(5), 344–357. https://doi.org/10.1080/10454446.2020.1774953

Patterson, J., Schulz, K., Vervoort, J., van der Hel, S., Widerberg, O., Adler, C., Hurlbert, M., Anderton, K., Sethi, M., & Barau, A. (2017). Exploring the governance and politics of transformations towards sustainability. *Environmental Innovation and Societal Transitions*, *24*, 1–16. https://doi.org/10.1016/j.eist.2016.09.001

Persaud, A., & Schillo, S. R. (2017). Purchasing organic products: Role of social context and consumer innovativeness. *Marketing Intelligence and Planning*, *35*(1), 130–146. https://doi.org/10.1108/MIP-01-2016-0011

Petit, O., Velasco, C., Wang, Q. J., & Spence, C. (2022). Consumer consciousness in multisensory extended reality. *Frontiers in Psychology*, *13*(April), 1–7. https://doi.org/10.3389/fpsyg.2022.851753

Pilelienė, L., & Tamulienė, V. (2021). Consumer attitudes and behavior towards organic products: Evidence from the Lithuanian market. *Journal of Entrepreneurship, Management and Innovation*, *17*(1), 269-299. https://doi.org/https://doi.org/10.7341/20211719

Reddy, N. S., & Thanigan, J. (2023). Determinants of purchase intention, satisfaction, and risk reduction: The role of knowledge and information search among mortgage buyers. *Cogent Economics and Finance*, *11*(2). https://doi.org/10.1080/23322039.2023.2266659

Rihn, A., Khachatryan, H., & Wei, X. (2018). Assessing purchase patterns of price conscious consumers. *Horticulturae*, *4*(3), 1–16. https://doi.org/10.3390/horticulturae4030013

Riskos, K., Dekoulou, P., Mylonas, N., & Tsourvakas, G. (2021). Ecolabels and the attitude–behavior relationship towards green product purchase: A multiple mediation model. *Sustainability (Switzerland)*, *13*(12), 1–22. https://doi.org/10.3390/su13126867

Rousseau, S., & Vranken, L. (2013). Green market expansion by reducing information asymmetries: Evidence for labeled organic food products. *Food Policy*, *40*, 31–43. https://doi.org/10.1016/j.foodpol.2013.01.006

Säfvenbom, R., Haugen, T., & Bulie, M. (2015). Attitudes toward and motivation for PE. Who collects the benefits of the subject? *Physical Education and Sport Pedagogy*, *20*(6), 629–646. https://doi.org/10.1080/17408989.2014.892063

Shahbandeh, M. (2023). *Worldwide sales of organic foods 1999-2021*. Statista. Retrieved from https://www.statista.com/statistics/273090/worldwide-sales-of-organic-foods-since-1999/

Shen, B., Liu, S., Zhang, T., & Choi, T. M. (2019). Optimal advertising and pricing for new green products in the circular economy. *Journal of Cleaner Production*, *233*, 314–327. https://doi.org/10.1016/j.jclepro.2019.06.022

Shen, M., & Wang, J. (2022). The impact of pro-environmental awareness components on green consumption behavior: The moderation effect of consumer perceived cost, policy incentives, and face culture. *Frontiers in Psychology*, *13*(June), 1–13. https://doi.org/10.3389/fpsyg.2022.580823

Shivanna, K. R. (2022). Climate change and its impact on biodiversity and human welfare. *Proceedings of the Indian National Science Academy*, *88*(2), 160–171. https://doi.org/10.1007/s43538-022-00073-6

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

Smith, O. M., Cohen, A. L., Rieser, C. J., Davis, A. G., Taylor, J. M., Adesanya, A. W., Jones, M. S., Meier, A. R., Reganold, J. P., Orpet, R. J., Northfield, T. D., & Crowder, D. W. (2019). Organic farming provides reliable environmental benefits but increases variability in crop yields: A global meta-analysis. *Frontiers in Sustainable Food Systems*, *3*(September), 1–10. https://doi.org/10.3389/fsufs.2019.00082

Smoluk-Sikorska, J., Smiglak-Krajewska, M., Rojík, S., & Fulneˇcková, P. R. (2024). Prices of organic food — The gap between willingness to pay and price premiums in the organic food market in Poland. *Agriculture*, *14*(17), 1–19. https://doi.org/https://

doi.org/10.3390/agriculture14010017

Sreen, N., Purbey, S., & Sadarangani, P. (2018). Impact of culture, behavior and gender on green purchase intention. *Journal of Retailing and Consumer Services*, *41*(December 2017), 177–189. https://doi.org/10.1016/j.jretconser.2017.12.002

Sultan, P., Wong, H. Y., & Azam, M. S. (2021). How perceived communication source and food value stimulate purchase intention of organic food: An examination of the stimulus-organism-response (SOR) model. *Journal of Cleaner Production*, *312*(June), 127807. https://doi.org/10.1016/j.jclepro.2021.127807

Tandon, A., Dhir, A., Kaur, P., Kushwah, S., & Salo, J. (2020). Why do people buy organic food? The moderating role of environmental concerns and trust. *Journal of Retailing and Consumer Services*, *57*(July), 102247. https://doi.org/10.1016/j.jretconser.2020.102247

Tandon, A., Jabeen, F., Talwar, S., Sakashita, M., & Dhir, A. (2021). Facilitators and inhibitors of organic food buying behavior. *Food Quality and Preference*, *88*(September 2020), 104077. https://doi.org/10.1016/j.foodqual.2020.104077

The Business Research Company. (2023). *Organic Food Global Market Report 2023*. Retrieved from https://www.thebusinessresearchcompany.com/report/organic-food-global-market-report

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

Wei, S., Ang, T., & Jancenelle, V. E. (2018). Willingness to pay more for green products: The interplay of consumer characteristics and customer participation. *Journal of Retailing and Consumer Services*, *45*(June), 230–238. https://doi.org/10.1016/j.jretconser.2018.08.015

Wijaya, T., & Sukidjo. (2017). Organic knowledge as antecedent of purchase intention on organic food. *International Journal of Business and Management Science*, *7*(2), 297–315.

Xing, Y., Li, M., & Liao, Y. (2022). Trust, price sensitivity and consumers' organic food purchasing behaviour in China. *Food Science and Technology (Brazil)*, *42*, 1-14. https://doi.org/10.1590/fst.42422

Yiridoe, E. K., Bonti-Ankomah, S., & Martin, R. C. (2005). Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: A review and update of the literature. *Renewable Agriculture and Food Systems*, *20*(4), 193–205. https://doi.org/10.1079/raf2005113

Yuan, R., Jin, S., & Wu, W. (2024). Interactive effects of information and trust on consumer choices of organic food: Evidence from China. *Appetite*, *192*(October 2023), 107115. https://doi.org/10.1016/j.appet.2023.107115

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, *52*(3), 2–22. https://doi.org/10.1177/002224298805200302

Zhang, B., Fu, Z., Huang, J., Wang, J., Xu, S., & Zhang, L. (2018). Consumers' perceptions, purchase intention, and willingness to pay a premium price for safe vegetables: A case study of Beijing, China. *Journal of Cleaner Production*, *197*, 1498–1507. https://doi.org/10.1016/j.jclepro.2018.06.273

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.