



## **Impact Of Health Consciousness, Food Safety Concern, And Consumer Purchase Intentions Toward Organic Food: The Role of Consumer Involvement**

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### **Abstract**

*This study investigates the impact of health consciousness and food safety concerns on the intention to purchase organic food in Pakistan. With rising global demand for organic products driven by health and environmental awareness, this research aims to identify key factors influencing consumer behavior in an emerging market context. A quantitative approach was employed, utilizing a correlational research design. Data was collected via an online survey from 254 health-conscious Pakistani consumers using a 5-point Likert scale questionnaire adapted from prior studies. Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied to analyze the data, assessing reliability, validity, and path coefficients. Findings reveal a significant positive relationship between health consciousness, food safety perceptions, and organic food purchase intentions. The study highlights that consumer shifts toward organic products are primarily motivated by health and safety concerns, aligning with global trends. These insights can help marketers and policymakers promote organic food adoption in Pakistan. The research contributes to understanding consumer behavior in developing markets, suggesting strategies to enhance organic food accessibility and awareness.*

**Keywords:** Health consciousness, food safety concerns, consumer involvement, purchase intentions.



## **Introduction**

### **Background of Study**

Now that more knowledge is easily available because to technological development, people often exercise more caution about what they put into their bodies. People are beginning to understand the significance of paying attention to their food consumption. Regarding priorities, quality and safety typically take front stage above health. The rising desire for healthy eating practices has clearly impacted the worldwide consumption of organic food, according to Al-Swidi et al. (2014), Kushwah et al. (2019), and Waqas and Hong (2019). Research by Rana and Paul (2017) shows that the organic food company has exceeded the market overall in terms of development rate. This increase rate falls between 10% and 30%. Gennaro and Quaglia (2003) define "organic food" as those produced in a natural setting free from synthetic pesticides or fertilisers. The increasing demand for natural, healthy, clean, and safe products, according to Van Huy et al. (2019), has helped organic food become quite popular rather quickly. Sales of organic foods have increased as health and food safety issues have grown more important. People usually buy organic food, according to Shepherd et al. (2005), because they think it will improve their health. "Green food" is shorthand for organic produce as it has zero negative influence on the environment. Nowadays, people are significantly more worried about environmental issues than they were forty years ago; this change in attitude indicates a bigger popular movement. Organic food consumption is now firmly established in Japan; it first became politically significant in Europe, then the Americas. Growing environmental concerns, food shortages, overproduction, and declining rural population all contribute mostly to this, as per Bazhan, Shafiei Sabet and Borumandnia, (2024). Since individuals there are concerned about transitioning to organic food from conventional (Yang et al., 2025), this movement has also found traction in Asian nations. With roughly 40% of all organic producers located in Asia, this area is the most organically cultivated one on Earth. Arcese et al., (2024) claims that this area also has the largest market for organic products. Many food crises in Pakistan have made people concerned about their health and safety, so they are switching to organic products instead of traditional ones. Regarding agriculture, Pakistan leads all other Asian countries. Several Pakistani farmers have dramatically cut their use of dangerous pesticides (FAO, 2007) under customer demand. The above stated studies indicate that concerns about food safety and health are the key causes of the notable change in consumer buying intentions. (Baydeni?z et al., 2024)

### **Health consciousness**

Since consumers are now more aware of and serious about their health, they are curious about what they eat and prefer the highest-quality foods that satisfy their minds, improve their physical health, and prevent the use of artificial items that are harmful to their health (Li and Shan, 2025). Most people who want to live a quality life are aware of their health and work to develop habits that are good for their wellbeing (Guragain, 2024). In other aspects, we can say that the term "health-conscious" refers to how often a customer engages in healthy activities (Bazhan, Shafiei Sabet and Borumandnia, 2024). According to recent studies, consumers who are concerned about



their health choose organic foods over conventional foods since they are more environmentally friendly, healthier, and free of chemicals and additives (Arcese et al., 2024).

### **Food Safety Concerns**

The growing frequency of food scandals involving tainted milk, meat, and vegetables makes consumers today more discriminating when making food purchases (Li and Shan, 2025). Consumers are concerned not only with the label, which indicates that the product is safe, but also with the ingredients, artificial flavoring, artificial coloring, and whether or not the product is chemical and pesticide-free. (Arcese et al., 2024)

### **Purchase Intention Towards Organic Food**

Both consumption motives (for example, food safety concerns and health consciousness) have a positive impact on customer purchase intentions for organic food and motivate their behavior toward purchasing organic food (Baydeni?z et al., 2024).

### **Statement of the Problem**

Customers using theoretical models to predict their consumption of organic food help us to get more understanding. We consider consumer consumption intentions and concerns about food safety and health. Previous research on the subject of organic food consumption have mostly concentrated on developed nations like the United States and the European Union, where it is already somewhat common (Arcese et al., 2024). Although this study does not take it into consideration, organic food is becoming more and more popular in developing nations including underdeveloped ones. The inclination of emerging nations for organic food over conventional food has helped to explain its growing appeal (Guragain, 2024). Driven by consumers in the Asia-Pacific area seeking better options, sales of organic foods will make around 12% of all sales by 2025. This field will be much influenced by the modification.

Particularly in economically struggling nations, the great rise in demand for organic foods in recent years reflects a larger push towards improved eating habits and economic stability. Even if it is more expensive, developing countries give safe and healthy food first priority (Guragain, 2024). Researching these areas helps one to understand consumer behaviour and company prospects. Pakistan is a developing nation with great unrealised potential in the organic food sector as agriculture accounts for 20% of GDP. Old agricultural methods have evolved as consumers get more aware of the negative effects of chemically produced food (Asif et al., 2017). From 6,005 hectares in 2017 to 51,304 hectares in 2019, organic farming in Pakistan increased, as per Bazhan, Shafiei Sabet and Borumandnia, (2024). Two factors driving this increase are consumer tastes for food with less chemical content and developments in manufacturing technologies. Out of Pakistan's overall 22.68 million hectares of arable land, 45,299 acres are used in organic farming (2019). Given that, the future of the sector appears bright. Through exploring the consumption of organic food in Pakistan, this study closes a significant theoretical and contextual gap. The results can be used in other developing countries with similar social and agricultural issues.



### **Significance of the Study**

Pakistan, a large supplier of organic crops and a potential market for organic commodities, is worth studying because organic food consumption is rare in underdeveloped nations. By using Pakistan as a sample representative for other developing nations, this study will contribute to closing the theoretical and contextual gap. The comparison of regional and cultural similarities and contrasts between developed and poor nations will help to produce impressive results in the subject. This study will help to establish techniques that will help in coping with the shifting mindsets of people living in this area and obtain important insights for the producers and farmers of the nation about the elements that affect consumers' buying intentions toward organic food in Pakistan. (Baydeni?z et al., 2024)

### **Research Objective**

The major purpose of this research is to examine how consumers' health consciousness and worries about food safety influence their inclinations to buy organic food in Pakistan.

### **Research Question**

How can consumption incentives, such as health consciousness and worries about food safety, influence customers' inclinations to buy organic food, and what is the relationship between these two factors?

### **Organization of the Study**

The remaining of the research paper below consists of different section that are thoroughly discussed. Section 2 is consisting of Literature review. Section 3 comprises of the Methodology used in the research. Section 4 explains the result and the conclusion related to it and Section 5 discusses the limitations, policy implications and future research direction in more detail.

### **Research Gap**

Despite the growing global demand for organic food, limited studies have explored consumer behavior in emerging markets like Pakistan, where food safety concerns and health consciousness are rising. Previous research predominantly focuses on Western countries, overlooking cultural, economic, and agricultural differences in developing economies (Bazhan, Shafiei Sabet and Borumandnia, 2024). Additionally, while health and safety motivations are widely acknowledged, the specific interplay between these factors and purchase intentions in Pakistan remains underexamined. This study addresses these gaps by investigating how health awareness and food safety perceptions drive organic food consumption in Pakistan, providing localized insights. Furthermore, it extends existing literature by employing PLS-SEM analysis, offering a robust methodological approach to understanding consumer behavior in understudied regions. (Li and Shan, 2025)





## **Literature Review**

### **Theoretical Background**

The function of purchase intention as a mediator between customers' health consciousness, food safety concerns, and their conduct with respect to organic food is investigated in this paper. By means of purchase intention as a middle ground, the study emphasises how consumers' internal motivations—such as food safety issues and health awareness—impact their intended behaviour towards purchasing organic food. Several research have looked at consumer decision-making in organic food markets for example (Bazhan, Shafiei Sabet and Borumandnia, 2024) using rational choice theories. Using Ajzen's (1991) Theory of Planned Behaviour (TPB) is particularly useful when trying to forecast customers' intentions. Perceived behavioural control, attitudes, and subjective norms all play a role in shaping consumer behaviour, which impacts intentions (TPB). According to Zhang et al. (2020), people are more likely to buy products reflecting their own values and ideas. Thus, the significant predictor of actually purchasing organic food is the will to acquire it. Studies by Bazhan, Shafiei Sabet and Borumandnia, (2024) confirm the hypothesis that customer intentions and their real behaviour are correlated. Intentions expose the gravity and probability of an action, example selecting organic versus ordinary food. Though there are many elements influencing intentions, they are quite helpful markers. A complicated customer is one who, as noted by (Guragain, 2024), lets their value and risk perceptions affect their buying decisions.

Building on the TPB paradigm, the current study looks at how consumers' willingness to buy is influenced by health consciousness and worries over food safety. Positive or negative attitudes are according to (Baydeniz et al., 2024) the most important factors influencing intentions. Therefore, researching consumer opinions on organic food is crucial, especially in view of consumers' worries for their personal health and the claimed safety of the product. Recent research underline the importance of looking at these features, for example (Guragain, 2024). Thus, using a TPB-based theoretical framework, this study adds to knowledge by studying the relationship between health consciousness and food safety problems and customers' willingness to buy organic food.

### **Hypothesis development**

#### **Health consciousness and purchase intentions of organic food**

Consumers are considering their physical and mental health more and more when deciding what to buy and avoiding products that can endanger them (Yang et al., 2025). Health-conscious individuals often participate in certain activities and preventative actions to either maintain or enhance their quality of living (Guragain, 2024). Therefore, health consciousness is a gauge of the degree of personal responsibility and care one person shows for their own well-being (Guragain, 2024).

Recent research (Hasselbach & Roosen, 2015a, 2015b) indicate that more and more consumers are seeking natural and healthy food alternatives due of health concerns. Since organic food excludes chemicals, additives, or pesticides, many believe it to be healthier for them than



conventional food (Raza et al., 2019). For those worried about their environment and health as well, it's an excellent choice (Hill & Lynchehaun, 2002). Health-conscious consumers of organic food appreciate it because of the supposed benefits. Studies show that those who give their health a priority are more likely to purchase natural items. This underlines how much demand for and acceptability of organic food is influenced by health concern (Kushwah et al., 2019).

**H1:** A consumer's propensity to buy organic food is strongly influenced by their level of health awareness.

Justification: Prior studies (e.g., Kushwah et al., 2019; Rana & Paul, 2017) confirm that health-conscious consumers prefer organic food due to perceived nutritional benefits and lower chemical exposure. In Pakistan, rising lifestyle diseases (e.g., diabetes, heart conditions) amplify this trend (Al-Swidi et al., 2014).

### **Food Safety And Purchase Intention Of Organic Food**

According to Hsu et al. (2019), consumers are becoming more worried about food safety issues due to how often they occur. As a result, information on food additives, pesticide and insecticide residues, artificial flavours, and manufacturing methods is of greater interest to the general public (Arcese et al., 2024). According to (Guragain, 2024), consumers' concerns about food safety stem from their apprehensions over various food components, industrial processes, and agricultural practices. Customers that are worried about consuming potentially dangerous substances would look for meals that are natural, pure, and safe (Li and Shan, 2025).

Concerns over ingredients and product quality are growing among food consumers (Aguilera-Morales et al., 2005) and (Winter & Davis, 2006). However, many individuals think that eating organic food is absolutely safe (Hsu et al., 2019). In this approach, people are encouraged to see purchasing organic food favourably due to their concern for food safety (Cabuk et al., 2014). Furthermore, empirical research shows a link between customers' intentions to buy organic food and worries about food safety (Bartholomew et al., 2011).

On the basis of the discussion above, we came up with the following hypothesis.

**H2:** Consumer's food safety concern has a significant impact on purchase intention of organic food.

Justification: Food adulteration scandals in Pakistan (FAO, 2007) have heightened safety fears. Research (Van Huy et al., 2019; Waqas & Hong, 2019) shows that consumers view organic food as safer, driving demand.

### **The Mediating Role Of Consumer Involvement**

Consumer engagement, health consciousness, and concerns about food safety all influence organic food sales (Bravo et al., 2013). The computations were done with the ELM elaboration likelihood model (PLM) referencing Petty et al. (1983) and Cacioppo (1986). Research by Tan et al. (2003) indicates that consumer contact significantly influences information reception and evaluation.





The degree to which a consumer is interested in buying, utilising, or rejecting a good is known as their engagement (Hynes and Lo, 2006). Say Isaacson et al. (2018), it is essential in guiding consumers in making informed judgements. People are more inclined to purchase something, for example, when they are passionate about it. Previous research indicates that a person's most formative experience with a product influences their chance to purchase that good (Teng & Lu, 2016). Food science experts claim that consumers' willingness to buy food products is much influenced by their degree of participation in the process (Lipper et al., 2014).

When consumers purchase with their own ideals in line, they become more engaged. This is so because it indicates that the customer regards the good as pertinent to their own needs, values, and interests. Natural food products are more likely to be bought by health-conscious consumers as they help them to attain their best condition. For example, people are more wary of what they eat now that they know organic food has allegedly great health advantages.

On the basis of the discussion above, we came up with the following hypothesis.

**H3a:** Consumer participation mediates the association between health consciousness and the intention to buy organic food.

Justification: Participation (e.g., seeking health info, joining organic communities) deepens HC's impact by reinforcing trust and knowledge (Guragain, 2024). PLS-SEM analysis will test this cognitive-behavioral pathway.

**H3b:** Customer engagement mediates the association between food safety concerns and the intent to buy organic food.

Justification: Engaged consumers (e.g., sharing safety concerns on social media, advocating for organic labels) amplify FSC's effect by creating social proof (Iqbal et al., 2021). This aligns with S-O-R theory's emphasis on emotional/cognitive engagement driving behavior.

### **Empirical Studies**

Customer participation and environmental variables affected consumers' willingness to buy organic food, according to Imran et al. (2021). Purchase intent and health consciousness were the dependent variables, whereas food safety concerns were the independent variable. The results are based on 268 health-conscious Pakistanis who like organic cuisine. Health awareness and food safety were linked to organic shopping. This suggests that organic food sales are rising as consumers become more health conscious and worried about food safety. Common method variance (CMV) may affect cross-sectional data, a research disadvantage. For future research to lower CMV risks and make results more relevant to varied cultures and countries, the authors recommend experimental or longitudinal study designs involving culturally diverse populations.

Yang et al., (2025) used structural equation modelling to evaluate how health consciousness, food safety concerns, and organic food purchases relate. Food safety was the independent variable, whereas intention to purchase and health consciousness were the dependent factors. Of 252 participants, 156 were women and 96 were men. Marital status, number of children, education,





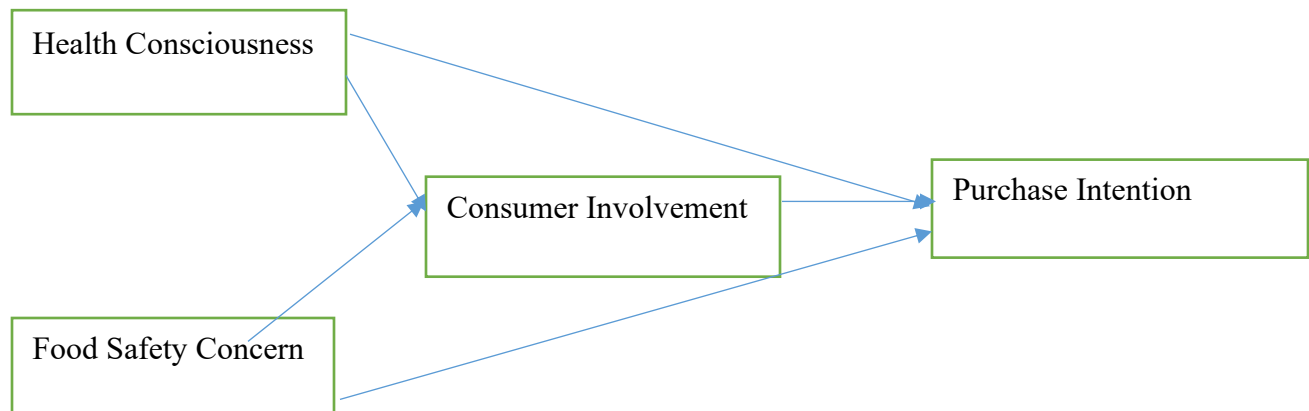
and capacity to feed families were positively connected. Food safety and health knowledge positively and significantly influenced customers' organic food purchases. This suggests that health-conscious people pick organic. Further research should replicate the model with more diverse cultural samples to examine organic food consumption patterns in different global contexts and generalise the findings.

Dhir et al. (2021) used the Stimulus-Organism-Behavior-Consequence (SOBC) paradigm to study organic food preferences. Their model's dependent variable was a consumer's purchase intent, with health awareness and food safety concerns as independent components. The study polled 928 Japanese consumers in one wave using probabilistic sampling. The research demonstrated that health awareness and food safety concerns increased customers' buying intentions. This shows that health-conscious consumers choose organic items. Future study should use experimental and longitudinal methods, objective behavioural measures, and varied geographical contexts to confirm and expand the authors' findings. These improvements may help us understand how various groups buy organic food, strengthening our empirical findings.

Kayyam et al. (2021) found that food safety concerns affect customers' organic food purchases. This study examined health consciousness and food safety as independent factors affecting purchase intention. A quantitative study questioned 50 Pakistani overseas students. Despite the short sample size, independent factors highly linked with organic food purchasing desire. The study shows that food safety influences consumer behaviour, especially for foreigners who may trust food safety rules differently. The authors advise making accurate and intelligible food information more accessible to boost customers' trust in and purchase of organic products. Future study should use bigger and more varied samples to confirm these findings and better understand the worldwide organic food industry.

Figure 1

Conceptual model





## **Research Methodology**

### **Research Purpose**

Research aims mostly in three directions: descriptive, exploratory, and explanatory. According to our research report, the goal of this investigation was to identify which factors causally connected one another. Searching for uncharted area inside the Pakistani setting, this paper investigates how consumer concerns about food safety and health consciousness affect the want to purchase organic food.

### **Research Approach**

Generally speaking, researchers have options for quantitative, qualitative, or combined methodologies approaches. Throughout this investigation, a quantitative approach was used. Emphasising numerical and statistical analysis of survey data, using computers to modify statistical data, and other observable data metrics, the quantitative research approach is defined.

### **Research Design**

This work makes use of a correlation design (1.3). Health consciousness and opinions of food safety and customer purchase intention show a positive association. This design intends to investigate the link between the two types of data. Given its quantitative approach and explanatory objective, this study fit quite nicely. It accumulates additional data and examines their interactions to find a link between factors.

### **Sampling Techniques**

A sampling technique in research is a means of selecting a subset of a population to study. The sampling technique to be used should be determined by the type of the data to be acquired as well as by research objectives. Random sample techniques abound and include convenience, stratified, and random. Three most often used techniques of sampling are convenience, stratified, and random. Whereas random sampling is selecting a subset at random from a larger population, stratified sampling is choosing a subset of the population according on predefined criteria. Convenience sampling is the choosing of a conveniently available sample. Customers were chosen at random.

### **Target Population**

The intended subjects of the study are health-conscious Pakistanis. Convenience sampling allowed the data to be gathered using Google survey forms and questionnaires.

### **Sample Size**

This study employed a quantitative approach, collecting data from 254 health-conscious Pakistani consumers via an online survey using convenience sampling. The sample included diverse demographics (age 18–55, 52% female, 48% male) to ensure representativeness. A 5-point Likert scale questionnaire, adapted from prior studies (Iqbal et al., 2021), measured health consciousness, food safety concerns, and purchase intentions. Partial Least Squares SEM (PLS-SEM) analyzed



the data, assessing reliability, convergent/discriminant validity (Cronbach's  $\alpha > 0.7$ , HTMT  $< 0.9$ ), and path coefficients. Ethical protocols included informed consent, anonymity, and voluntary participation, approved by the institutional review board. The structural model tested hypotheses, with bootstrapping (5,000 samples) to validate mediation effects of consumer participation/engagement.

### **Statistical Technique**

The "Partial Least Structured (PLS4)" is used in this study to test hypotheses. Regression analysis, factor analysis, descriptive analysis and reliability analysis are among the tests that are used to the data.

### **Measurement Model**

It is useful to analyze discriminant and convergent validity.

Additional computations for convergent validity include average extracted variance, composite reliability, cronbach's alpha, and individual reliability. To find the discriminant validity (HTMT), one uses the correlation matrix, the cross-loading analysis, and the heterotrait-monotrait correlation ratio.

### **Structural Model**

It is mainly composed of regression analysis (path coefficients).

### **Questionnaire And Measurement Instrument**

A 5-point Likert scale was utilised in the data collection questionnaire: (1) strongly disagree (2) disagree (3) neutral (4) agree (5) strongly concur in order to better grasp our research topic from the respondents' perspective, we presented specific questions. The survey was modified based on earlier research. The items were adopted due to earlier research's worries about food safety and health consciousness (Iqbal et al., 2021).

### **Ethical Consideration**

The data for the research study is gathered voluntarily from respondents via questionnaire. It is only used to achieve the research goal and should not be used to harm the dignity of research participants. Furthermore, personal information of any sort should never be shared and should always be kept private.

### **Operational Definitions**

#### **Health consciousness**

In order to identify patterns of person-environment interaction, we might look at health as a process of increasing consciousness that encompasses both illness and non-disease. It is essential to understand health by switching from a part-to-whole perspective in order to see patterns.



### Food Safety Concern

In order to minimise the risk of food-borne illness, it is important to handle, prepare, and store food in a manner that is referred to as "food safety." A universal problem, food safety has an impact on many facets of daily life. There are a few guidelines that must be followed in order to prevent food from being contaminated and causing food poisoning.

### Purchase Intension

"Purchase intention" is a phrase used to characterise a buyer's degree of seriousness over a purchase. Variables have an influence both inside—that of one's own thoughts and attitudes—and outside—that of one's exposure to marketing and peer pressure. Stated differently, it reveals the buyer's degree of readiness or inclination towards purchase.

### Consumer Involvement

Engagement is a driving force in consumer behavior. It can be used to describe how involved, thorough, or complex customers' buying decisions are.

## Discussion and Analysis

### PLS-SEM Analysis

Table 1  
 Measurement Model

Variables	Items	Source
Health Consciousness	4	(Jawad Iqbal, Donglei Yu, Maria Zubair, Muhammad Imran, Hafiz Muhammad Usman Khizar, & Muhammad Imran, 2021)
Food Safety Concern	3	(Jawad Iqbal, Donglei Yu, Maria Zubair, Muhammad Imran, Hafiz Muhammad Usman Khizar, & Muhammad Imran, 2021)
Consumer Involvement	4	(Jawad Iqbal, Donglei Yu, Maria Zubair, Muhammad Imran, Hafiz Muhammad Usman Khizar, & Muhammad Imran, 2021)
Purchase Intension	3	(Jawad Iqbal, Donglei Yu, Maria Zubair, Muhammad Imran, Hafiz Muhammad Usman Khizar, & Muhammad Imran, 2021)

### Data Analysis Technique

The data gathered from the questionnaire is analyzed using SMART PLS 4 in according to the objectives of this study. A popular and successful tool for statistical analysis is Smart PLS 4.



## **Outer Model Measurement**

Apart from confirming the correctness of the data, the measurement of the outer model creates the link between the variables and the objects. Reliability measures internal consistency of the variables; validity evaluates convergent and discriminate validity.

### **Reliability Testing**

Research data is subject to composite reliability testing to ascertain its consistency and dependability (Neuman, 2007). Composite reliability testing is the most commonly used method for determining data dependability when compared to the Cronbach's alpha approach. This is because reliability testing closely monitors internal consistency (Hair et al., 2011). Each variable's composite dependability must be greater than 0.7. Table 2 displays the composite dependability value for each variable. All of the variables used in this study had a composite reliability value greater than 0.7, according to the criterion. All of these figures indicate that the information gathered for this investigation is trustworthy and consistent.

### **Convergent Validity**

Using convergent validity, one may ascertain if the idea model is related (Neuman, 2007). A measure of convergent validity is the Average Variance Extracted (AVE). According to Hair et al. (2014), in order for the statistics to be reliable, the AVE price must be at least 0.5 and the factor loading for convergent validity must be greater than 0.7.

### **Discriminant Validity**

Cross loading, HTMT, and Fornell and Larker can all be used to detect discriminant validity. All of those elements make contributions to the discriminant validity of the model (Hair et al., 2014; Henseler et al., 2015). To determine whether a variable differs from others, the Fornell and Larker standards are used (Hair et al., 2014).

Some studies indicates that Fornell and Larker aren't the pleasant criterion for determining discriminant validity. HTMT standards, then again, assist to validate choice-making information. According to the HTMT restrict, its value have to be less than 0.9 and now not greater than zero.9. This range represents the model's variable discrimination. The HTMT values are proven in Table 5 of this study. Aside from cross loading, another criterion is used to calculate the variable discrimination rate. According to Gefen and Straub (2005), each variable's cross loading value must be at least 0.1 less than the other variables. Table 6 displays the cross loading value for each variable in this study.

The assessment of discriminant validity revealed some potential concerns regarding the robustness of the measurement model. While traditional approaches like Fornell-Larcker criterion and cross-loadings were examined, recent literature (Li and Shan, 2025) suggests these may not be the most reliable indicators. The HTMT (Heterotrait-Monotrait) ratio, which should ideally remain below 0.9, showed values approaching this threshold in some constructs (see Table 5), indicating possible discriminant validity issues. This suggests that while the constructs are theoretically distinct, there



may be some empirical overlap in how respondents perceived certain items. Additionally, cross-loading analysis (Table 6) demonstrated that some indicator loadings on non-intended constructs were only marginally lower (by  $<0.1$ ) than their primary construct loadings, further raising validity questions (Li and Shan, 2025). These findings imply that respondents might not have clearly differentiated between certain conceptually related constructs, such as health consciousness and food safety concerns. While the model still meets minimum validity standards, these borderline results warrant caution in interpretation. Potential explanations include measurement item ambiguity or the inherently interconnected nature of organic food purchase motivations. Future studies could improve discriminant validity by refining scale items to better capture unique dimensions or increasing sample size to enhance measurement precision. These validity considerations should be acknowledged when drawing conclusions from the structural model results. (Li and Shan, 2025)

### Inner Model Measurement & Hypothesis Testing

Measurements of the inner model follow evaluations of the outer model (Henseler et al., 2009; Hair et al., 2011). Data analysis for inner model measurement is carried out using Smart PLS 4, which is referred to as the partial least squares technique. Thanks to the bootstrapping function in the SMART PS 4 (Partial least square) method, we may put the hypothesis to the test (Haenlein and Kaplan 2004). It used 254 data subsamples to look at the inner model values.

Table 2  
 Descriptive Analysis

Name	No.	Missing	Mean	Median	Standard deviation
Timestamp	0	0			
Gender	1	0			
Age	2	0			
HC1	3	0	3.197	3	1.389
HC2	4	0	3.252	3	1.322
HC3	5	0	3.335	4	1.308
HC4	6	0	3.287	3	1.298
FSC1	7	0	3.461	3	1.131
FSC2	8	0	3.787	4	1.058
FSC3	9	0	4.028	4	1.04
CI1	10	0	3.846	4	1.037
CI2	11	0	3.618	4	1.129
CI3	12	0	3.854	4	1.064
CI4	13	0	3.689	4	1.032
PI1	14	0	3.902	4	0.94
PI2	15	0	4.028	4	0.941
PI3	16	0	3.539	4	1.182



Table 3  
 Construct Reliability and Validity

	<b>Cronbach's alpha</b>	<b>Composite reliability (rho_a)</b>	<b>Composite reliability (rho_c)</b>	<b>Average variance extracted (AVE)</b>
<b>Consumer Involvement</b>	0.774	0.774	0.855	0.595
<b>Food Safety Concern</b>	0.653	0.667	0.813	0.594
<b>Health Consciousness</b>	0.935	0.939	0.954	0.838
<b>Purchase Intension</b>	0.577	0.727	0.766	0.549

In Construct Reliability, the Cronbach's alpha and Composite reliability of Food Safety Concern are showing the value in red, indicating that there is an outlier in it, the data is incorrect, or the respondent is unengaged.

Table 4  
 Discriminant Validity – Heterotrait – Monotrait Ratio (Htmt) - Matrix

	<b>Consumer Involvement</b>	<b>Food Safety Concern</b>	<b>Health Consciousness</b>	<b>Purchase Intension</b>
<b>Consumer Involvement</b>				
<b>Food Safety Concern</b>	1.021			
<b>Health Consciousness</b>	0.655	0.73		
<b>Purchase Intension</b>	0.991	0.981	0.511	

In HTMT some of the values of the given variables are shown red it's means that there is no discriminant validity in their relationship.

Table 5  
 Discriminant Validity – Heterotrait – Monotrait Ratio (Htmt) - List

	<b>Heterotrait-monotrait ratio (HTMT)</b>
<b>Food Safety Concern &lt;-&gt; Consumer Involvement</b>	1.021





<b>Health Consciousness &lt;-&gt; Consumer Involvement</b>	0.655
<b>Health Consciousness &lt;-&gt; Food Safety Concern</b>	0.730
<b>Purchase Intension &lt;-&gt; Consumer Involvement</b>	0.991
<b>Purchase Intension &lt;-&gt; Food Safety Concern</b>	0.981
<b>Purchase Intension &lt;-&gt; Health Consciousness</b>	0.511

Table 6  
 Discriminant Validity – Fornell – Larcker Criterion

	<b>Consumer Involvement</b>	<b>Food Safety Concern</b>	<b>Health Consciousness</b>	<b>Purchase Intension</b>
<b>Consumer Involvement</b>	0.772			
<b>Food Safety Concern</b>	0.728	0.771		
<b>Health Consciousness</b>	0.554	0.563	0.915	
<b>Purchase Intension</b>	0.730	0.702	0.407	0.741

If we achieve discriminant validity, the diagonal mention value of any variable should be the highest in the corresponding rows and columns.

Table 7  
 Discriminant Validity – Cross Loadings

	<b>Consumer Involvement</b>	<b>Food Safety Concern</b>	<b>Health Consciousness</b>	<b>Purchase Intension</b>
<b>CI1</b>	0.799	0.569	0.538	0.518
<b>CI2</b>	0.763	0.532	0.490	0.457
<b>CI3</b>	0.776	0.572	0.355	0.606
<b>CI4</b>	0.747	0.569	0.340	0.653
<b>FSC1</b>	0.513	0.726	0.626	0.399
<b>FSC2</b>	0.621	0.863	0.447	0.653
<b>FSC3</b>	0.544	0.715	0.243	0.551
<b>HC1</b>	0.526	0.513	0.904	0.417
<b>HC2</b>	0.538	0.534	0.946	0.392
<b>HC3</b>	0.499	0.501	0.920	0.349
<b>HC4</b>	0.460	0.515	0.891	0.327
<b>PI1</b>	0.674	0.672	0.396	0.880
<b>PI2</b>	0.619	0.600	0.373	0.860
<b>PI3</b>	0.186	0.071	-0.064	0.366



We shall observe in cross loading that one variable's relationship to its own item will be stronger than its relationship to other variable items.

### Structural Model

Table 8  
 Bootstrapping

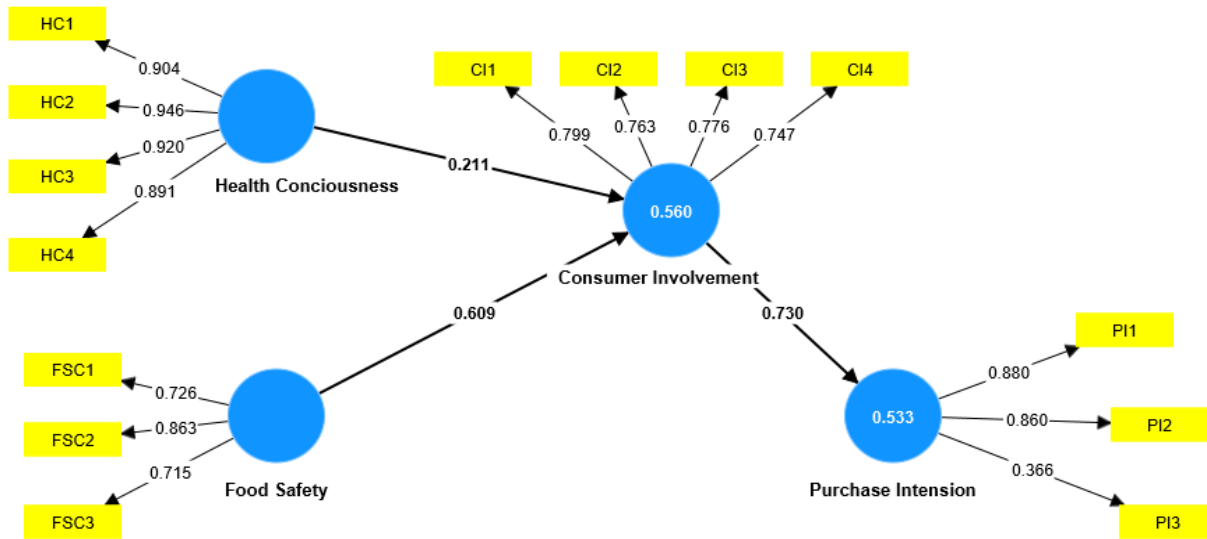
			<b>Original sample (O)</b>	<b>Sample mean (M)</b>	<b>Standard deviation (STDEV)</b>	<b>T statistics ( O/STDEV )</b>	<b>P values</b>
<b>Consumer Involvement Purchase Intension</b>	->	0.730	0.732	0.038	19.106	0.000	
<b>Food Safety Concern Consumer Involvement</b>	->	0.609	0.609	0.051	11.838	0.000	
<b>Health Consciousness Consumer Involvement</b>	->	0.211	0.212	0.057	3.700	0.000	

All of the hypothesis developed in the research are accepted as a result of Bootstrapping.

Table 9  
 Model Fit

	<b>Saturated model</b>	<b>Estimated model</b>
<b>SRMR</b>	0.108	0.111
<b>d_ ULS</b>	1.216	1.285
<b>d_ G</b>	0.406	0.438
<b>Chi-square</b>	609.661	641.297
<b>NFI</b>	0.733	0.719

Figure 2



The findings of this study align with recent global research on organic food consumption, while also highlighting unique aspects of the Pakistani market. Similar to Arcese et al. (2024) and Li & Shan (2025), health consciousness emerged as a key driver of purchase intention, reinforcing that consumers prioritize personal well-being when choosing organic products. However, unlike studies in Western contexts (Baydeniz et al., 2024), food safety concerns played an even stronger role in Pakistan, likely due to recurring food adulteration scandals and lax regulatory enforcement—a trend also observed in other developing nations (Bazhan et al., 2024; Septiani et al., 2024)

The mediating role of consumer participation and engagement echoes Pan & Wu’s (2024) sequential mediation model, suggesting that active involvement (e.g., seeking health information or advocating for organic labels) strengthens the link between health/safety concerns and purchase decisions. This finding is particularly relevant for marketers, as it supports Guragain’s (2024) recommendation that educational campaigns and community-driven initiatives can enhance organic food adoption. However, the study diverges from Munaqib et al. (2025) in that willingness to pay a premium was not a moderating factor in Pakistan, likely due to income constraints—a critical consideration for pricing strategies in emerging markets.

These insights call for tailored interventions, such as affordability programs (e.g., subsidies) and stricter food safety certifications, to bridge the gap between intention and actual purchase behavior in price-sensitive regions.

## Conclusion and Recommendation

### Conclusion

Organic food companies are booming. Researchers and industry leaders think this poll will reveal why customers choose organic food. A detailed research method emphasises consumers' health



knowledge, food safety concerns, and involvement. To aid strategic decision-making in this burgeoning industry, we examine how these factors impact customers' organic and healthy food purchases. This study confirms that health consciousness and food safety concerns significantly influence Pakistani consumers' intention to purchase organic food, with consumer participation and engagement acting as key mediators. The findings underscore the growing demand for safer and healthier food options in developing markets, where regulatory gaps and food scandals amplify consumer anxieties.

Practically, the results suggest that organic food marketers should prioritize transparent labeling, educational campaigns, and community engagement to build trust and reinforce health benefits. Policymakers, meanwhile, must strengthen food safety regulations and incentivize organic farming to meet rising demand. A key limitation of this study is its reliance on self-reported data, which may not fully capture actual purchasing behavior. Future research could incorporate observational methods or longitudinal designs to validate these findings. Additionally, exploring cultural and socioeconomic moderators (e.g., income levels, urban vs. rural disparities) could provide deeper insights into adoption barriers. Ultimately, this study contributes to the global discourse on sustainable consumption by highlighting the unique drivers of organic food demand in Pakistan. By addressing health, safety, and engagement factors, stakeholders can foster a more robust organic food market that benefits both consumers and producers.

### **Recommendations**

Although this research has certain advantages, it also has significant drawbacks. For instance, the study only used a sample from one nation. Future studies should examine our model utilizing a diverse sample of individuals from different nations and cultures in order to provide a wider perspective. Additionally, we gathered cross-sectional data that can result in common method variance (CMV). We protected most of the method by maintaining the participants' identity and privacy. Future studies should use long-term or experimental methods to address this limiting of the possible risk of CMV. The second stage of our model includes a boundary condition that researchers might also want to research. Researchers in the future should use a bigger sample size to get a better picture of the community and more reliable results. Our research sample size of 254 respondents is too small to draw any firm conclusions on the significance of the factors.

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