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Consumers' Willingness to Pay for Organic Foods in Tehran: A Mixed-Methods Study

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Abstract

In Iran, despite the limited development and enforcement of certification systems, consumers' interest in organic food is growing. However, the organic market is still emerging. Therefore, the current study investigates the factors influencing consumers' willingness to pay for organic fresh products (fruits and vegetables), while also exploring key consumer-driven priorities for strengthening the sector. The study employed a sequential qualitative-quantitative approach. First, 16 Iranian experts were consulted in two rounds to identify the influencing variables, using the Delphi method. Subsequently, a mixed-methods approach was used for data collection and analysis. This survey was conducted in 2024 among 214 consumers at vegetable markets across 22 regions of Tehran. The data was analyzed using multiple regression to determine the main influencing factors. The results showed that consumers' willingness to pay for organic food is positively influenced by their perceptions of organic products and higher income levels. Furthermore, factors such as age, attitudes toward agrochemicals, and the perception of higher costs significantly impact consumers' willingness to pay for organic products in Tehran. This study also highlights the role of the certification system in building consumer trust, noting that while organic production organizations exist in Iran, the certification framework remains fractured and lacks broad consumer recognition. A key contribution of this study relates to its mixed approach, providing in-depth perspectives on consumer preferences in an expanding organic market. The qualitative findings further underscore the importance of establishing designated organic markets, reinforcing certification and labeling systems, and targeting consumer education to increase awareness and trust in organic products.

Keywords
consumer attitudes; organic food consumption; organic food policy; organic foods in Iran; willingness to pay

1. Introduction

Organic production refers to a method of farming that does not utilize synthetic chemicals, pesticides, or genetically modified organisms. Global trade in organic products reached $220 billion in 2018 and is projected to grow to $620 billion by 2026 (Khangan, 2020; Willer et al., 2020). This growth reflects increasing consumer demand for health-conscious, sustainable, and environmentally friendly food.

According to global statistics, the total area under organic cultivation reached 71.5 million hectares in 2018 (Willer et al., 2020). The geographical distribution of organic farming shows that many high-income regions allocate a greater share of their agricultural land to organic production. A total of 16 countries dedicate more than 10% of their agricultural land to organic farming, whereas in many low- and middle-income countries, including Iran, this figure remains low. In Iran, less than 0.01% of farmland is organic, despite modest growth since 2016 (Khangan, 2020).

Although organic agriculture in Iran is expanding slowly, consumer attitudes are increasingly favorable. Studies indicate growing public expectations for farmers to adopt environmentally responsible practices (Yazdanpanah et al., 2022a, 2022b). Nevertheless, aligning this consumer demand with actual organic production remains a significant challenge.

Iranian consumers are increasingly associating organic food with health and environmental benefits, influenced by education and rising awareness (Baba Akbari Sari et al., 2009; Bazhan et al., 2023). Willingness to pay (WTP) is influenced by income, education, health consciousness, and trust in organic labels (Khaerolahi et al., 2021). Global studies have explored organic food purchasing behavior through demographic, attitudinal, and socio-cultural lenses (Ahmad et al., 2010; Aschemann-Witzel & Zielke, 2017; Paul & Rana, 2012; Yilmaz, 2023). In Iran, despite growing interest, the organic market faces significant structural challenges, including high prices, inadequate infrastructure, and limited government support (Mahdavi et al., 2020). Although consumers are placing higher value on health and sustainability (White et al., 2019), adoption is constrained by affordability and limited trust. The extant literature provides a foundation for organic development (Babajani et al., 2015; Koocheki & Ghorbani, 2005; Veisi et al., 2017), and awareness of organic vegetables is relatively high (Alizadeh et al., 2008). Nevertheless, substantial obstacles persist, including price sensitivity, limited certification, inadequate labeling, and minimal advertising (Ghazanfari et al., 2024; Ghofrani et al., 2017; Haghjou et al., 2013). Trust remains a critical factor in this context (Canova et al., 2020). The concept of affordability is inherently linked to factors such as income, accessibility, and market scale. As global demand has been demonstrated to facilitate cost reductions (see Jánská et al., 2020; Pandey et al., 2019), it is imperative to understand consumer preferences and the willingness to pay to achieve market expansion (see Nandi et al., 2017). While awareness is increasing in Iran, particularly in urban centers such as Tehran, the factors influencing WTP remain under-explored. The objective of this study is to address this knowledge gap by identifying the key influences on WTP and consumer strategies to support organic market development. The city's substantial population, significant income inequality, and concentrated organic markets make it a noteworthy case for studying WTP.

The city's socioeconomic diversity helps explore how affordability and access influence consumer behavior. As urban areas lead in changing consumption patterns, understanding urban WTP for organic food is crucial. This study employs a mixed-methods approach to explore Iranian consumers' WTP and propose measures to promote organic markets, particularly in Tehran. For this study, "organic" refers specifically to products that meet certified organic standards, distinguishing them from "natural" products that lack formal certification.

2. Literature Review

To provide a structured overview of existing literature, this section is divided into three main areas. First, we examine the primary drivers of WTP for organic food, focusing on factors such as health concerns, environmental responsibility, and income. Second, we investigate barriers to organic food consumption, including price sensitivity, limited availability, and lack of trust in organic certification. Finally, we discuss theoretical models, with an emphasis on the theory of planned behavior, which explains organic purchasing decisions.

2.1. Drivers of WTP

The global growth in organic production has been attributed in the literature to increased consumer environmental awareness, as reflected in consumer knowledge and attitudes (Fraj & Martinez, 2006; Thøgersen, 2016). The gradual rise in environmental concerns has brought this issue into mainstream public discourse (Paul & Rana, 2012), along with the belief that food choices can contribute to addressing environmental challenges (Ghali-Zinoubi & Toukabri, 2019; Grunert et al., 2014).

Health concerns and perceptions of product quality also play a central role in motivating organic food consumption (Hansen et al., 2018). In Iran, several studies have shown that consumers are willing to pay more for organic products (Kargar Dehbidi & Ansari Samani, 2020; Pouralijan et al., 2021; Pourmozafar et al., 2015). However, factors such as environmental awareness, income, and education significantly influence WTP for organic food (Shokoohi & Erfanifar, 2024; Zandi Nasab et al., 2020). Trust in organic labels and ease of access are also important determinants of WTP (Pouralijan et al., 2021). International findings suggest that developing the organic market requires promotional and educational initiatives, improved distribution and access, and strengthening consumer trust (Babajani et al., 2023).

A study was conducted to examine the factors influencing organic product consumption among Tehran consumers, with a particular focus on those who shopped at certified organic stores. The study found that income, perceived community identification, product quality perception, and environmental attitudes were the most significant factors affecting purchasing decisions (Zandi Nasab et al., 2020).

A similar finding was reported by Pouralijan et al. (2021) in a study on consumer behavior toward organic oranges. The researchers found that perceived organic attributes had a stronger influence on consumer choices than environmental benefits. These perceptions had a positive and significant impact on consumers' propensity to purchase organic oranges. Rajabi et al. (2013), in their study on consumer acceptance of organic products in Karaj, concluded that overall knowledge and awareness of organic products were moderate, and attitudes were generally favorable. Four key factors were identified as influencing product acceptance: information and education, improved access, product characteristics, and support facilities.

Razeghi et al. (2018) conducted a study among Tehran residents, finding that while knowledge exhibited an inverse relationship with accessibility, variables such as trust, marital status, and gender were positively associated with organic food consumption. However, a notable absence of a substantial correlation was observed between price and the aforementioned outcomes. The study underscored the significance of cultivating consumer trust, fostering distinct brand identities, and enhancing traceability to promote increased consumption of organic products. Lack of effective promotion and the absence of a unique, standardized label in the Iranian market also remain major obstacles that hinder sales potential.

Socioeconomic variables, such as income, education, age, and household size, consistently influence WTP across contexts (Muhammad et al., 2015; Vapa-Tankosić et al., 2018). The impact of family size on WTP is mixed; some studies cite financial constraints (Adekunle et al., 2019; Ahlheim & Schneider, 2013; Muhammad et al., 2015), while others find higher WTP among larger households with a greater focus on food quality (Vapa-Tankosić et al., 2018). Similarly, the presence of children in a household has shown varied effects. Some studies suggest that health- and environment-conscious parents are more willing to pay a premium for eco-labeled products (Freyer & Haberkorn, 2008; Loureiro et al., 2002), while others indicate that financial limitations reduce WTP (Sriwaranun et al., 2015).

Other influential factors include prior organic purchasing behavior, environmental concerns, and socio-attitudinal variables (Baiyegunhi et al., 2018; Sriwaranun et al., 2015). Awareness of health and safety benefits (Çakmakçı & Çakmakçı, 2023), also boosts WTP beyond what demographics alone can explain (Adekunle et al., 2019). However, despite these positive influences, high price premiums continue to be a significant deterrent to broader adoption (Adekunle et al., 2019).

2.2. Barriers to Organic Food Consumption

The higher price of organic products is largely due to lower yields and the absence of synthetic inputs (Gschwandtner, 2018). Many studies have identified high prices, limited availability, and poor label perception as major barriers to organic food consumption (Johnstone & Tan, 2015; Rödiger & Hamm, 2015). Nevertheless, in certain contexts, consumers may still prefer organic food despite these disadvantages (Suciu et al., 2019).

Income level has also been shown to influence organic food expenditure (Carmona et al., 2021; Chowdhury et al., 2021; Pawlewicz, 2020), as have broader socio-demographic variables (Diagourtas et al., 2023; Huo et al., 2023).

In Iran, regional studies have consistently found that consumer attitudes, socioeconomic characteristics, and product attributes, such as branding and pricing, affect purchasing behavior (Andervazh, 2020; Asgharnezhad et al., 2018; Bazhan et al., 2024; Kavoosi Kalashami et al., 2017; Pishbahar et al., 2020; Sharifi et al., 2021; Tohidi et al., 2023). These findings are consistent with global research trends. Lack of certification and labeling undermines consumer trust and reduces WTP, as confirmed by several Iranian studies (Baba Akbari Sari et al., 2009; Haghjou et al., 2013; Khaerolahi et al., 2021; Sayed Saleki et al., 2012). In a survey conducted in Mashhad, inadequate advertising and distrust in certification labels were cited as key challenges in purchasing healthy products (Firoozzare et al., 2024). In this context, government policies and planning could play a pivotal role in overcoming these obstacles (Babajani et al., 2015; Edalati et al., 2020; Shahabi Ahangarkolaee & Gorton, 2021).

2.3. Relevant Theoretical Models

Ajzen's theory of planned behavior is widely used to predict consumer intentions in food-related decision-making, including WTP for organic food (Ajzen, 1991; Caliskan et al., 2021; Chiew et al., 2023). According to the theory of planned behavior, behavioral intentions are shaped by attitudes, perceived norms, and perceived behavioral control. Several studies have applied these concepts to consumer WTP for organic products (Pang et al., 2021; Wang et al., 2020).

Positive attitudes toward organic products have been found to predict higher WTP (Bernabéu et al., 2022). Key influencing factors include health concerns, attitudes, subjective norms, knowledge about organic foods, availability, and labeling (Sana et al., 2018). Socioeconomic characteristics, including gender, education level, age, and occupation, have been identified as factors that influence WTP (Tsakiridou et al., 2006; Tung et al., 2012).

However, positive perceptions do not always translate into actual purchases (Bernabéu et al., 2022). For example, even when consumers express concern about pesticide use, inconsistencies in attitudes may still limit buying behavior (Tung et al., 2012). In certain instances, the geographic origin of a product may have a greater influence on consumer preferences than the methods employed during production (Bernabéu et al., 2022).

Food safety, health, and environmental concerns are the main motivations behind interest in organic food (Asioli et al., 2017; Shahabi Ahangarkolaee & Gorton, 2021). Other factors, such as taste, production methods, and the absence of artificial additives, also play significant roles in shaping preferences (Asioli et al., 2017).

Although WTP is often used as a proxy for purchasing intent, it does not always lead to actual purchasing behavior. External barriers, such as budget constraints, limited product availability, and competing consumer priorities, contribute to this gap. Research shows that while attitudes, marketing efforts, and peer influence can increase WTP, real purchases depend on additional factors beyond initial willingness (Caliskan et al., 2021; Pang et al., 2021; Wang et al., 2020). Figure 1 illustrates the conceptual framework of the study based on the influencing factors explained in the literature review.

3. Methodological Approach

The present study employed a combination of qualitative and quantitative approaches. Figure 2 illustrates the research design. Initially, the research group administered two rounds of Delphi questionnaires with Iranian experts to ascertain the primary factors that influence the WTP for organic foods in Iran. In addition, they reviewed the literature to complete the variable list and design the conceptual framework.

An exploratory mixed-methods design was used, integrating literature findings and expert insights through a Delphi process and consumer surveys. In the survey part of this study, we used triangulation to validate our results by combining qualitative and quantitative phases. The qualitative insights on consumer points of view and attitudes toward organic foods in different districts of Tehran complemented the quantitative evidence and increased the credibility and consistency of the conclusions. This alignment serves to enhance our comprehension of the factors that influence consumer behavior, thereby supporting the overall credibility of this research.

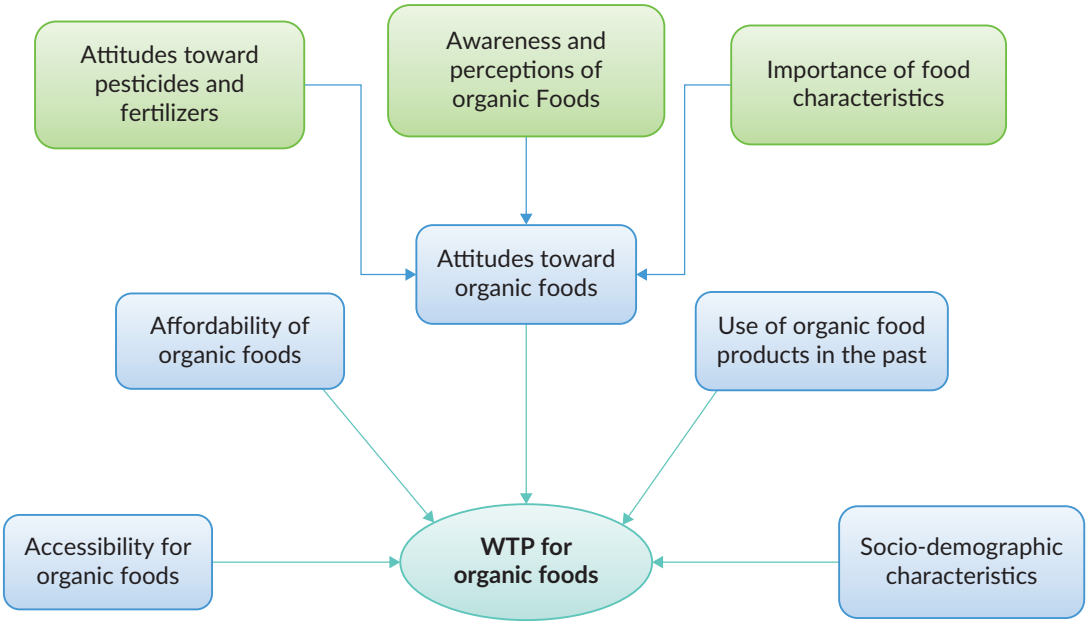

Figure 1. Conceptual framework of factors influencing willingness to pay for organic foods.

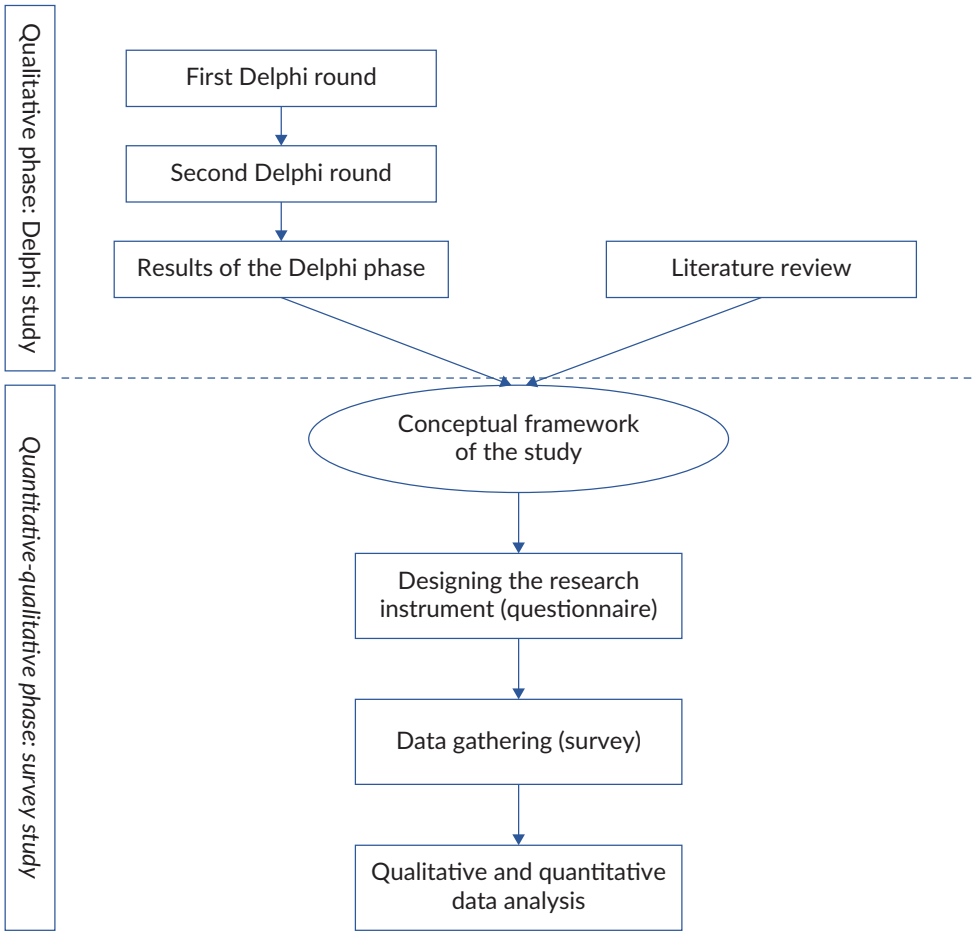

Figure 2. Study design and relations between different parts of the study.

3.1. The Qualitative Delphi Phase

This phase contained two rounds of the Delphi through interviews with 16 experts and scholars from different organizations and universities, as well as relevant ministries, and all of them possess expertise in organic farming development in Iran. The sampling method in this phase of the study was snowball sampling, and the data gathering method was conducted through online interviews using questionnaires. The Delphi panel included 16 experts from academia, government, certification bodies, and organic farming, selected via snowball sampling for their sectoral expertise. The snowball sampling method helped us to identify people with profound knowledge of the organic food sector. Though the number of participants was restricted, the Delphi studies prioritize expert knowledge over sample size, as the main goal is to achieve consensus among specialists. Considering the relatively small organic food sector in Iran, the selected panel effectively represented the main actors involved in the development of organic food in the country.

Experts evaluated the factors derived from existing literature and proposed new factors that influence the development of organic food products. Round 2 utilized a 1–10 scale to finalize these ratings. Participant details are summarized in Appendix 1 (see the Supplementary File).

Based on the literature review and the outcomes of the Delphi interviews, variables used in the survey phase are listed in Appendix 2. See the Supplementary File.

3.2. The Survey Phase of the Research

This phase was addressed by applying a semi-structured questionnaire provided for survey interviews regarding the research questions. The questionnaire was divided into two sections. In the initial section, we presented a series of open-ended inquiries to encourage respondents to provide concise and direct responses. The data from this section was analyzed using SPSS 27. The second part of the questionnaire contained open-ended questions designed to elicit the participants' views on the challenges and solutions to developing organic food in Iran. The present study utilizes the MAXQDA software to systematically analyze the qualitative survey data, with a focus on identifying recurrent themes and categories pertaining to the challenges and solutions associated with organic agriculture in Tehran. Thematic coding was employed to categorize the responses, which were grouped into the following major categories: awareness and education, production and distribution, government and institutional support, economic barriers, and cultural attitudes. Within each category, sub-themes were developed to capture the nuances of the data.

3.2.1. The Sampling Method and Data Gathering of the Second Section

A convenience sampling method was employed to recruit consumers in Tehran's fruit and vegetable markets, an approach deemed suitable for the study's mixed-methods design (Etikan et al., 2016). Convenience sampling, as defined by Etikan et al. (2016), guided the sampling method in the present study. This approach entailed the recruitment of respondents on a voluntary basis from fruit and vegetable markets in Tehran, who then participated in the survey during designated data collection periods. Consumer survey data have been collected in September and October 2024, thereby ensuring that the results reflect the most current consumer attitudes and market conditions at the time of the study. To capture socioeconomic diversity, we used a stratified convenience sampling across Tehran's districts, grouped into five welfare levels adapted from Kamal et al. (2019). See Appendix 3 in the Supplementary File.

The geographical location of Tehran and its municipal districts is illustrated in Figure 3. As illustrated in this figure, most of the population is concentrated in the eastern and southern regions of Tehran, where a greater proportion of interviews were conducted for our survey.

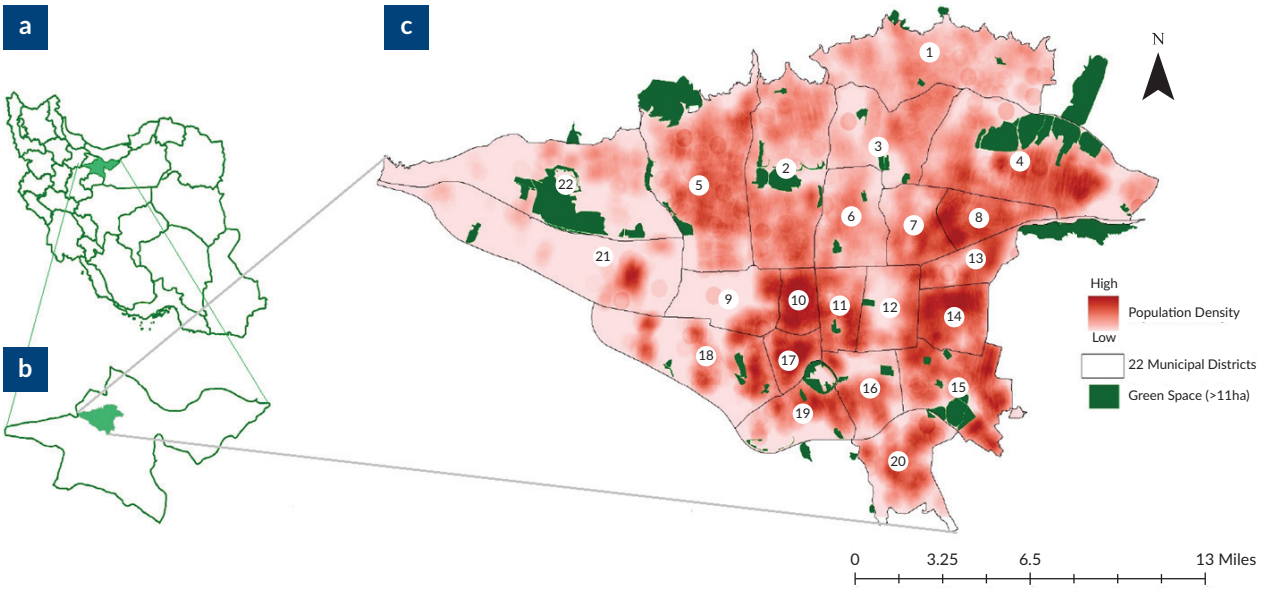

Figure 3. (a) Tehran province location in Iran; (b) Tehran city location; and (c) population density. Note: This figure was adapted from Alavi et al. (2024) and has undergone slight alterations.

4. Results and Discussion

The objective of this section is to provide a comprehensive description of the demographic and attitudinal characteristics of the sample regarding organic food, along with the prediction model of WTP. To this end, stepwise regression analysis will be employed in SPSS 27, leveraging a range of personal, perceptual, and attitudinal variables.

4.1. Descriptive Statistics

4.1.1. The Socio-Demographic Characteristics of Respondents

The sample (N = 214) consisted predominantly of males (60.6%), with a significant majority of respondents under the age of 35 and possessing a high school diploma or a bachelor's degree. The distribution of income levels exhibited a bias towards the Median, with most households comprising four to six individuals (see Appendix 4 in the Supplementary File for further details).

4.1.2. Importance of Food Characteristics From the Respondents' Views

According to the respondents (Table 1), the attribute of food appearance was identified as the most important, with a mean value of 3.27 on a scale of 0 to 4. In contrast, the attribute of production location was identified as the least important, with a mean value of 2.54 on the same scale.

Table 1. Importance of food characteristics (Likert spectrum 0 = *No importance* to 4 = *Very Important*).

Food characteristics	*N*	*M*	Standard deviation
Appearance of food (taste, smell, color, and freshness)	214	3.27	1.114
Place of production	212	2.54	1.432
Price	214	2.71	1.253
Easy access	213	2.72	1.188
Ingredients (Fat, Sugar, Salt, etc.)	214	2.70	1.379
Artificial colors, preservatives, and residual chemicals	214	2.84	1.376

4.1.3. The Respondents' Understanding and Attitudes Toward Organic Fruits and Vegetables

As demonstrated in the literature review, studies have shown that individuals with a deeper understanding of the environmental and health benefits of organic products are more likely to recognize their value and justify the higher cost (Etuah et al., 2022; Haghjou et al., 2013). Approximately 50% of the sample exhibited a low level of familiarity with organic production, with a minority of 3.7% demonstrating a high degree of understanding. (Table 2).

Table 2. The understanding of organic fruits and vegetables among respondents.

	Frequency	Valid percentage	Cumulative percentage
No knowledge	6	2.8%	2.8%
Low knowledge	98	45.8%	48.6%
Moderate knowledge	102	47.7%	96.3%
High knowledge	8	3.7%	100%
Total	214	100%	

Table 3 shows that most respondents (52.8%) held negative views toward pesticides, while only 16.8% viewed them favorably.

Table 3. The attitudes of respondents toward pesticides and agrochemicals.

Attitudes	Frequency	Valid percentage	Cumulative percentage
Positive attitude	36	16.8%	16.8%
Moderate attitude	65	30.4%	47.2%
Negative attitude	113	52.8%	100%
Total	214	100%	

Attitudes toward organic products were predominantly favorable, with 75.7% of respondents expressing positive sentiments (see Table 4). The survey results indicate a notable level of support for organic products among the surveyed population.

Table 4. Attitudes toward organic fruits and vegetables.

Attitude	Frequency	Valid percentage	Cumulative percentage
Negative	14	6.5%	6.5%
Moderate	38	17.8%	24.3%
Positive	162	75.7%	100%
Total	214	100	

4.1.4. WTP for Organic Fruits and Vegetables

The results of the quantitative part of the survey on respondents' WTP for organic fruit and vegetables (Table 5) show a wide range of responses. Respondents were generally willing to pay modest premiums: 60% were willing to pay 1–20% more. Only 3.3% were unwilling to pay any premium. The findings of this study indicate that while a considerable number of consumers exhibit a propensity to procure organic products at a premium price, their inclination to do so is, in general, within a moderate range.

Table 5. Respondents' WTP for a higher price for organic food.

Higher cost percentage	Frequency	Percentage	Valid percentage	Cumulative percentage
0%	7	3.3%	3.3%	3.3%
1–10%	63	29.4%	29.4%	32.7%
11–20%	64	29.9%	29.9%	62.6%
21–50%	41	19.2%	19.2%	81.8%
51–70%	12	5.6%	5.6%	87.4%
71–100%	17	7.9%	7.9%	95.3%
More than 100%	10	4.7%	4.7%	100%
Total	214	100%	100%	

4.2. Quantitative Analysis: Regression Model

Multiple regression is a statistical method that involves the use of a group of independent variables to predict a dependent variable within a statistical model. In this study, a stepwise multiple regression analysis was performed in SPSS 27 to predict respondents' willingness to pay (WTP) for organic products based on several variables (predictors). The dependent variable in this study was WTP for organic fruit and vegetables, as determined by the survey results. In the final stage of the analysis, seven predictor variables were entered into forward steps, including attitude towards pesticides, belief that organic food is expensive, trust in authorities and conventional farmers, attitude towards organic fruit and vegetables, availability of organic food, household income, and age. In regard to the method of entering the variables, the regression analysis was executed in seven steps. The final regression model (Model 7) explained 61.1% of the variance in WTP (Table 6).

Table 6. The regression model summary.

Model	*R*	*R* square	Adjusted *R* square	Standard error of the estimate	Durbin-Watson
1	0.640	0.410	0.405	1.193	
2	0.686	0.471	0.462	1.134	
3	0.717	0.513	0.501	1.092	
4	0.737	0.543	0.528	1.062	
5	0.755	0.570	0.552	1.035	
6	0.771	0.594	0.573	1.010	
7	0.781	0.611	0.587	0.994	2.200

This finding suggests that the variables entered the model, or, in other words, the predictors, collectively exerted a significant influence on the WTP of the respondents in the present study. While the previous analysis focused on the value and direction of the coefficients, the statistical significance of each independent variable in the final regression model is critical and determines the final regression model (Model 7; Table 7). The *p*-values of each coefficient provide evidence that the observed relationships between the independent variables and the dependent variable, in this case, WTP, are real effects or due to chance. In this model, statistical significance was assessed using an alpha level of 0.05.

Table 7. Regression coefficients and significance for the final model (Model 7).

Variable	Coefficient (B)	Standard error	*t*-statistic	*p*-value (Significance)
Constant	−1.860	0.987	−1.884	0.062
Attitude towards pesticides and agrochemicals (X1)	0.521	0.065	7.987	<0.001
Perception that organic products are too expensive (X2)	−0.658	0.154	−4.267	<0.001
Trust in authorities and conventional farmers regarding food safety (X3)	−0.402	0.090	−4.450	<0.001
Attitude towards organic fruit and vegetables (X4)	0.211	0.055	3.838	<0.001
Availability of organic produce (X5)	0.338	0.113	2.991	0.003
Household's income (X6)	0.179	0.068	2.650	0.009
Age (X7)	−0.014	0.007	−2.187	0.031

As shown in Table 7, the following seven independent variables were statistically significant ($p < 0.05$) in the final regression model:

1. Attitude towards pesticides: Negative attitudes towards pesticides were strongly related to higher WTP for organic products.
2. Belief that organic food is too expensive: This negative relationship suggests that respondents who considered organic food too expensive were less willing to pay a premium.
3. Trust in authorities and conventional farmers: Higher trust in conventional production systems was negatively related to WTP.
4. Attitudes towards organic produce: Positive attitudes towards organic produce significantly predicted higher WTP.

5. Availability of organic food: The perception that organic food is available in sufficient quantities positively affected WTP.
6. Household income: Higher household income was positively associated with WTP.
7 Age: Older respondents were less willing to pay a premium for organic products.

Based on the regression results, the regression equation model can be written as follows:

$$Y = -1.860 + (0.521)\,X1 - (0.658)\,X2 - (0.402)\,X3 + (0.211)\,X4 + (0.338)\,X5 + (0.179)\,X6 - (0.014)\,X7$$

In which: Y = WTP; X1 = attitude towards pesticides and agrochemicals; X2 = perception that organic products are too expensive; X3 = trust in authorities and conventional farmers regarding food safety; X4 = attitude towards organic fruit and vegetables; X5 = availability of organic produce; X6 = household income; and X7 = age.

Table 6 shows that the final model explained 61.1% of WTP variance (Adjusted R^2 = 0.587), with no multicollinearity or autocorrelation concerns (Durbin-Watson = 2.2). The residuals, with an *M* near zero, were normally distributed.

WTP increased with negative attitudes toward pesticides, higher trust in organic produce, better availability, and higher income; and decreased with stronger trust in conventional systems and older age.

4.3. Qualitative Analysis

As outlined in the methodology (Section 3.2), the consumer survey included open-ended questions designed to explore the issues and possible ways forward in the development of organic food in Tehran from the consumer's perspective. A thematic analysis of the qualitative responses was conducted using MAXQDA, resulting in five overarching themes. These qualitative findings enrich and contextualize the research and serve to complement, confirm, and triangulate with the quantitative findings in Sections 4.1 and 4.2. In this section, the responses from participants are presented with their unique respondent identifiers (e.g., R23, indicating Respondent 23) to maintain anonymity while allowing for traceability.

4.3.1. Need for More Public Education and Knowledge

A key qualitative finding was a lack of public awareness and understanding of organic products. The respondents (e.g., R20, R36, R200, R91, and R180) expressed a desire for targeted educational campaigns via television and social media. These campaigns would aim to address the confusion surrounding the differences between organic and conventional products. This aligns with quantitative results that show nearly half of the respondents had "low" or "moderate" knowledge (Table 2). Suggestions included integrating organic farming education into schools and agricultural programs (e.g., R38 and R44) to foster long-term cultural change. This knowledge gap helps explain generally positive attitudes toward organic products (Table 4) that do not always translate into higher WTP (Table 5), as consumers often lack specific information to fully value the premium.

4.3.2. Major Challenges Related to Supply, Distribution, and Access

A major concern among participants was the limited supply and access to organic produce, validating its significant positive prediction of WTP (X5; Table 7, $p = 0.003$). Consumers desired increased organic production, noting farmer challenges like high input costs (e.g., R32, R49, R50, R159, and R161). Finding organic options was difficult, especially for urban shoppers, correlating with "ease of access" (Table 1, $M = 2.72$). Suggestions for improvement included increased retailing in various markets (e.g., R6, R26, R39, and R131) and farmer-to-consumer delivery to reduce costs and build trust (e.g., R59, R98, and R164).

4.3.3. Expectations for the Role of Government and Institutional Support

Respondents expressed a strong desire for increased government involvement in the organic sector, particularly in regulating and monitoring organic practices. This finding provides support for the hypothesis that there is a significant negative relationship between trust in government and conventional farmers, and WTP (see Table 7, $p < 0.001$). The results of this study indicate that consumers may select organic options due to their mistrust of conventional food oversight. Participants specifically called for stricter regulation of organic labels, pesticide use, and clearer definitions of organic farming (e.g., R9, R88, and R172). As R89 noted: "The government…should regulate the chemicals and pesticides…and organic products should be registered." This aligns with the broader negative perception of pesticides (Table 3, 52.8% negative attitude). Additional suggestions included subsidies for organic conversion (e.g., R113, R170, and R202) and funding for organic research, with support for agencies like the Ministry of Health and Agricultural Jihad indicating a demand for a credible national organic system.

4.3.4. Widespread Economic Constraints to Consumption

The high cost of organic food emerged as a predominant concern in the qualitative responses, corroborating the regression findings where the statement "organic food is too expensive" (X2) exhibited a negative predictive value on WTP (Table 7, $p < 0.001$). Conversely, higher household income (X6) was identified as a positive predictor ($p = 0.009$). Respondents frequently cited cost as the primary factor influencing their preferences for organic food (e.g., R12, R18, and R165). They proposed strategies to reduce prices, such as price reductions or subsidies for consumers. This economic barrier aligns with WTP patterns in Table 5, where the majority of respondents indicated a willingness to pay only moderate or low premiums (1–20%), and with the moderate importance of price in Table 1 ($M = 2.71$). While many consumers were motivated by concerns regarding their health and the environment, premium prices resulted in limited purchasing power, particularly among lower-income groups.

4.3.5. Lack of Consumer Confidence in Authenticity

A key concern in the qualitative data was trust in the legitimacy of organic labels. Respondents questioned whether labeled products truly met organic standards, often citing doubts about producers or the label itself (e.g., R27, R58, and R117). This skepticism may explain why, despite generally favorable attitudes toward organic produce (X4; Table 4, 75.7%) and its significant predictive value for WTP (Table 7, $p < 0.001$), uncertainty about authenticity limits purchase intent. Mistrust may also contribute to the lower importance of "place of production" (Table 1, $M = 2.54$), as original labels are not always trusted. Some favored locally

grown organics, possibly due to greater transparency or shorter supply chains (e.g., R35 and R121). These findings underscore the need for credible, verifiable certification and labeling systems to build trust and support market growth.

5. Discussion

The findings of this study highlight the complex interplay of perceptual, structural, and contextual factors influencing Iranian consumers' WTP for organic fruit and vegetables. Appearance and food safety emerged as top priorities in consumer decision-making, consistent with previous studies (Paul & Rana, 2012; Rödiger & Hamm, 2015). The emphasis on visual cues and sensory appeal indicates that immediate quality assessments remain central to purchasing behavior. Conversely, the relatively low importance attributed to the concept of "place of production" may be indicative of limited awareness or skepticism towards local or regional sourcing, a pattern that has been previously documented in the research conducted by Khaerolahi et al. (2021). Marketing efforts aimed at promoting organic and local food would benefit from aligning with these dominant consumer heuristics. A substantial knowledge gap regarding organic food remains, particularly among lower-income consumers, thereby corroborating the findings of Rajabi et al. (2013) and Razeghi et al. (2018). The stratified sampling design employed in this study enabled the identification of socioeconomic disparities. This pervasive dearth of knowledge hinders the expansion of the organic market and underscores the necessity for more precise labeling and targeted educational initiatives. The present study draws on the theory of planned behavior (Ajzen, 1991; Wang et al., 2020) to argue that enhancing consumer understanding can shape attitudes and increase WTP. The study confirms that public concern about chemical inputs, especially pesticides, drives interest in organic alternatives, echoing prior research (Ghali-Zinoubi & Toukabri, 2019; Paul & Rana, 2012). Strong negative attitudes toward conventional farming were evident, but not universal—some consumers still prioritize cost or consider agrochemicals a necessary part of food production. This variability suggests targeted messaging is needed to emphasize health and environmental risks and to encourage organic consumption through mass media and public outreach.

While positive attitudes toward organic food were pervasive, aligning with literature on health and environmental motivations (Ghali-Zinoubi & Toukabri, 2019; Thøgersen, 2016), structural barriers such as high prices and limited access constrained behavior. While a considerable proportion of respondents indicated a willingness to pay (WTP) a 1–20% premium, aligning with the findings reported by Hansen et al. (2018), only a limited number were willing to incur costs beyond 50%, a finding consistent with the observations made by Johnstone and Tan (2015). The cost of the technology is a significant impediment to its more widespread use. These findings underscore the necessity for economic policies such as consumer subsidies, producer incentives, or price stabilization to foster market development (Gschwandtner, 2018). The quantitative predictors of WTP—namely, pesticide concerns (X1), perceived cost (X2), trust in conventional systems (X3), organic attitudes (X4), availability (X5), income (X6), and age (X7)—were all statistically significant and reinforced by qualitative findings. Consumer interviews yielded substantial contextual information. A recurring theme in these interviews was deep-seated mistrust in labeling and certification (X3 and X4). This mistrust was observed even among consumers who held favorable views of organic products. This mistrust has the potential to compromise the efficacy of organic labeling, a factor that may contribute to the observed lack of significance of the "place of production" attribute in consumer purchasing decisions. A subset of respondents expressed a preference for locally sourced organic products, indicating that shorter supply chains may contribute to enhanced trust. Perceived affordability and limited

availability emerged as real-world constraints on organic purchasing. These qualitative insights explain the negative effect of cost perceptions (X2) and the positive impact of availability (X5) on WTP. Similarly, age and income trends—higher WTP among younger and wealthier respondents—mirrors previous research (Aschemann-Witzel & Zielke, 2017; Gracia & de Magistris, 2008). Importantly, trust in conventional systems reduced WTP for organic products (Vermeir & Verbeke, 2008), suggesting that consumers who trust mainstream oversight see less need for organic alternatives.

Blending qualitative and quantitative approaches not only validated the key statistical predictors but also illuminated the nuanced mechanisms behind them. For example, concerns about pesticide residues (X1) were more than a preference—they were often described as deeply rooted fears shaped by health anxieties and limited regulatory trust. Similarly, the influence of trust (X3 and X4) on WTP became clearer through narratives expressing skepticism about certification, governance, and transparency. The qualitative data also highlighted strong consumer demand for improved regulation, credible certification, and education, indicating where policy interventions might be most effective.

In addition to confirming quantitative patterns, the interviews revealed systemic barriers and actionable entry points for policy. Calls for better labeling, more visible certification, and expanded consumer education were frequent. Economic concerns remained dominant, reinforcing the need for retail expansion and government-supported affordability measures. Increasing transparency in production, shortening supply chains, and promoting local organic farming could improve both consumer trust and market penetration.

In sum, the integration of qualitative insights strengthened the interpretive validity of this study. It demonstrated how structural conditions (e.g., cost and access), perceptual variables (e.g., trust and knowledge), and demographic factors interact to shape organic food consumption. Future efforts to grow Iran's organic market must address affordability, labeling credibility, and education simultaneously. Additionally, community-based models like urban gardening and cooperative farming offer promising avenues to enhance access and rebuild trust from the ground up.

6. Conclusion

This study examined the demand-side dynamics of organic fruit and vegetable consumption in Tehran, offering empirical insights into consumer behavior within the context of sustainable urban food systems. A mixed-methods approach was employed to identify the key determinants of WTP, including pesticide concerns, perceived costs, trust in conventional systems, attitudes toward organic food, availability, income, and age. The qualitative findings corroborated these results, unveiling structural barriers—including limited affordability, access, and consumer trust—alongside potential interventions related to education, infrastructure, and regulatory transparency. These findings are directly relevant to urban planning, particularly as cities seek to develop more sustainable and equitable food environments. Spatial access emerged as a critical factor, underscoring the necessity for planners to address geographic disparities in food availability through zoning, networked distribution systems, and proximity-based retail interventions. The practice of urban agriculture, both within and surrounding city boundaries, ought to be endorsed through the implementation of land-use protections and the incorporation into broader food logistics frameworks. The incorporation of organic food systems into spatial planning and infrastructure investment has the potential to enhance both environmental sustainability and public health outcomes. Achieving

alignment between consumer behavior and sustainability objectives necessitates a concerted effort across the domains of planning, policy, and market. The barriers identified—cost, access, awareness, and trust—represent key leverage points for planners and policymakers to influence food system transitions. This study underscores the necessity for cross-sectoral planning that considers food not only as a health or agricultural issue, but also as a spatial and infrastructural one, central to sustainable urban development. The following planning strategies are recommended:

- Implementing spatially equitable subsidies or pricing mechanisms to improve affordability across income groups.
- Supporting local food networks—such as farmers' markets, community-supported agriculture, and neighborhood food hubs—to reduce food miles and increase trust.
- Enhancing regulatory systems with transparent organic certification to rebuild consumer confidence.
- Investing in infrastructure for low-carbon, efficient food logistics, and last-mile delivery.
- Embedding sustainable food systems within urban planning curricula, master plans, and resilience strategies.
- Fostering cross-sector partnerships that address spatial and economic exclusion in urban food access.

While the study provides important insights, its findings are limited to Tehran and rely on self-reported data. Future research should incorporate spatially explicit analyses of WTP and food accessibility across urban sub-regions to guide geographically targeted interventions. Longitudinal studies tracking the effects of planning or policy changes on consumer behavior would further strengthen this emerging field. Comparative research across diverse urban contexts could also yield transferable lessons for sustainable food planning globally.

Ultimately, cultivating a robust organic food market in Tehran is not merely a matter of individual choice; it is a complex urban planning challenge. Addressing the intertwined economic, spatial, and informational barriers to sustainable consumption requires integrated strategies. By leveraging planning tools to make sustainable food more accessible, affordable, and trusted, cities can align food policy with broader goals of equity, resilience, and environmental sustainability.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

LLMs Disclosure

The authors acknowledge the use of AI tools, including DeepL and ChatGPT, for assisting with the editing process of this manuscript.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

References

Adekunle, C. P., Oyekale, T. O., & Oladeji, S. O. (2019). Socio-economic factors influencing consumers' willingness to pay for organic products in Abeokuta, Southwest Nigeria. *Journal of Agripreneurship and Sustainable Development*, *2*(2), 89–101.

Ahlheim, M., & Schneider, F. (2013). *Considering household size in contingent valuation studies* (No. 68). Center for Research on Innovation and Services. https://ideas.repec.org/p/zbw/fziddp/682013.html

Ahmad, S. N. B., Juhdi, N., & Jaya, K. (2010). Organic food: A study on demographic characteristics and factors influencing purchase intentions among consumers in Klang Valley, Malaysia. *International Journal of Business and Management*, *5*(2), 105–118. https://doi.org/10.5539/ijbm.v5n2p105

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211.

Alam, M. A. (2024). Consumer awareness and perceptions of pesticide residues in vegetables in Bangladesh. *Research in Agriculture Livestock and Fisheries*, *11*(1), 25–33.

Alavi, S. A., Esfandi, S., Khavarian-Garmsir, A. R., Tayebi, S., Shamsipour, A., & Sharifi, A. (2024). Assessing the connectivity of urban green spaces for enhanced environmental justice and ecosystem service flow: A study of Tehran using graph theory and least-cost analysis. *Urban Science*, *8*(1), Article 14. https://doi.org/10.3390/urbansci8010014

Alizadeh, A., Javanmardi, J., Abdollazadeh, N., & Liaghat, Z. (2008, June 16–20). *Consumers' awareness, demands and preferences for organic vegetables: A survey study in Shiraz, Iran* [Paper presentation]. 16th IFOAM Organic World Congress, Modena, Italy.

Andervazh, L. (2020). Studying the factors affecting the attitude and intention of buying organic food consumers: Structural equation model. *Iranian Journal of Health Education and Health Promotion*, *8*(1), 35–44.

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.

Asgharnezhad, B., Salati, F., & Ghaffari, M. (2018). *Factors affecting intention to purchase organic food products among Iranian consumers. Academy of Marketing Studies Journal*, *22*(3), 1–23.

Asioli, D., Aschemann-Witzel, J., Caputo, V., Vecchio, R., Annunziata, A., Næs, T., & Varela, P. (2017). Making sense of the "clean label" trends: A review of consumer food choice behavior and discussion of industry implications. *Food Research International*, *99*, 58–71. https://doi.org/10.1016/j.foodres.2017.07.022

Baba Akbari Sari, M., Asadi, A., Akbari, M., Fakher Zadeh, S. A., & Sookhtanloo, M. (2008). An investigation of the consumer attitude and effective factors in adoption of agricultural organic products. *Iranian Journal of Agriculrural Economics and Development Research*, *39*(1), 133–144.

Babajani, A., Muehlberger, S., Feuerbacher, A., & Wieck, C. (2023). Drivers and challenges of large-scale conversion policies to organic and agrochemical-free agriculture in South Asia. *International Journal of Agricultural Sustainability*, *21*(1), Article 2262372. https://doi.org/10.1080/14735903.2023.2262372

Babajani, A., Shabanali Fami, H., Asadi, A., & Rezapanah, M. Z. (2015). Explain the driving policy instruments

of organic farming development in Iran. *Iranian Journal of Agricultural Economics and Development Research*, *46*(2), 267–276.

Baiyegunhi, L. J., Mashabane, S. E., & Sambo, N. C. (2018). Influence of socio-psychological factors on consumer WTP for organic food products. *Journal of Economics and Behavioral Studies*, *10*(5), 208–219.

Bazhan, M., Shafiei Sabet, F., & Borumandnia, N. (2023). Development and validation of a questionnaire to examine determinants of consumer intentions to purchase organic food. *BMC Nutrition*, *9*, Article 74. https://doi.org/10.1186/s40795-023-00731-y

Bazhan, M., Shafiei Sabet, F., & Borumandnia, N. (2024). Factors affecting purchase intention of organic food products: Evidence from a developing nation context. *Food Science & Nutrition*, *12*(5), 3469–3482.

Bazoche, P., Combris, P., Giraud-Héraud, E., Seabra Pinto, A., Bunte, F., & Tsakiridou, E. (2014). Willingness to pay for pesticide reduction in the EU: Nothing but organic? *European Review of Agricultural Economics*, *41*(1), 87–109.

Bernabéu, R., Nieto, R., & Rabadán, A. (2022). Effect of self-reported attitudes toward organic foods in consumer preferences and willingness to pay. *Renewable Agriculture and Food Systems*, *37*(4), 360–368.

Çakmakçı, S., & Çakmakçı, R. (2023). Quality and nutritional parameters of food in agri-food production systems. *Foods*, *12*(2), Article 351. https://doi.org/10.3390/foods12020351

Caliskan, A., Celebi, D., & Pirnar, I. (2021). Determinants of organic wine consumption behavior from the perspective of the theory of planned behavior. *International Journal of Wine Business Research*, *33*(3), 360–376.

Canova, L., Bobbio, A., & Manganelli, A. M. (2020). Buying organic food products: The role of trust in the theory of planned behavior. *Frontiers in Psychology*, *11*, Article 575820. https://doi.org/10.3389/fpsyg.2020.575820

Carmona, I., Griffith, D. M., & Aguirre, I. (2021). Understanding the factors limiting organic consumption: The effect of marketing channel on produce price, availability, and price fairness. *Organic Agriculture*, 11, 89–103.

Chiew, D. K. Y., Zainal, D., & Sultana, S. (2023). Understanding organic food purchase behavior: Using the extended theory of planned behavior. *International Journal of Business Innovation and Research*, *31*(2), 268–294.

Chowdhury, S., Meero, A., Rahman, A. A. A., Islam, K. A., Zayed, N. M., & Hasan, K. R. (2021). An empirical study on the factors affecting organic food purchasing behavior in Bangladesh: Analyzing a few factors. *Academy of Strategic Management Journal*, *20*(4). https://www.abacademies.org/articles/an-empirical-study-on-the-factors-affecting-organic-food-purchasing-behavior-in-bangladesh-analyzing-a-few-factors-11136.html

Diagourtas, G., Kounetas, K. E., & Simaki, V. (2023). Consumer attitudes and sociodemographic profiles in purchasing organic food products: Evidence from a Greek and Swedish survey. *British Food Journal*, *125*(7), 2407–2423.

Edalati, S., Omidvar, N., Haghighian Roudsari, A., Ghodsi, D., & Zargaraan, A. (2020). Development and implementation of nutrition labelling in Iran: A retrospective policy analysis. *The International Journal of Health Planning and Management*, *35*(1), e28–e44. https://doi.org/10.1002/hpm.2924

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Etuah, S., Adams, F., Mensah, J. O., Amoah Osei, A. A., Atta Danso, K., & Kwame Frimpong, R. (2022). Assessing consumer awareness, perception, and willingness to pay a premium for certified organic vegetables. *International Journal of Vegetable Science*, *28*(4), 374–383.

Fathia, Q. N., Nurmalina, R., & Simanjuntak, M. (2018). Consumer's attitude and willingness to pay for organic rice. *Indonesian Journal of Business and Entrepreneurship*, *4*(1), Article 11. https://doi.org/10.17358/ijbe.4.1.11

Firoozzare, A., Boccia, F., Yousefian, N., Ghazanfari, S., & Pakook, S. (2024). Understanding the role of awareness and trust in consumer purchase decisions for healthy food and products. *Food Quality and Preference*, *121*, Article 105275. https://doi.org/10.1016/j.foodqual.2024.105275

Fraj, E., & Martinez, E. (2006). Environmental values and lifestyles as determining factors of ecological consumer behavior: An empirical analysis. *Journal of Consumer Marketing*, *23*(3), 133–144.

Freyer, B., & Haberkorn, A. (2008, June 18–20). *Influence of young children (3–6 years) on organic food consumption in their families* [Paper presentation]. 16th IFOAM Organic World Congress in Cooperation with the International Federation of Organic Agriculture Movements, Modena, Italy. https://orgprints.org/id/eprint/12130

Ghali-Zinoubi, Z., & Toukabri, M. (2019). The antecedents of the consumer purchase intention: Sensitivity to price and involvement in organic product: Moderating role of product regional identity. *Trends in Food Science & Technology*, *90*, 175–179. https://doi.org/10.1016/j.tifs.2019.02.028

Ghazanfari, S., Firoozzare, A., Covino, D., Boccia, F., & Palmieri, N. (2024). Exploring factors influencing consumers' willingness to pay healthy-labeled foods at a premium price. *Sustainability*, *16*(16), Article 6895. https://www.mdpi.com/2071-1050/16/16/6895

Ghofrani, Y. R., Taleghani, M., & Chirani, E. (2017). Organic agriculture: Food for future green consumers in Iran. *International Journal of Agricultural Management and Development*, *7*(2), 179–189.

Gracia, A., & de Magistris, T. (2008). The demand for organic foods in the South of Italy: A discrete choice model. *Food Policy*, *33*(5), 386–396. https://doi.org/10.1016/j.foodpol.2007.12.002

Grunert, K. G., Hieke, S., & Wills, J. (2014). Sustainability labels on food products: Consumer motivation, understanding and use. *Food Policy*, *44*, 177–189. https://doi.org/10.1016/j.foodpol.2013.12.001

Gschwandtner, A. (2018). The organic food premium: A local assessment in the UK. *International Journal of the Economics of Business*, *25*(2), 313–338.

Haghjou, M., Hayati, B., Pishbahar, E., Mohammadrezaei, R., & Dashti, G. (2013). Factors affecting consumers' potential willingness to pay for organic food products in Iran: Case study of Tabriz. *Journal of Agricultural Science and Technology*, *15*, 191–202.

Hansen, T., Sørensen, M. I., & Eriksen, M. L. R. (2018). How the interplay between consumer motivations and values influences organic food identity and behavior? *Food Policy*, *74*, 39–52. https://doi.org/10.1016/j.foodpol.2017.11.003

He, Z. (2020). Organic animal farming and comparative studies of conventional and organic manures. In H. M. Waldrip, P. H. Pagliari, & Z. He (Eds.), *Animal manure: production, characteristics, environmental concerns, and management* (Vol. 67, pp. 165–182). American Society of Agronomy. https://doi.org/10.2134/asaspecpub67.c9

Huo, H., Ahmad, F. S., & Teoh, B. (2023). Factors affecting consumers' organic food purchase behavior: A systematic literature review and future research agenda. *Environment and Social Psychology*, *9*(2). https://doi.org/10.54517/esp.v9i2.1892

Jánská, M., Kollar, P., & Celer, Č. (2020). Factors influencing purchases of organic food. *Zagreb International Review of Economics & Business*, *23*(1), 81–94.

Johnstone, M. L., & Tan, L. P. (2015). Exploring the gap between consumers' green rhetoric and purchasing behavior. *Journal of Business Ethics*, *132*, 311–328. https://doi.org/10.1007/s10551-014-2316-3

Kamal, S. H. M., Harouni, G. G., & Basakha, M. (2019). Spatial pattern of well-being in Tehran: The north-south gap. *Medical Journal of the Islamic Republic of Iran*, *33*, Article 112. https://doi.org/10.34171/mjiri.33.112

Kargar Dehbidi, N., & Ansari Samani, H. (2020). Evaluating the factors affecting the consumption of Shiraz consumers to benefit from organic tomato product: Application of Hackman two-step method. *Journal of Environmental Science and Technology*, *22*(7), 43–56.

Kavoosi Kalashami, M., Sadeghpour, H., Allahyari, M. S., Surujlal, J., & Ghorbandoust, M. (2017). Evaluation of urban consumer willingness to pay for organic leafy vegetables. *International Journal of Vegetable Science*, *23*(3), 195–206.

Khaerolahi, H., Aali, S., & Taghizadeh, H. (2021). Designing a model for improving the attitude of customers of organic food products in Iran. *Consumer Behavior Studies*, *8*(2), 176–199.

Khangan, M. (2020). Organic food and beverages market size to reach USD 620.00 billion by 2026, globally. *Food & Beverages*, 1–220. https://orgprints.org/id/eprint/38396

Koocheki, A., & Ghorbani, R. (2005). Traditional agriculture in Iran and development challenges for organic agriculture. *The International Journal of Biodiversity Science and Management*, *1*(1), 52–57. https://doi.org/10.1080/17451590509618079

Loureiro, M. L., McCluskey, J. J., & Mittelhammer, R. C. (2002). Will consumers pay a premium for eco-labeled apples? *Journal of Consumer Affairs*, *36*(2), 203–219.

Mahdavi, H., Allahyari, M. S., Damalas, C. A., & Dunn, E. S. (2020). Drivers and barriers for organic rice (*Oryza sativa* L.) production in northern Iran: experts' consensus using the Delphi method. *Biological Agriculture & Horticulture*, *36*(2), 96–106. https://doi.org/10.1080/01448765.2019.1698464

Muhammad, S., Fathelrahman, E., & Ullah, R. U. T. (2015). Factors affecting consumers' willingness to pay for certified organic food products in United Arab Emirates. *Journal of Food Distribution Research*, *46*(1), 37–45.

Nandi, R., Bokelmann, W., Gowdru, N. V., & Dias, G. (2017). Factors influencing consumers' willingness to pay for organic fruits and vegetables: Empirical evidence from a consumer survey in India. *Journal of Food Products Marketing*, *23*(4), 430–451.

Pandey, D., Kakkar, A., Farhan, M., & Khan, T. A. (2019). Factors influencing organic foods purchase intention of Indian customers. *Organic Agriculture*, *9*, 357–364. https://doi.org/10.1007/s13165-018-0240-z

Pang, S. M., Tan, B. C., & Lau, T. C. (2021). Antecedents of consumers' purchase intention towards organic food: Integration of theory of planned behavior and protection motivation theory. *Sustainability*, *13*(9), Article 5218. https://doi.org/10.3390/su13095218

Paul, J., & Rana, J. (2012). Consumer behavior and purchase intention for organic food: A review and research agenda. *Journal of Retailing and Consumer Services*, *19*(1), 79–92.

Pawlewicz, A. (2020). Change of price premiums trend for organic food products: The example of the Polish egg market. *Agriculture*, *10*(2), Article 35. https://doi.org/10.3390/agriculture10020035

Pishbahar, E., Mahmoudi, H., & Hayati, B. (2020). The survey of heterogeneity on organic products consumers' preferences using mixed logit and latent class models: (Case study organic tea consumers in Tehran). *Journal of International Food & Agribusiness Marketing*, *32*(3), 220–233. https://doi.org/10.1080/08974438.2019.1599757

Pouralijan, M., Amirnezhad, H., Mojaverian, S. M., & Taslimi, M. (2021). Investigating consumers' willingness to consume organic products in Sari City of Iran. *Agricultural Economics and Development*, *28*(4), 93–116.

Pourmozafar, H., Leyane, G., Shahabe, S., & Rafiee, H. (2015). Estimating the consumers' willingness to pay for organic products: Application of Heckman two stage method (case of organic cucumbers). *Environmental Researches*, *5*(10), 97–108.

Priya, S., & Parameswari, M. (2016). Consumer attitude towards organic food products. *International Journal of Applied Research*, *2*(4), 723–725.

Rajabi, A., Shabanali Fami, H., & Pouratashi, M. (2013). Investigating the adoption component of agricultural organic products from the viewpoints of consumers. *Journal of Food Science and Technology*, *10*(38), 33–43.

Razeghi, F., Haghi, E., & Yunesian, M. (2018). Data about knowledge and tendency towards organic food use in Tehran. *Data in Brief*, *16*, 955–958. https://doi.org/10.1016/j.dib.2017.12.033

Rödiger, M., & Hamm, U. (2015). How are organic food prices affecting consumer behavior? A review. *Food Quality and Preference*, *43*, 10–20. https://doi.org/10.1016/j.foodqual.2015.02.002

Sana, U., Latif, W. U., Ahmad, W., Jafar, M. S., Pervez, M., Ahmed, N., & Xu, X.-R. (2018). Willingness-to-pay for organic food in Pakistan: The effect of motivational factors and mediated role of attitude. In *International Conference on E-Commerce and Contemporary Economic Development* (pp. 368–381). DEStech Publications. https://doi.org/10.12783/dtem/eced2018/23996

Sayed Saleki, Z., Sayedsaleki, M. S., & Rahimi, M. R. (2012). Organic food purchasing behaviour in Iran. *International Journal of Business and Social Science*, *3*(13), 278–288.

Shahabi Ahangarkolaee, S., & Gorton, M. (2021). The effects of perceived regulatory efficacy, ethnocentrism and food safety concern on the demand for organic food. *International Journal of Consumer Studies*, *45*(2), 273–286.

Sharifi, R., Kheiri, B., & Ghofrani, Y. R. (2021). Behavioral model of real buyers of organic productsin Guilan province. *International Journal of Agricultural Management and Development*, *11*(2), 245–260.

Shokoohi, Z., & Erfanifar, S. (2024). The effect of environmental attitude and lifestyle on consumers' willingness to pay a price premium for potato with the Organic National label. *Environmental Sciences*. Advance online publication. https://envs.sbu.ac.ir/article_104767.html?lang=en

Sriwaranun, Y., Gan, C., Lee, M., & Cohen, D. A. (2015). Consumer' willingness to pay for organic products in Thailand. *International Journal of Social Economics*, *42*(5), 480–510.

Suciu, N. A., Ferrari, F., & Trevisan, M. (2019). Organic and conventional food: Comparison and future research. *Trends in Food Science & Technology*, *84*, 49–51. https://doi.org/10.1016/j.tifs.2018.12.008

Thøgersen, J. (2016). Consumer decision-making with regard to organic food products. In T. de Noronha Vaz & Peter Nijkamp (Eds.), *Traditional food production and rural sustainable development* (pp. 173–192). Taylor & Francis.

Tohidi, A., Mousavi, S., Dourandish, A., & Alizadeh, P. (2023). Organic food market segmentation based on the neobehavioristic theory of consumer behavior. *British Food Journal*, *125*(3), 810–831.

Tsakiridou, E., Zotos, Y., & Mattas, K. (2006). Employing a dichotomous choice model to assess willingness to pay (WTP) for organically produced products. *Journal of Food Products Marketing*, *12*(3), 59–69. https://doi.org/10.1300/J038v12n03_05

Tung, S. J., Shih, C. C., Wei, S., & Chen, Y. H. (2012). Attitudinal inconsistency toward organic food in relation to purchasing intention and behavior: An illustration of Taiwan consumers. *British Food Journal*, *114*(7), 997–1015.

Vapa-Tankosić, J., Ignjatijević, S., Kranjac, M., Lekić, S., & Prodanović, R. (2018). Willingness to pay for organic products on the Serbian market. *International Food and Agribusiness Management Review*, *21*(6), 791–802.

Vehapi, S., & Dolićanin, E. (2016). Consumers behavior on organic food: Evidence from the Republic of Serbia. *Економика пољопривреде*, *63*(3), 871–889.

Veisi, H., Carolan, M. S., & Alipour, A. (2017). Exploring the motivations and problems of farmers for conversion to organic farming in Iran. *International Journal of Agricultural Sustainability*, *15*(3), 303–320.

Vermeir, I., & Verbeke, W. (2008). Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Ecological Economics*, *64*(3), 542–553.

Wang, J., Zhang, Y., & Liu, S. (2020, December). Analysis of consumers' perception and purchasing intention toward organic food based upon the theory of planned behavior. In *2020 International Conference on Big Data Economy and Information Management (BDEIM)* (pp. 29–33). IEEE.

White, K., Habib, R., & Hardisty, D. J. (2019). How to shift consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of marketing*, *83*(3), 22–49.

Willer, H., Schlatter, B., Trávníček, J., Kemper, L., & Lernoud, J. (2020). *The world of organic agriculture: Statistics and emerging trends 2020*. FiBL; IFOAM Organics International. https://www.fibl.org/en/shop-en/5011-organic-world-2020

Yazdanpanah, M., Moghadam, M. T., Zobeidi, T., Turetta, A. P. D., Eufemia, L., & Sieber, S. (2022a). What factors contribute to conversion to organic farming? Consideration of the health belief model in relation to the uptake of organic farming by Iranian farmers. *Journal of Environmental Planning and Management*, *65*(5), 907–929. https://doi.org/10.1080/09640568.2021.1917348

Yazdanpanah, M., Tajeri Moghadam, M., Javan, F., Deghanpour, M., Sieber, S., & Falsafi, P. (2022b). How rationality, morality, and fear shape willingness to carry out organic crop cultivation: A case study of farmers in southwestern Iran. *Environment Development and Sustainability*, *24*, 2145–2163. https://doi.org/10.1007/s10668-021-01523-9

Yilmaz, B. (2023). Factors influencing consumers' behavior towards purchasing organic foods: A theoretical model. *Sustainability*, *15*(20), Article 14895. https://doi.org/10.3390/su152014895

Zandi Nasab, M., Ghaffari, M., & Khadem Shahzadeh Taher, F. (2020). Identification and prioritization are the factors affecting willingness to pay for organic agricultural products from the perspective of consumers. *Journal of Agricultural Economics and Development*, *33*(4), 363–376.

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