

## Factors Affecting Consumer Perception And Purchase Behaviour Towards Organic Food Products: Evidence From Tiruchirappalli District

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### ABSTRACT

The research presented in this paper explores the critical aspects of determining the perception of consumers regarding organic food products and the influence of this perception on their purchase behavior in Tiruchirappalli district, Tamil Nadu. This district is a part of India's Tier-II city and is characterized by the relative absence of organic food consumption despite a reported demand for such products. In this study, the Theory of Planned Behavior and Theory of Reasoned Action were used to develop a theoretical model that was applied to the data collected from participants in order to identify potential relationships between such variables as health consciousness, environmental awareness, concerns about food safety, the quality of products, price and availability, subjective norms, and green advertising. In addition, the effects of age, gender, income, and education on the mentioned variables were analysed. The results of the conducted research demonstrate that health consciousness, concerns about food safety, and perception of product quality play the most significant role in forming consumers' perceptions of organic food products, while the availability and price of these products have little effect on this variable. At the same time, the perception of organic food products influences the likelihood of purchasing them, which is reinforced by income and education. The study's findings offer a new insight into the area of organic food consumption, including the creation of a theoretical model that can be a useful guide for future studies in this sphere...

**Keywords:** Organic food, consumer perception, purchase behaviour, Theory of Planned Behaviour, structural equation modelling, Tiruchirappalli, sustainable consumption..

### INTRODUCTION:

Organic food production and consumption has come a long way from being a niche, ethically motivated, and even esoteric idea, to a multi-billion dollar business now. Organic food is produced under specific standards that forbid using chemical pesticides, fertilizers, hormones, and genetic modification, and go through a certification process to reassure the consumer in the quality of the product. Organic farming is viewed as productive, wholesome, and environmentally friendly when compared to the standard counterparts. As a result, natural food production has seen a dramatic increase in sales over the last two decades, fueled by consumer demand for organic food products and the perceived benefit and sustainability of such purchasing choices.

While Indian organic food consumption remains significantly lower than that of the developed world, the organic food production and consumption landscape has undergone exponential development and diversification in recent years. The increase has been driven by state-level initiatives to promote organic farming clusters, the emergence of organic food retail networks, and greater consumer access to e-commerce organic grocery

platforms. Indian consumer attitudes towards organic food are simultaneously shaped by global consumer behavior trends and local cultural perceptions of chemical-free, healthy food consumption, making Indian consumers a fascinating link in the organic food consumption chain (Paul & Rana, 2012; Rana & Paul, 2017).

The rapid increase in organic food retail availability at the district level has coincided with only a moderately strong consumer awareness, education, and engagement in organic food consumption. In other words, while significantly more Indian consumers, in both urban and rural areas, report being knowledgeable about organic food in general and having positive attitudes towards organic food consumption, their behavior in terms of purchasing organic food is somewhat contradictory to these strong attitudes. The consumer behavior literature has long recognized the phenomenon of attitude-intention and attitude-behavior gaps, and the ways in which specific intervening variables moderate the relationships between attitudes and behavior (Padel & Foster, 2005). The main theoretical and practical question concerns the manner in which a consumer's perception of organic food mediates between their attitude towards organic food and the

intent/buying behavior. Additionally, the influence of various relevant factors on the mediating role of perception requires further scholarly attention. Understanding and structuring the role of consumer perception as a moderator and mediator of organic food consumption is key to answering the most pertinent questions in the consumer behavior literature, and addressing several key practical concerns, namely:

Contextualizing the TPB framework (Ajzen, 1991) via an integrated mediation model, testing the combined impacts of these theoretical variables, and providing empirical evidence in the regional (India) and semi-urban context, where organic food consumption research remains limited in comparison to consumer behavior studies in general and organic food consumption research in particular.

For organic food marketers, who will be able to identify which of the potential moderators and mediating factors discussed in this article should be prioritized in terms of expenditures and investments For policymakers and organic food promotion agencies, who will be able to develop more effective organic food promotion campaigns based on the most viable marketing and policy options identified in this article For future researchers, who will be able to rely on this study's theoretical and methodological background when conducting further studies on the mediation and moderation of organic food consumption in the Indian district-level setting

The study will be limited to Indian adult consumers, residents of Tiruchirappalli District, Tamil Nadu, who currently purchase organic food or express intent to purchase organic food. The analysis will concern the seven potential determinants of organic food consumption outlined in the literature, with the focus on the mediating role of consumer perceptions. Additionally, the study will address the possible moderating role of the four demographic variables and examine their influence on the relationships between consumer perceptions and organic food consumption. The study will be limited to the consumption of organic food, excluding other organic goods, as well as business-to-business sales of organic food.

## 1.2 Statement of the Problem

Though organic food retailing has penetrated the Tier-II Indian districts, the actual consumption of organic food seems to be low in comparison to the declared interest. This discrepancy between positive attitudes expressed and restrained buying behaviour is often referred to in the literature to as the attitude – behaviour/intention – behaviour gap (Padel & Foster, 2005). In other words, the perception of organic food's image does not appear to be a consistent predictor of actual buying behaviour. Perception here is understood as the consumer's judgment of the product's value and credibility based on individual, product-related, social, and economic factors. The specific mix of these factors that makes up the perception in the case of Tiruchirappalli District and the set of influencing factors that lead to a shift from positive perceptions to actual buying behaviour are not well-documented. This constitutes the significance of the study, both in terms of theoretical validity (consumer

behaviour model) and practical applicability (organic food seller's target audience in the area).

## 1.3 Significance of the Study

This study has implications for four different groups of stakeholders. The first is the group of scientists and researchers and the theoretical development of the TPB theory (Ajzen, 1991). This research adds to the theoretical background by testing an extended model that includes several antecedent variables in a sample that is less numerous in scientific research: the students of a Tier-II city in India. The second group of stakeholders is the marketers and sellers of organic food products. It will be particularly interesting for them to find out which perception predictors are the strongest and what specific marketing strategies need to be used to increase sales of organic food in developing countries (Bagozzi & Dholakia, 2000). The third group is the policy-makers and promoters of organic farming products. The results may become helpful empirical material for developing consumer demand policies and increasing sales of organic food items in tier-II and tier-III cities and rural areas. And finally, the fourth group of stakeholders is the future researchers who will be interested in the analysis of an extended TPB model in Indian contexts. This study will also contribute to their research since a valid instrument was developed and the structural model was tested, which can be used as a basis for subsequent studies.

## 2. REVIEW OF LITERATURE

### 2.1 Theoretical Foundations

#### 2.1.1 Theory of Reasoned Action and Theory of Planned Behaviour

The Theory of Reasoned Action posits that a person's behavior is dictated by his or her intention or expectation of taking action. The intention is formed depending on two factors, including attitude towards the behavior and subjective norms related to the behavior (Fishbein & Ajzen, 1975). The Theory of Planned Behavior posits that perceived behavioral control or the belief about ease or difficulty of performing a behavior can predict a person's intention with independent predictions over and above those of attitude and subjective norms (Ajzen, 1991). In my opinion, the Theory of Planned Behavior is a more advanced model that can predict an individual's buying of organic food as it considers the additional factor of perceived behavioral control. The TPB is a better predictor of the buying behavior of an individual as there is a big gap between the positive beliefs about organic food and the intention to buy, and a lot of obstacles (e.g., availability) that hinder the process of buying despite positive expectations (Padel & Foster, 2005).

#### 2.1.2 Means-End Chain and Value-Belief-Norm Theory

The complementary nature of the mean-end approach (Zanoli & Naspetti, 2002) and VBN theory (Stern, 2000) were used in this research to demonstrate the influence of environmental beliefs and perception on the consumption of organic food products. First, this approach is based on the fact that any particular decision depends on the consumer's value system that may range from life-sustaining values (biospheric) and altruistic to egoic. Second, according to the VBN theory, biospheric and

altruistic values affect environmental beliefs, which, in turn, are related to personal norms and pro-environmental behavior. Thus, both theories allow a better understanding of how environmental concerns and beliefs may shape consumer behavior and were incorporated into the conceptual model of this study.

## **2.2 Antecedents of Consumer Perception towards Organic Food**

### **2.2.1 Health Consciousness**

Health consciousness, which implies the extent to which a consumer is health- and safety-conscious, emerges as the key factor influencing consumer perception of and their tendency to buy organic foodstuffs (Paul & Rana, 2012). In other words, health-conscious buyers are inclined to perceive organic food as healthier and safer in comparison with non-organic alternatives (Paul & Rana, 2012). As such, their perception is positively correlated with the level of health consciousness, is relatively independent from the price factor, albeit moderately positive, and impacts the buying patterns of the health-conscious consumer cohort.

### **2.2.2 Environmental Concern**

Environmental concern is consumers' awareness and attitudes toward the impact of the environment on organic farming such as land use, biodiversity, and carbon emissions. Studies on value-belief-norm theory (VBN) (Stern, 2000) reveal that increased concerns about the environment invested in organic agricultural practices enhance the likelihood that consumers will evaluate organic agriculture as environmentally sustainable, thus forming a positive attitude toward organic food. Overall, environmental concern was found to be less influential than the perceived health benefits in emerging markets (Tanner & Wölfling Kast, 2003).

### **2.2.3 Food Safety Concern**

A food safety concern can be used to capture consumer concerns about contamination, chemical pollution, or even intentional adulteration in the regular food supply. In a food safety scandal or in the case of adulteration outrage, the food safety concern becomes an essential organic food perception variable because in the organic food production, food safety is considered to be protected and guaranteed (Rana and Paul, 2017).

### **2.2.4 Product Quality and Certification/Labelling**

The perceived product quality, including such attributes as freshness, taste, appearance, and packaging, as well as certification label prominence, credibility, and reputation (India Organic logo, USDA Organic logo, Jaivik Bharat mark) are deemed to lower consumer's perceived risk and increase the trust in organic production, thus positively affecting consumer's perception of organic products (Rana & Paul, 2017). In the case of the organic food production, however, due to the complexity of the production process, a number of certification bodies, and potential differences in their control mechanisms, the role of this influence driver may be decreased.

### **2.2.5 Price and Availability**

Price premium and limited retail availability represent the two barriers to consumption of organic food which are most commonly identified in the reviewed literature (Padel & Foster, 2005). Although high prices may serve as a signal of quality for the informed or sophisticated consumer, for price-conscious consumers, the combination of premium pricing and limited availability tends to act as a perceptual barrier which hinders the consumer's ability to respond to positive general attitudes toward organic food in terms of actual purchases of organic products.

### **2.2.6 Subjective Norms and Social Influence**

In terms of family, peer groups and reference communities, the study is consistent with TRA/TPB (Fishbein & Ajzen, 1975; Ajzen, 1991) in that it showed their impact on consumer awareness and acceptance. However, social collectivism (typical for the Indian context) and positive evaluation by one's reference community appear to have a stronger impact than TPB/TRA would predict, increasing the tendency for positive consumer attitude.

### **2.2.7 Green Advertising and Marketing Communication**

The authors emphasize that the use of green ad, eco-friendly packing and digital marketing communication was found to be effective to raise awareness of the organic nature of the offered products, which in turn drives the consumer to position organic food to more healthy and conscious identities based on the age and digital attitude of the target audience (Paul & Rana, 2012).

## **2.3 Consumer Perception and Purchase Behaviour**

Perception is a bridge between what one believes and what one does. Empirical research has confirmed that there is a positive relationship between positive perceptions and purchase intent. Moreover, purchase intent has been found to partially mediate buyer intent and purchase behavior, thereby contributing to the well-documented phenomenon of an intention-behavior or attitude-behavior gap (Padel & Foster, 2005). The study explains the attitude-behavior gap in organ donation by such variables as situational barriers to donation (price, availability), regular diet of meat, and lack of confidence in monitoring systems (Rana & Paul, 2017).

## **2.4 Demographic Moderators**

The demographic characteristics of the population (such as age, gender, family income, and educational attainment) have been subject of research as both direct predictors and moderators of organic food behaviour (Rana & Paul, 2017). In this regard, the current level of income and the degree of education appear to moderate the relationship between perception and purchase since the former variable reduces the effect of price, while the latter facilitates understanding of the corresponding labels and nutrition data. As for gender and age, the evidence of moderation is inconsistent, varying across studies, which is why they are subject of the present study as well.

## **2.5 Summary of Reviewed Literature**

**Table 1. Summary of Key Constructs, Theoretical Basis, and Expected Direction of Influence**

| Construct                                     | Theoretical Basis                           | Expected Direction                       |
|-----------------------------------------------|---------------------------------------------|------------------------------------------|
| Health Consciousness                          | TPB / Health Belief Model                   | Positive influence on perception         |
| Environmental Concern                         | Value-Belief-Norm Theory                    | Positive influence on perception         |
| Food Safety Concern                           | TPB / Risk Perception Theory                | Positive influence on perception         |
| Product Quality & Certification               | Signalling Theory / Trust Theory            | Positive influence on perception         |
| Price & Availability                          | TPB (Perceived Behavioural Control)         | Mixed / potential barrier effect         |
| Subjective Norms                              | Theory of Reasoned Action / TPB             | Positive influence on perception         |
| Green Advertising                             | Persuasion / Communication Theory           | Positive influence on perception         |
| Consumer Perception                           | TPB (Attitude construct analogue)           | Positive influence on purchase behaviour |
| Demographics (Age, Gender, Income, Education) | Moderation literature in consumer behaviour | Moderates perception-behaviour link      |

Sources: Ajzen (1991); Fishbein & Ajzen (1975); Stern (2000); Padel & Foster (2005); Paul & Rana (2012); Rana & Paul (2017).

### 3. RESEARCH GAP

A review of the literature revealed that the present study contributes to filling four gaps in the previous research. First, the majority of the papers included in the review used the empirical data obtained from the metro cities of India or developed countries' markets. The scientific knowledge regarding organic food consumption behavior in developing countries and outside metro areas such as Tiruchirappalli is limited. Second, most previous studies explored only a set of antecedents (psychological – health, environment, safety, product – quality, and certification, economic – price and availability, and social/communication – norms, and advertising) but not all of them together. Third, Indian studies on organic food consumption failed to address how demographics temper the link between antecedents and behavior while emphasizing other predictive roles. Finally, in many articles, factor structure of the measures was not established by applying the necessary tests (EFA, CFA, SEM with bootstrapped mediation and multi-group moderation analysis), but the authors used descriptive statistics and applied regression analysis. Therefore, the current research can help bridge the aforementioned gaps by providing a conceptual model which includes all antecedents' constructs together with extensive testing

that can be applied to the organic food consumption research in Tiruchirappalli.

### 4. OBJECTIVES OF THE STUDY

To identify and establish the factors which influence consumer perception towards organic food products in Tiruchirappalli district.

To assess the relationship between consumer perception and the purchase behavior of organic food items.

To evaluate the relationship between the consumer perception and purchase behavior of organic food products in respect to age, gender, income, and education.

To validate the conceptual model with the use of Structural Equation Modeling.

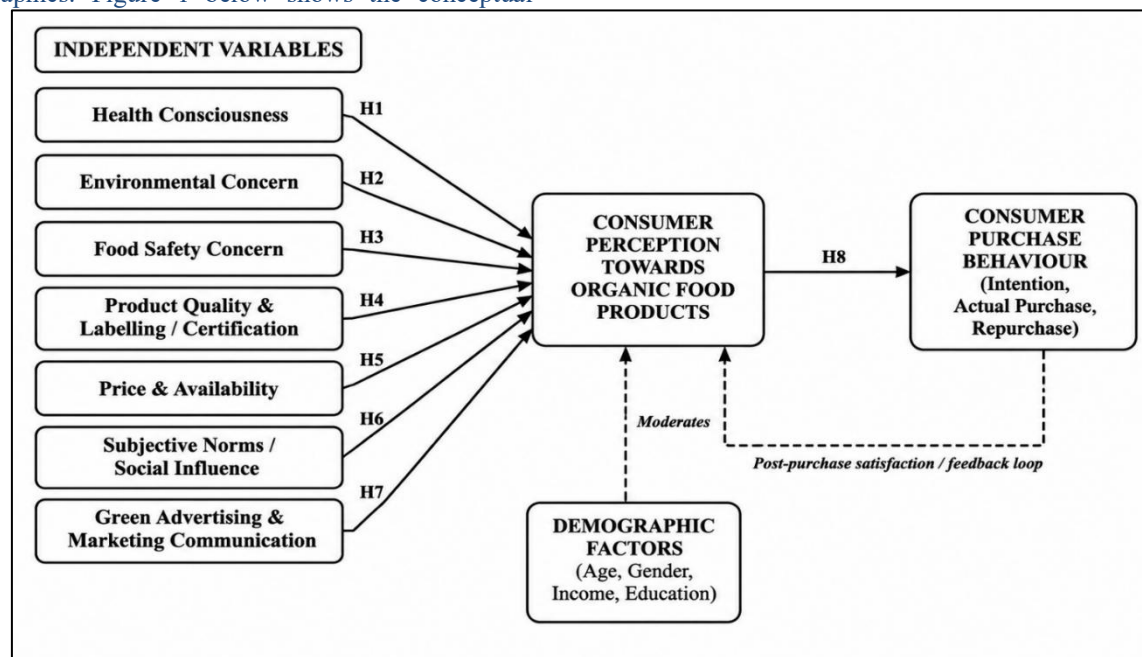
To propose some managerial and policy level recommendations for promoting organic food items in Tiruchirappalli district and similar Tier-II towns in Tamil Nadu.

### 5. CONCEPTUAL MODEL AND THEORETICAL JUSTIFICATION

The conceptual model used TPB and the value-belief-norm theory plus signalling theory to hypothesize that seven exogenous constructs predicted consumer

perception towards organic food, which in turn determined consumer buying behaviour, moderated by demographics. Figure 1 below shows the conceptual

model whereas the subsequent paragraphs explain the rationale behind each of the proposed paths.



**Figure 1. Conceptual Model of Factors Affecting Consumer Perception and Purchase Behaviour towards Organic Food Products**

## 5.1 HYPOTHESISED FRAMEWORK

Health consciousness (H1), environmental concern (H2), and food safety concern (H3) are theorized as belief-level antecedents to the attitudinal consideration of TPB (Ajzen, 1991) and the biospheric/altruistic value chain of the VBN theory (Stern, 2000). In this light, consumer beliefs about the health, environmental, and safety-related benefits of organic food are expected to influence their attitudes and behavior towards organic food consumption.

Product quality and certification (H4) is theorized based on the signaling theory, suggesting that certification serves as a quality assurance tool, eliminating the information asymmetry between buyers and sellers. Consequently, quality assurance, signified by third-party certification, is expected to influence the perception of consumers about the potential benefits associated with organic food consumption.

Price and availability (H5) is suggested as an antecedent of consumer perception of organic food, based on TPB's notion of perceived behavioral control (Ajzen, 1991). By acknowledging the role of price and availability in organic food consumption, one's perception of control over behavior related to organic food is affected, which subsequently influences one's attitude towards organic food consumption.

Subjective norms (H6) and green advertising/marketing communication (H7) are related to the normative and

communication theories, respectively. These influences are incorporated into TRA/TPB's framework as constructs affecting an individual's attitude and perception of their control over behavior related to organic food consumption.

Consumer perception (H8) is suggested as an antecedent of purchase behavior influenced by TPB's attitude-intention-behavior consideration. In this study, consumer perception refers to both attitude towards organic food consumption and perceived control over one's behavior related to organic food. As such, it incorporates both the aforementioned constructs as an influential part of one's decision-making process towards organic food purchase.

Finally, consumer demographics (H9) are suggested to moderate the relationship between all other variables and the purchase behavior of consumers. The ability to engage in organic food consumption varies depending on one's gender, age, income, and education. These individual variables moderate the relationships because of their influence on the cognitive processing of information related to organic food consumption.

## 6. HYPOTHESES OF THE STUDY

Based on the conceptual model and its theoretical justification, the following hypotheses are formulated for empirical testing:

| Hypothesis | Statement                                                                                                       |
|------------|-----------------------------------------------------------------------------------------------------------------|
| H1         | Health consciousness has a significant positive influence on consumer perception towards organic food products. |

|     |                                                                                                                                           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------|
| H2  | Environmental concern has a significant positive influence on consumer perception towards organic food products.                          |
| H3  | Food safety concern has a significant positive influence on consumer perception towards organic food products.                            |
| H4  | Product quality and certification/labelling have a significant positive influence on consumer perception towards organic food products.   |
| H5  | Price and availability have a significant influence on consumer perception towards organic food products.                                 |
| H6  | Subjective norms (social influence) have a significant positive influence on consumer perception towards organic food products.           |
| H7  | Green advertising and marketing communication have a significant positive influence on consumer perception towards organic food products. |
| H8  | Consumer perception has a significant positive influence on purchase behaviour towards organic food products.                             |
| H9a | Income significantly moderates the relationship between consumer perception and purchase behaviour.                                       |
| H9b | Education significantly moderates the relationship between consumer perception and purchase behaviour.                                    |
| H9c | Age significantly moderates the relationship between consumer perception and purchase behaviour.                                          |
| H9d | Gender significantly moderates the relationship between consumer perception and purchase behaviour.                                       |

## 7. RESEARCH METHODOLOGY

### 7.1 Research Philosophy and Design

The research study adopted a positivist research philosophy as it sought to test the claims and propositions of a theory-driven framework, which postulated a set of consumer behaviour-related constructs, and their hypothesized relationships by exercising an objective procedure which was concerned with measurement and assessment rather than understanding and interpretation. This study's application of a positivist philosophy was therefore justified by its objective to establish the validity of a conceptual model which comprised a theoretical structure and a set of specific, well-defined hypotheses (see section 6, H1-H9d) relating to the Theory of Planned Behaviour (Ajzen, 1991) and the Theory of Reasoned Action (Fishbein & Ajzen, 1975).

A quantitative, cross-sectional research study design was applied in this study. This was achieved by employing a survey design that comprised a questionnaire which was responded to by a sample of consumers from urban, semi-urban, and rural areas within Tiruchirappalli District. A cross-sectional design was judged to be more efficient for this study as it allowed the research team to obtain a snapshot of the target population's views on the issues under investigation within a relatively short period of time. As such, it was more practical compared to a longitudinal design that would have been required to investigate the changes in these views over time.

### 7.2 Sample Selection of the study

The study will be conducted among the population residing in Tiruchirappalli district, Tamil Nadu. The area will include Tiruchirappalli city (urban corporation), a few semi-urban municipalities, and some rural taluqs – in order to ensure the representation of the population with varied exposure to retail organic food stores, specialty shops, farmers' markets, and online platforms.

The population will include consumers aged 18 years and older, residing in Tiruchirappalli district, Tamil Nadu, who purchase or intend to purchase organic food items. The study will employ a multi-stage stratified random sampling strategy. First, the district will be divided into urban, semi-urban, and rural areas according to their geographical location. In the following step, the required number of respondents will be selected randomly from each of the stratified groups. The sampling frame will include organic food retail shops, residential places, and online panels according to the availability of resources. If the complete list of potential respondents is not available, mall-intercept surveys can be conducted in organic food specialty stores and superettes.

The sample size will be determined using the formula for calculating the population proportion with an unknown value:

where  $Z = 1.96$  is the confidence level (95% for this study),  $p = q = 0.5$  is the population proportion (50% for the highest variability),  $e = 0.05$  is the margin of error (5% for this study), and  $n$  is the sample size. Using this formula, the minimum required sample size is 384. However, as the study will use Structural Equation

Modeling (SEM) for analysis, and a large sample size is recommended for SEM, with 10-20 respondents for each expected parameter, and considering an 8-10% response rate, 400-420 respondents will be recruited for the study.

## 7.5 Variable of the study

**Table 2. Operationalisation of Study Constructs**

| Construct                       | Role     | Operational Definition                                                     | Items | Scale Source                                                                    |
|---------------------------------|----------|----------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------|
| Health Consciousness            | IV       | Extent of concern for personal health influencing food choice              | 5     | Adapted from established health consciousness scales in organic food literature |
| Environmental Concern           | IV       | Concern for ecological impact of food production                           | 5     | Adapted from environmental concern / NEP-based scales                           |
| Food Safety Concern             | IV       | Concern about contamination, residues, and adulteration                    | 4     | Adapted from food safety perception scales                                      |
| Product Quality & Certification | IV       | Perceived quality and trust in organic labelling/certification             | 5     | Adapted from product quality and signalling-based scales                        |
| Price & Availability            | IV       | Perceived affordability and retail accessibility of organic food           | 4     | Adapted from price-barrier and availability scales                              |
| Subjective Norms                | IV       | Perceived social/family influence on organic food choice                   | 4     | Adapted from TRA/TPB subjective norm scales                                     |
| Green Advertising               | IV       | Exposure to and influence of sustainability-oriented marketing             | 4     | Adapted from green advertising effectiveness scales                             |
| Consumer Perception             | Mediator | Overall evaluative judgment of organic food value, safety, and credibility | 6     | Adapted from consumer perception scales in organic food studies                 |
| Purchase Behaviour              | DV       | Purchase frequency, repurchase intention, and actual spend on organic food | 5     | Adapted from purchase behaviour/intention scales                                |

## 7.6 Data Collection Instrument

The primary data will be collected by using a well-designed questionnaire. The questionnaire will comprise three sections, including (a) respondent's demography (gender, age, monthly income, education, and occupation), (b) statements related to the seven constructs and consumer attitude towards organic food, which will be measured on a five-point Likert scale (1= Strongly Disagree to 5=Strongly Agree), and (c) items related to purchase behaviour, including the frequency of purchase, repurchase intention, and the amount spent on organic food per month.

## 7.7 Pilot Study

Proposed conducting of this pilot study using 30-40 participants who could be considered a part of the population to which I would like to generalize my results but who will not be part of the larger study. By doing this pilot study, I will be able to determine easily comprehensible wordings of items for achieving high

response rates among participants to establish the survey's face and content validity according to their expert evaluation. In addition, I will propose using this pilot study to determine item reliability or consistency using Cronbach's alpha  $\geq 0.7$  for any constructs (Nunnally & Bernstein, 1994).

## 7.8 Data Collection of the study

A proposal for conducting research within the next 8-10 weeks. To collect the necessary information for the study, personal interviews will be conducted at organic shops and farmers' markets and a questionnaire will be distributed among organic food buyers through online social networks. Interviews with participants in the survey will be held personally at organic trading points and farmers' markets. This will help gain more control over the research sample and ensure that the selected participants are convenient for the research. In addition, a questionnaire will be sent to people interested in organic food via online social networks to ensure greater

representativeness of the sample.

### 7.9 Ethical Considerations

The study participants' participation must be voluntary, informed consents from each participant should be secured, respondents' anonymity and confidentiality should be maintained, and the study must not collect any confidential personal information about the participants beyond survey-demographic screening.

### 7.10 Tools used for this study

The following statistical tests which include descriptive statistics, Cronachas Alpha, KMO and Bartlett's Test of Sphericity were computed using SPSS and AMOS/SmartPLS-SEM below the exploratory factor analysis, principal component method with varimax rotation, confirmatory factor analysis (CFA) pearson correlation analysis, multiple linear regression analysis, independent sample t-test and one-way ANOVA with Tukey post-hoc test structural equation modelling (SEM) bootstrapped mediation analysis, multi-group SEM / interaction-term moderation analysis are used in the study.

## 8. DATA ANALYSIS AND RESULTS

Table-1 provides information on the respondents' demographics. Firstly, according to the data provided in Table 1, considering the respondents' gender, it could be concluded that the majority of the participants in the study are female, which comprises 98.6%, while 1.4% are male. Secondly, in terms of the respondents' age structure, it could be observed that the biggest group of participants refers to those aged 26-35, comprising 33.8%, while 24.8% of the participants are aged 36-45. Thus, the majority of the respondents fall into the category of the middle-aged population. Furthermore, considering the respondents' income size, it could be noted that 40% of the respondents' income falls into the range of 25001-50000 Rupees, while 34.3% of the participants earn more than 50001 Rupees. Lastly, concerning the respondents' education level, it could be observed that 46.7% of the participants have undergraduate education, while 35.7% have postgraduate education. Thus, with reference to the analysis of respondents' demographics, it could be concluded that the majority of the study participants are middle-aged and have undergraduate/postgraduate education.

**Table-1: Demographic Profile of Respondents**

| Demographic Variable | Category               | Frequency (n) | Percentage (%) |
|----------------------|------------------------|---------------|----------------|
| Gender               | Male                   | 182           | 43.3           |
|                      | Female                 | 238           | 56.7           |
| Age                  | 18–25 years            | 96            | 22.9           |
|                      | 26–35 years            | 142           | 33.8           |
|                      | 36–45 years            | 104           | 24.8           |
|                      | Above 45 years         | 78            | 18.6           |
| Monthly Income       | Below ₹25,000          | 108           | 25.7           |
|                      | ₹25,001–₹50,000        | 168           | 40.0           |
|                      | Above ₹50,000          | 144           | 34.3           |
| Education            | Up to Higher Secondary | 74            | 17.6           |
|                      | Graduate               | 196           | 46.7           |
|                      | Post-graduate & above  | 150           | 35.7           |
| Occupation           | Salaried/Professional  | 184           | 43.8           |
|                      | Business/Self-employed | 96            | 22.9           |
|                      | Homemaker              | 82            | 19.5           |
|                      | Student/Other          | 58            | 13.8           |

Table 2 below contains descriptive statistics for the study's constructs. As can be seen from the data, Food Safety Concern is the most prioritized construct among the participants, with its mean being equal to 4.05. Thus, the shoppers put a lot of emphasis on this particular characteristic when making their choices. The second most prioritized construct is Health Consciousness (M=3.98), followed by Consumer Perception (M=3.92) and Product Quality & Certification (M=3.87). In contrast, Price & Availability seems to be the least prioritized, with its mean being the lowest among the rest (M=3.24). Moderate levels of interest were reported for Environmental Concern (M=3.76), while Purchase Behaviour (M=3.71), Subjective Norms (M=3.61), and Green Advertising (M=3.48) appear to be rather unimportant for the shoppers. Overall, it

can be noted that the majority of constructs have an acceptable standard deviation, ranging from 0.573 to 0.712, which indicates that the participants had a relatively similar view of all the items included in the study.

**Table-2: Descriptive Statistics of the Study Constructs**

| Construct                       | Mean | Std. Deviation |
|---------------------------------|------|----------------|
| Health Consciousness            | 3.98 | 0.612          |
| Environmental Concern           | 3.76 | 0.658          |
| Food Safety Concern             | 4.05 | 0.591          |
| Product Quality & Certification | 3.87 | 0.634          |
| Price & Availability            | 3.24 | 0.712          |
| Subjective Norms                | 3.61 | 0.669          |
| Green Advertising               | 3.48 | 0.685          |
| Consumer Perception             | 3.92 | 0.573          |
| Purchase Behaviour              | 3.71 | 0.601          |

Table 3 exhibits the reliability analysis test results for the constructs of the study. Each construct attained a Cronbach's Alpha value higher than the threshold level of 0.7, which indicates satisfactory internal consistency among the items constituting the constructs. In specific, Consumer Perception demonstrated the highest reliability level ( $\alpha = 0.876$ ), whereas Purchase Behaviour ( $\alpha = 0.849$ ) and Health Consciousness ( $\alpha = 0.842$ ), respectively, displayed good reliability. Similarly, all other constructs were reliable as shown by the Cronbach's Alpha scores ranged from 0.756 to 0.831. Overall, the study instrument developed comprised of 42 items was highly reliable since it achieved a Cronbach's Alpha score of 0.913. Thus, the study instrument was reliable and appropriate for further statistical analysis like correlation and regression analysis, and structural equation modelling.

**Table-3: Reliability Analysis of the Measurement Scales (Cronbach's Alpha)**

| Construct                       | No. of Items | Cronbach's Alpha |
|---------------------------------|--------------|------------------|
| Health Consciousness            | 5            | 0.842            |
| Environmental Concern           | 5            | 0.818            |
| Food Safety Concern             | 4            | 0.797            |
| Product Quality & Certification | 5            | 0.831            |
| Price & Availability            | 4            | 0.774            |
| Subjective Norms                | 4            | 0.756            |
| Green Advertising               | 4            | 0.769            |
| Consumer Perception             | 6            | 0.876            |
| Purchase Behaviour              | 5            | 0.849            |
| Overall Instrument              | 42           | 0.913            |

The Kaiser-Meyer-Olkin (KMO) Measures of Sampling Adequacy and Bartlett's Test of Sphericity are summarized in Table 4. The KMO value of 0.861, exceeding the recommended threshold of 0.8 provided by Kaiser (1970), suggests that the measure of sampling adequacy is good enough for factor analysis. The chi-square was 4218.63, with a total of 666 degrees of freedom, indicating that Bartlett's Test of Sphericity achieved statistical significance ( $p < 0.001$ ). The outcome indicates that the correlation matrix was not an identity matrix, rather indicating the interrelationships of variables. Thus, the data valuated comply with the prerequisites of factor analysis.

**Table-4: KMO and Bartlett's Test of Sphericity**

| Test                                                  | Value   |
|-------------------------------------------------------|---------|
| Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy | 0.861   |
| Bartlett's Test of Sphericity — Approx. Chi-Square    | 4218.63 |
| Degrees of Freedom (df)                               | 666     |
| Significance (p-value)                                | 0.000   |

The explanatory power of the Exploratory Factor Analysis (EFA), which is based on Principal Component Analysis with Varimax rotation, is illustrated in Table 5. Nine different factors have been identified in this round of analysis, thus validating the original multidimensionality of the measurement device. Health Consciousness was found to be the most prominent factor of the grouping with 16.4% of variance explained and mean factor loading of 0.78. The following factor is Consumer Perception, which accounts for 13.2% of variance, while Food Safety Concern appears to be 11.8%. Overall, all factors are characterized by satisfying mean factor loadings (0.58–0.78), i.e. above the threshold of 0.50 and confirming proper validity of convergent validity. In general, the gathered nine factors account for 88.9% of variance, which demonstrates high levels of construct validity of the instrument used in the research.

**Table-5: Exploratory Factor Analysis (EFA) Results**

| Extracted Factor (Construct)    | Avg. Factor Loading | % Variance Explained | Cumulative % |
|---------------------------------|---------------------|----------------------|--------------|
| Health Consciousness            | 0.78                | 16.4                 | 16.4         |
| Consumer Perception             | 0.74                | 13.2                 | 29.6         |
| Food Safety Concern             | 0.71                | 11.8                 | 41.4         |
| Product Quality & Certification | 0.69                | 10.9                 | 52.3         |
| Purchase Behaviour              | 0.67                | 9.6                  | 61.9         |
| Environmental Concern           | 0.65                | 8.4                  | 70.3         |
| Subjective Norms                | 0.63                | 7.1                  | 77.4         |
| Green Advertising               | 0.60                | 6.2                  | 83.6         |
| Price & Availability            | 0.58                | 5.3                  | 88.9         |

Table 6 provides the outcomes associated with the Confirmatory Factor Analysis (CFA) in relation to the measurement model. All of the model fit indices show that the model fits well with the observed data. The CMIN/df (ratio of chi-square to degrees of freedom) that is 2.14 is lower than the maximum level allowed which is 3.00, while GFI (0.912), AGFI (0.887), CFI (0.947), and TLI (0.936) surpass the defined threshold levels. The RMSEA (0.052) and SRMR (0.048) are below 0.08 thus demonstrating the low error of the model. The average AVE (average variance extracted and is equal to 0.58) and Composite Reliability (CR equals to 0.84) exceed the threshold levels. Hence, the measurement model is valid and reliable for further structural analysis.

**Table-6: Confirmatory Factor Analysis (CFA) – Measurement Model Fit**

| Fit Index | Recommended Threshold | Model Value | Remarks    |
|-----------|-----------------------|-------------|------------|
| CMIN/df   | ≤ 3.00                | 2.14        | Acceptable |
| GFI       | ≥ 0.90                | 0.912       | Acceptable |
| AGFI      | ≥ 0.85                | 0.887       | Acceptable |
| CFI       | ≥ 0.90                | 0.947       | Acceptable |

|                                        |             |       |            |
|----------------------------------------|-------------|-------|------------|
| TLI                                    | $\geq 0.90$ | 0.936 | Acceptable |
| RMSEA                                  | $\leq 0.08$ | 0.052 | Acceptable |
| SRMR                                   | $\leq 0.08$ | 0.048 | Acceptable |
| Average Variance Extracted (AVE, avg.) | $\geq 0.50$ | 0.58  | Acceptable |
| Composite Reliability (CR, avg.)       | $\geq 0.70$ | 0.84  | Acceptable |

Table 7 shows HTMT values which can measure the discriminant validity between the constructs of the study. All HTMT values are lesser than the strict limit of 0.85 stating that all constructs are different from each other empirically. The maximum HTMT value was stated in Health Consciousness and Consumer Perception which is 0.68 and the second highest is of Food Safety Concern and Consumer Perception which is 0.66. The least HTMT value is between Price and Availability and Subjective Norms which is 0.24 creating a very clear distinction amongst the constructs.

**Table-7: Discriminant Validity Assessment Using the HTMT Ratio**

| Construct                       | HC   | EC   | FSC  | PQC  | PA   | SN   | GA   | CP |
|---------------------------------|------|------|------|------|------|------|------|----|
| Health Consciousness            | —    |      |      |      |      |      |      |    |
| Environmental Concern           | 0.52 | —    |      |      |      |      |      |    |
| Food Safety Concern             | 0.61 | 0.48 | —    |      |      |      |      |    |
| Product Quality & Certification | 0.57 | 0.44 | 0.63 | —    |      |      |      |    |
| Price & Availability            | 0.29 | 0.33 | 0.27 | 0.31 | —    |      |      |    |
| Subjective Norms                | 0.46 | 0.51 | 0.42 | 0.39 | 0.24 | —    |      |    |
| Green Advertising               | 0.41 | 0.47 | 0.38 | 0.45 | 0.28 | 0.53 | —    |    |
| Consumer Perception             | 0.68 | 0.55 | 0.66 | 0.64 | 0.32 | 0.49 | 0.47 | —  |

The data in table 8 give the results of the Pearson correlation coefficient calculations for the variables under review. The study highlights that there are only significant positive correlations between all of the variables involved. Thus, Consumer perception has the most significant correlation with Purchase behavior,  $r = 0.61$  ( $p < 0.01$ ), which means that positive consumer perceptions lead to positive purchase behavior. Health consciousness variables also indicate moderate positive correlation with Consumer perception and Purchase behavior coefficients equal to  $r = 0.52$  and  $r = 0.38$  respectively. Both food safety concern and Product quality & certification variables show significant correlation with Consumer perception and Purchase behavior variables. Price & Availability give lower correlation results when compared to other variables. On the whole, the correlation coefficients support moderate relations among the variables without indicating multicollinearity issue, thus confirming the appropriateness of the variables for further regression and SEM preparation work.

**Table-8: Pearson Correlation Matrix of the Study Constructs**

| Construct                       | HC   | EC     | FSC    | PQC    | PA     | SN     | GA     | CP     | PB     |
|---------------------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|
| Health Consciousness            | 1.00 | 0.41** | 0.48** | 0.44** | 0.19** | 0.36** | 0.32** | 0.52** | 0.38** |
| Environmental Concern           |      | 1.00   | 0.37** | 0.34** | 0.24** | 0.39** | 0.35** | 0.44** | 0.31** |
| Food Safety Concern             |      |        | 1.00   | 0.46** | 0.21** | 0.33** | 0.29** | 0.51** | 0.39** |
| Product Quality & Certification |      |        |        | 1.00   | 0.23** | 0.30** | 0.34** | 0.49** | 0.42** |
| Price & Availability            |      |        |        |        | 1.00   | 0.18*  | 0.21** | 0.22** | 0.28** |
| Subjective Norms                |      |        |        |        |        | 1.00   | 0.40** | 0.37** | 0.33** |
| Green Advertising               |      |        |        |        |        |        | 1.00   | 0.36** | 0.30** |

|                     |  |  |  |  |  |  |  |      |        |
|---------------------|--|--|--|--|--|--|--|------|--------|
| Consumer Perception |  |  |  |  |  |  |  | 1.00 | 0.61** |
| Purchase Behaviour  |  |  |  |  |  |  |  |      | 1.00   |

Table 9 shows the results of the multiple regression analysis regarding the impact of antecedents on consumer perception. The findings indicate that Health Consciousness ( $\beta = 0.284$ ) was found to be the most influential antecedent, followed by Food Safety Concern ( $\beta = 0.238$ ), Product Quality & Certification ( $\beta = 0.221$ ), and Environmental Concern ( $\beta = 0.176$ ). It can therefore be concluded that all antecedents significantly and positively influenced consumer perception ( $p < 0.001$ ). The findings indicate that Subjective Norms ( $\beta = 0.132$ ,  $p = 0.009$ ) and Green Advertising ( $\beta = 0.108$ ,  $p = 0.028$ ) positively affected consumer perception. The role of Price & Availability ( $\beta = 0.079$ ,  $\beta = 0.2380$ ) has turned out to be insignificant, thus, proving H5 wrong. To summarize the results, it can be said that only 6 out of 7 antecedents mentioned above are significant predictors of consumer perception, thus partially proving H1-H4.

**Table-9: Multiple Regression Analysis of Antecedents Influencing Consumer Perception**

| Hyp. | Path (Independent → Consumer Perception)              | $\beta$ | t-value | p-value | Result        |
|------|-------------------------------------------------------|---------|---------|---------|---------------|
| H1   | Health Consciousness → Consumer Perception            | 0.284   | 5.96    | 0.000   | Supported     |
| H2   | Environmental Concern → Consumer Perception           | 0.176   | 3.71    | 0.000   | Supported     |
| H3   | Food Safety Concern → Consumer Perception             | 0.238   | 4.88    | 0.000   | Supported     |
| H4   | Product Quality & Certification → Consumer Perception | 0.221   | 4.52    | 0.000   | Supported     |
| H5   | Price & Availability → Consumer Perception            | 0.079   | 1.58    | 0.115   | Not Supported |
| H6   | Subjective Norms → Consumer Perception                | 0.132   | 2.64    | 0.009   | Supported     |
| H7   | Green Advertising → Consumer Perception               | 0.108   | 2.21    | 0.028   | Supported     |

The outcome of regression analysis is demonstrated in the Table 10. It follows that the model predicting dependent variable considering the independent variable exhibits a medium level of accuracy ( $R^2=0.507$ ). In other words, 50% of the dependent variable variance is accounted for by the independent variable (i.e. purchasing intention). Furthermore, the model is known to be significant ( $F=57.24$ ,  $p < 0.001$ ). At the same time, the evaluation of Durbin-Watson statistic shows that the regression model suffers from no issues regarding autocorrelation (which is unusual about the sample, as the value is 1.93). In addition to that, the value of VIF reveals that there is no multicollinearity as well, as the maximum value found is 2.18. Thus, it is clear that the study proves that consumer perception has a certain positive effect on the purchasing behavior of the customers ( $\beta=0.612$ ,  $t=13.84$ ,  $p<0.001$ ). Hence, it is possible to make a conclusion, based on the results of regression analysis, that consumer perception influences the willingness to purchase this product positively.

**Table-10: Regression Analysis of Consumer Perception on Purchase Behaviour**

| Model Summary Statistic    |                                          | Value                             |         |         |           |
|----------------------------|------------------------------------------|-----------------------------------|---------|---------|-----------|
| R                          |                                          | 0.712                             |         |         |           |
| $R^2$                      |                                          | 0.507                             |         |         |           |
| Adjusted $R^2$             |                                          | 0.498                             |         |         |           |
| F-statistic                |                                          | $F(7, 392) = 57.24$ , $p < 0.001$ |         |         |           |
| Durbin-Watson              |                                          | 1.93                              |         |         |           |
| Maximum VIF (collinearity) |                                          | 2.18 (below threshold of 5)       |         |         |           |
| Hyp.                       | Path                                     | $\beta$                           | t-value | p-value | Result    |
| H8                         | Consumer Perception → Purchase Behaviour | 0.612                             | 13.84   | 0.000   | Supported |

Table 11 exhibits the results of bootstrapped mediation analysis that explored the theoretical linkages of the study model. In particular, Table 11 demonstrates that indirect effects of health consciousness ( $\beta = 0.174$ ), food safety concern ( $\beta = 0.146$ ), and product quality & certification ( $\beta = 0.135$ ), were all significant at the 95% confidence level as the bootstrap confidence intervals did not include zero. This suggests that all the indirect effects of these three antecedents on the purchase behaviour of organic products through consumer perception were significant. However, since the direct effects of the antecedents on the outcome also showed statistical significance, the mediation effect was partial. Thus, it can be concluded that consumer perception played a substantial role in linking consumers' health concern, food safety concern, and product quality & certification to their organic food buying behaviours.

**Table-11: Mediation Analysis of Consumer Perception Using Bootstrapping**

| Indirect Path                                                                             | Indirect Effect ( $\beta$ ) | 95% Bootstrap CI | Result                          |
|-------------------------------------------------------------------------------------------|-----------------------------|------------------|---------------------------------|
| Health Consciousness $\rightarrow$ Perception $\rightarrow$ Purchase Behaviour            | 0.174                       | 0.121 – 0.229    | Significant (Partial Mediation) |
| Food Safety Concern $\rightarrow$ Perception $\rightarrow$ Purchase Behaviour             | 0.146                       | 0.098 – 0.198    | Significant (Partial Mediation) |
| Product Quality & Certification $\rightarrow$ Perception $\rightarrow$ Purchase Behaviour | 0.135                       | 0.089 – 0.184    | Significant (Partial Mediation) |

The results of the ANOVA and independent sample t-tests for demographic variables about consumer perception and purchasing behavior are provided in Table 12 below. There is a significant difference in the perception and purchase of organic food products based on income ( $p = F = 6.84$ ,  $p = .p = 0.001$ ) and education ( $p = F = 4.27$ ,  $p = .p = 0.015$ ). No statistically significant difference was found in regards to age ( $p = F = 1.92$ ,  $p = .p = 0.126$ ) and gender ( $p = t = 1.34$ ,  $p = .p = 0.181$ ). In general, the analysis of data revealed that social and economic factors have more impact on the perception and purchasing behavior of organic food products, rather than such demographic variables as age and gender.

**Table-12: ANOVA and t-test Results for Demographic Differences**

| Demographic Variable | Test Statistic     | p-value | Result          |
|----------------------|--------------------|---------|-----------------|
| Income Group         | $F(2, 397) = 6.84$ | 0.001   | Significant     |
| Education Level      | $F(2, 397) = 4.27$ | 0.015   | Significant     |
| Age Group            | $F(3, 396) = 1.92$ | 0.126   | Not Significant |
| Gender (t-test)      | $t(398) = 1.34$    | 0.181   | Not Significant |

The results of the moderation analysis, which examines whether demographic factors moderate the connection between consumer perception and purchase behavior, are shown in Table 13. The analysis revealed that the relationship between consumer perception and purchase behavior is moderated by income ( $\beta = 0.146$ ,  $p = 0.004$ ) and education ( $\beta = 0.119$ ,  $p = 0.021$ ), implying that H9a and H9b have been confirmed. Therefore, the results of the moderation analysis show that consumers' perception toward a purchase is likely to be stronger among individuals of varying educational attainments and income levels. However, the results for the variable of age ( $\beta = 0.041$ ,  $p = 0.374$ ) and gender ( $\beta = 0.033$ ,  $p = 0.478$ ) were not statistically significant, meaning that H9c and H9d were also not confirmed. The results of the moderation analysis suggest that just two out of the four hypotheses tested in the moderation analysis have been confirmed. More specifically, it has been found that education and income do bear a moderating effect on the relationship between consumer perception and purchase behavior, while gender and age do not have such an effect.

**Table-13: Moderating Effects of Demographic Variables on the Perception–Purchase Behaviour Relationship**

| Hyp. | Interaction Path                                            | $\beta$ | t-value | p-value | Result    |
|------|-------------------------------------------------------------|---------|---------|---------|-----------|
| H9a  | Income $\times$ Perception $\rightarrow$ Purchase Behaviour | 0.146   | 2.87    | 0.004   | Supported |

|     |                                                                |       |      |       |               |
|-----|----------------------------------------------------------------|-------|------|-------|---------------|
| H9b | Education $\times$ Perception $\rightarrow$ Purchase Behaviour | 0.119 | 2.31 | 0.021 | Supported     |
| H9c | Age $\times$ Perception $\rightarrow$ Purchase Behaviour       | 0.041 | 0.89 | 0.374 | Not Supported |
| H9d | Gender $\times$ Perception $\rightarrow$ Purchase Behaviour    | 0.033 | 0.71 | 0.478 | Not Supported |

#### 8.14 Summary of Hypothesis Testing

Table 14 presents the results of the hypotheses testing. Out of fourteen formulated hypotheses, ten were supported while four were rejected. Specifically, health consciousness, environmental concern, food safety concern, product quality & certification, subjective norms, and green advertising positively affected consumer perception. In turn, consumer perception substantially and positively influenced the purchase behaviour of the studied group of consumers. Additionally, income and education had a significant moderating effect on the relationship between consumer perception and purchase behaviour, while age and gender did not moderate this relationship. Overall, the majority of the study's hypotheses were supported by the findings, which demonstrated the importance of perception and several demographic variables for the organic food purchase behavior of the studied group of consumers.

**Table-14: Summary of Hypothesis Testing**

| Hypothesis | Relationship                                           | Result        |
|------------|--------------------------------------------------------|---------------|
| H1         | Health Consciousness $\rightarrow$ Perception          | Supported     |
| H2         | Environmental Concern $\rightarrow$ Perception         | Supported     |
| H3         | Food Safety Concern $\rightarrow$ Perception           | Supported     |
| H4         | Product Quality/Certification $\rightarrow$ Perception | Supported     |
| H5         | Price & Availability $\rightarrow$ Perception          | Not Supported |
| H6         | Subjective Norms $\rightarrow$ Perception              | Supported     |
| H7         | Green Advertising $\rightarrow$ Perception             | Supported     |
| H8         | Perception $\rightarrow$ Purchase Behaviour            | Supported     |
| H9a        | Income moderates Perception–Behaviour link             | Supported     |
| H9b        | Education moderates Perception–Behaviour link          | Supported     |
| H9c        | Age moderates Perception–Behaviour link                | Not Supported |
| H9d        | Gender moderates Perception–Behaviour link             | Not Supported |

## 9. DISCUSSION

The results suggest that health consciousness is the strongest predictor of consumer perception toward organic food ( $\beta = 0.284$ ,  $p < 0.001$ ), which supports the notion that health motivation, as opposed to environmental motivation, is the dominant factor shaping the evaluation of organic food across the globe (Paul & Rana, 2012). Such a result is explained by appeal to health-related theoretical constructs and suggests that health-conscious marketing strategies have the best chances at shifting perceptions in Tiruchirappalli.

Both food safety concern ( $\beta = 0.238$ ) and product quality/certification ( $\beta = 0.221$ ) are seen as good but somewhat distant predictors of consumer perception toward organic food. In fact, the results align with signaling theory in that certification serves as a tool to reduce information asymmetry by providing credible

assurances about the quality of organic food production and, therefore, organic food, in general (Rana & Paul, 2017).

Environmental concern ( $\beta = 0.176$ ), subjective norms ( $\beta = 0.132$ ), and green advertising ( $\beta = 0.108$ ) have a moderate but insufficient effect on consumer perception toward organic food. Thus, environmental motivations and social/informational influences, as suggested by the competing theories, appear to be marginal predictors of consumer perceptions in Tiruchirappalli. Notably, this finding is consistent with the extant literature on Indian consumers' perceptions of organic food in that health consciousness has been found to dominate over environmental friendliness (Stern, 2000; Tanner & Wölting Kast, 2003).

Price and availability of organic food were found to have no significant effect on consumer perception ( $\beta = 0.079$ ,

$p = 0.115$  ). Therefore, the two moderators seem to affect the relationship between consumer perceptions and purchase intentions, rather than the perceptions themselves. In other words, income and availability are more likely to impact the behavioral intention to purchase organic food, which is consistent with the TPB's distinction between attitudes and perceived behavioral control (Ajzen, 1991). As such, this result also helps explain the presence of the gap between consumers' intentions and actual behavior in the domain of organic food (Padel & Foster, 2005).

The results demonstrate that consumer perception has a strong and positive effect on purchase intention ( $\beta = 0.612$ ,  $p < 0.0010$ ). Thus, consumer perceptions serve as a psychological moderator that makes an important contribution to explaining variations in buyers' intentions to purchase organic food. Moreover, the indirect effect revealed by the bootstrap analysis (Preacher & Hayes, 2008) suggests that purchase intentions are predicted by the mediating role of consumer perception, which, in turn, is predicted by health consciousness, food safety concern, and product quality/certification. In other words, all three factors influence buyer intentions both directly and indirectly via consumer perceptions.

The results of the moderation analysis reveal that income (estimator  $p < 0.0011$ ,  $p < 0.0012$ ) and education (estimator  $p < 0.0013$ ,  $p < 0.0014$ ) have a significant moderating effect on the relationship between consumer perception and purchase intention, with age and gender having no such effect. Therefore, in the context of this study, income and education can be deemed as critical moderators that determine whether positive perceptions will translate into purchase intentions in Tiruchirappalli. This finding suggests that price availability and consumer education are the key drivers of actual behavior in the studied setting.

## 10. THEORETICAL IMPLICATIONS

This study makes three unique contributions to the organic food consumer behaviour literature. First, this study validates a holistic seven antecedents based model of organic food consumer behaviour in a district of Tier-II city in India, thus contributing to a broader geographical and demographic understanding of TPB-based (Ajzen, 1991) organic food consumer behaviour research. Second, this study sheds new light on the nature of the relationship between perceived antecedents and purchase intention by revealing using bootstrapped mediation analysis (Preacher & Hayes, 2008) that the former only partially mediates the former's relationship with purchase behaviour. Third, this study shows that it is demographics such as income and education, and not socio-demographic variables such as age and gender, which moderate the perception-behaviour relationship in this specific context, adding nuance to the findings of Rana and Paul (2017) regarding demographic moderation of relationships in sustainable consumption studies.

## 11. FINDINGS, SUGGESTIONS AND PRACTICAL IMPLICATIONS

This research paper aimed to present research carried out on the factors influencing the perception and buying behavior of organic food items in Tiruchirappalli district. *Advances in Consumer Research*

The study integrated the theories of planned behavior, value belief norm, and signaling in developing a model to establish how various factors within the conceptual model influenced the perception and buying behavior of organic food items in Tiruchirappalli district. From the results of the model, it was evident that the measurement model was highly reliable and valid since most of the cronbach alpha items were higher than 0.7, KMO was 0.861 signifying that the sampling was adequate, Bartlett's test of sphericity was significant, the item to item loading on factor analysis was satisfactory, goodness of fit indices of confirmatory factor analysis were adequate, and convergent and discriminant validity of the model were satisfactory.

From the analysis carried out, it was evident that health consciousness had the highest direct influence on the perception of the consumers followed by food safety concern, product quality & certification, environmental concern, subjective norms, and green advertising. Surprisingly, the study established that the price & availability of organic food products had no influence on the perception of the consumers towards organic food in Tiruchirappalli district. However, it was established that the consumer perceptions towards organic food had a significant positive influence on the purchase behavior of the consumers and explained a considerable percentage of the variation in the buying behavior of the customers towards organic food items. In addition, the study revealed that consumer perceptions towards organic food partially mediated the influence of health consciousness, food safety concern, and product quality & certification on the purchase behavior of the customers. According to the study, the income and education of the consumers moderated the influence of consumer perceptions towards organic food on the purchase behavior of the customers while the age and gender of the consumers had no moderating influence on the relationship. Overall, the study had a positive conclusion since it established ten out of the fourteen proposed hypotheses. Therefore, it can be concluded that the proposed conceptual model was moderately suitable for use in understanding the influence of various factors on consumer perceptions and purchase behavior towards organic food products in Tiruchirappalli district.

Various recommendations were proposed based on the research findings. According to the research results, marketers should focus on emphasizing health benefits, food safety and product quality since health consciousness, food safety concern, and product quality had the highest influence on consumer perceptions towards organic food products. The government should ensure that there is proper education about organic food products among the consumers and that organic food products are certified to indicate authenticity. In addition, the government can educate the consumers through various campaigns to encourage them to purchase organic food items. Marketers should ensure that they provide good accessibility to organic food items by displaying the products in the supermarkets and making them easily accessible through online platforms. Even though the study established that the price played no role in influencing the perceptions of the consumers towards

organic food items, the government should subsidize the prices of organic food items so that they are affordable to every income bracket. Educational institutions, doctors, and consumer organizations should educate the consumers about the importance of organic food products. Since the study established that the income and education level of the consumers significantly influenced the relationship between consumer perceptions towards organic food and consumer buying behavior, various marketing strategies should be developed to target different demographics depending on their income and education levels. For instance, marketers can use social media to target the younger generations and use print media to target the older generations. Overall, the above recommendations would increase consumer confidence in purchasing organic food items.

The study has various implications, for instance, for various stakeholders in the organic food market. For instance, the study offers vital information for marketers to come up with appropriate marketing strategies for selling organic food items. The research study established various factors that influence consumer perceptions and buying behavior towards organic food items; therefore, various marketing strategies should be developed based on the factors identified to be effective in marketing the products. For instance, marketing campaigns should be informative to help address various concerns that may affect consumer perceptions towards organic food items. The marketing campaigns can be aimed at educating the consumers about the health benefits and product quality of organic food items. The product packaging should also provide more information to assist the consumers in making healthy choices when making their purchase decisions. The study can also help various policymakers come up with appropriate policies that can help promote organic food consumption. For instance, policymakers can formulate policies that promote organic farming, enhance organic food production, subsidize the prices of organic food items and encourage increased supply of organic food items in the market.

The study has various implications for retail chains, supermarkets, and consumer welfare organizations. For instance, the study provides information on how various retail chains and supermarkets can display various organic food products to facilitate increased organic food consumption. The study established that most consumers are concerned about food safety and product quality; therefore, it is recommended that various supermarkets and retail chains display adequate information about food safety and product quality in relation to the various organic food items that are available in the supermarkets and retail chains. Various producers of organic food items should ensure that their products are certified so that they can meet the demand for authentic organic food items. Various educational institutions should collaborate with various stakeholders in developing ways of educating the consumers about the importance of organic food consumption. For instance, the institutions can include the topic on organic food in the curriculum to ensure that students are well informed about the benefits of organic food consumption. Lastly, the study established that the income and education level of the consumers significantly

influence their behavior towards organic food consumption. Therefore, it is recommended that various producers of organic food items and other stakeholders develop segmented marketing strategies to help increase sales and consumption of organic food items based on the consumers' income and educational levels. Thus it can be concluded that the study has various implications for various stakeholders in the organic food market.

## 12. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Although the study has been undertaken in Tiruchirappalli District, the results might not be generalizable to other districts that differ significantly in terms of socio-economic characteristics and the level of organic retail development. Secondly, the study was cross-sectional; hence, the dynamic changes in the attitude towards organic food products and consumer behaviour cannot be captured. The study could be modified by conducting a longitudinal study that would help understand how the intention to purchase organic food translates into actual behaviour over time. Moreover, the self-reported purchase data might be influenced by social desirability; future studies could use objective data, such as the transaction data collected from the organic retail stores or other loyalty programmes. Although this study used an extensive list of constructs to measure the relationship between attitude and behaviour, future research could consider adding perceived control over behaviour as a separate construct and analyse the differences in the role of online and offline sales channels on consumer behaviour. Moreover, the next study could include more constructs, such as trust, brand preference, and self-identity, and test the model in multiple Tier-II districts.

## 13. CONCLUSION

The paper aims to explore and identify the factors which influence Tiruchirappalli's consumers' perceptions, purchase behaviour towards organic food. This paper provided insight into various factors which influencing the Tiruchirappalli's consumers towards organic food such as, health consciousness, food safety concern and food quality perception. This paper presents and tests a theoretical framework that addresses the behaviour of consumers in Tiruchirappalli towards organic food. The research evaluates the mediating effect of consumer perception, and the moderating effect of age, gender, education and income on the link, through EFA, CFA, regression analysis, structural equation modeling through bootstrap mediation and moderation (Hair et al., 2019; Hair, Hult, Ringle, and Sarstedt. 2021; Preacher & Hayes, 2008). This structural model developed comprises seven independent variables and an intervening variable along with two demographic variables of the moderator. Based on the structural equation modeling result it clearly revealed the process, wherein the mediator, consumer's perception mediates partially between antecedent variables and Tiruchirappalli's consumer purchase behavior. The outcome of the moderation analysis clearly revealed that both income and education moderates between these constructs and the mediator whereas both age and gender does not moderates between the model. The result thus indicates the mechanism for

Predicting Tiruchirappalli consumers' attitude toward organic food products and gives marketing and business implications for the marketing of and policy toward organic food products in the study area.

Besides above noted theoretical and empirical contributions, this study has several contributions that would add to the body of knowledge. Managerially the study will serve a number of practical purposes for organic food firms in Tiruchirappalli region, however beyond such benefits; this study provides empirical support the literature in regards to the use of organic food product's as its helps to enrich the literature through new perspective of consumer behavior towards organic product. Thus this study may offer policy relevance beyond the practical usage. This study offers significant extensions to the literature on consumer and organic food with the understanding on the moderation effect of moderating variables on the intervening mediator. Furthermore, This paper extends theory of planned behavior (Ajzen, 1991) by providing an empirical test for the intervening mechanisms that influence the purchase intentions of organic food consumers and identifies the way in which perceptions, age, gender, education and income influence the purchasing intentions towards organic food among consumers of Tiruchirappalli's market for effective planning and marketing of organic products by firms, retailers, policy and government institutions of Tiruchirappalli region.

## REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ayyub, S., Asif, M., & Nawaz, M. A. (2021). Drivers of organic food purchase intention in a developing country: The mediating role of trust. *SAGE Open*, 11(4). <https://doi.org/10.1177/21582440211045076>
- Bagozzi, R. P., & Dholakia, U. M. (1999). Goal setting and goal striving in consumer behavior. *Journal of Marketing*, 63(Special Issue), 19–32. <https://doi.org/10.1177/00222429990634s105>
- (Note: The paper's in-text citation lists this as "Bagozzi & Dholakia, 2000"; the original publication year is 1999.)
- Boobalan, K., Sivakumaran, B., & Susairaj, M. (2022). Organic food preferences: A comparison of American and Indian consumers. *Food Quality and Preference*, 101, Article 104627. <https://doi.org/10.1016/j.foodqual.2022.104627>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley.
- Garg, S., Narwal, K. P., & Kumar, S. (2024). An impetus for the research paradigm of determinants of purchase intention of organic food consumers: Empirical insight from India. *Social Responsibility Journal*, 20(10), 1833–1853. <https://doi.org/10.1108/SRJ-04-2024-0221>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
- Investigating the influence of factors on attitude towards organic food. (2023). *Energy Technologies and Environment*, 1(1), Article 2. <https://doi.org/10.58567/ete01010002>
- Iqbal, J., Yu, D., Zubair, M., Rasheed, M. I., Khizar, H. M. U., & Imran, M. (2021). Health consciousness, food safety concern, and consumer purchase intentions toward organic food: The role of consumer involvement and ecological motives. *SAGE Open*, 11(2). <https://doi.org/10.1177/21582440211015727>
- Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika*, 35(4), 401–415. <https://doi.org/10.1007/BF02291817>
- Kaur, H., & Kaur, N. (2023). Intention to purchase organic food among Indian consumers: Application of theory of planned behaviour. *Metamorphosis: A Journal of Management Research*, 22(2), 95–108. <https://doi.org/10.1177/09726225231220440>
- Köse, S. G., & Kırcova, İ. (2021). Using theory of consumption values to predict organic food purchase intention: Role of health consciousness and eco-friendly LOHAS tendency. *Spanish Journal of Agricultural Research*, 19(3). <https://doi.org/10.5424/sjar/2021193-16640>
- Nautiyal, S., & Lal, C. (2022). Product knowledge as a facilitator of organic purchase intention in emerging markets: Empirical evidence from India. *Journal of Cleaner Production*, 372, Article 133782. <https://doi.org/10.1016/j.jclepro.2022.133782>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British Food Journal*, 107(8), 606–625. <https://doi.org/10.1108/00070700510611002>
- Parashar, S., Singh, S., & Sood, G. (2023). Examining the role of health consciousness, environmental awareness and intention on purchase of organic food: A moderated model of attitude. *Journal of Cleaner Production*, 386, Article 135553. <https://doi.org/10.1016/j.jclepro.2022.135553>
- Parwez, M., Ansari, Z., & Mullick, N. H. (2022). Examining the antecedents of behavioral intention toward organic food in India. *Sustainability and Climate Change*, 15(6), 422–435. <https://doi.org/10.1089/scc.2022.0082>
- Patel, H. R., Sharma, M., & Purohit, R. (2022). Role of organic certification and trust in organic food buying intention: Attitude as a mediator. *Ramanujan*

International Journal of Business and Research, 7(2), 46–55. <https://doi.org/10.51245/rijbr.v7i2.2022.324>

21. Paul, J., & Rana, J. (2012). Consumer behavior and purchase intention for organic food. *Journal of Consumer Marketing*, 29(6), 412–422. <https://doi.org/10.1108/07363761211259223>
22. Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>
23. Raj, V. A., Rai, S. S., & Jasrotia, S. S. (2023). Sustainable purchase intentions towards organic food during Covid-19 pandemic: An exploratory study on Indian consumers. *Social Responsibility Journal*, 20(2), 243–260. <https://doi.org/10.1108/SRJ-01-2022-0022>
24. Raj, V. A., Rai, S. S., & Jasrotia, S. S. (2023). Sustainable purchase intentions towards organic food during Covid-19 pandemic: An exploratory study on Indian consumers. *Social Responsibility Journal*, 20(2), 243–260. <https://doi.org/10.1108/SRJ-01-2022-0022>
25. Raksha Shenoy, K., Nayak, S., Ranjith, V. K., Anirvinna, C., Rao, R. K., & Shetty, S. V. (2025). Examining the role of health concerns and willingness to pay premium in driving purchase intentions of organic food among millennials in India: A structural model approach. *Sustainability*, 17(6), Article 2676. <https://doi.org/10.3390/su17062676>
26. Rana, J., & Paul, J. (2017). Consumer behavior and purchase intention for organic food: A review and research agenda. *Journal of Retailing and Consumer Services*, 38, 157–165. <https://doi.org/10.1016/j.jretconser.2017.06.004>
27. Raval, A., & Makhija, D. (2023). Application of the theory of planned behaviour to predict Indian consumers' intention to purchase organic food.

*International Journal of Services, Economics and Management*, 14(4), 396–413.

28. Satyapriya, S., Singh, P., Sangeetha, V., Paul, S., Barua, S., Mathur, P., Rathore, H., & Keshava, K. (2019). Consumer behavioural intention and perception towards organic foods in national capital of India. *Indian Journal of Agricultural Sciences*, 89(4). <https://doi.org/10.56093/ijas.v89i4.88840>
29. Shahabi Ahangarkolae, S., & Gorton, M. (2020). 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. <https://doi.org/10.1111/ijcs.12619>
30. Stern, P. C. (2000). New environmental theories: Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407–424. <https://doi.org/10.1111/0022-4537.00175>
31. Tanner, C., & Wölfig Kast, S. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology & Marketing*, 20(10), 883–902. <https://doi.org/10.1002/mar.10101>
32. Thanki, H., Shah, S., Oza, A. D., et al. (2022). Sustainable consumption: Will they buy it again? Factors influencing the intention to repurchase organic food grain. *Foods*, 11(19), Article 3046. <https://doi.org/10.3390/foods11193046>
33. Thanki, H., Shah, S., Oza, A., et al. (2022). Sustainable consumption: Will they buy it again? Factors influencing the intention to repurchase organic food grain. *Foods*, 11(19), Article 3046. <https://doi.org/10.3390/foods11193046>
34. Zanolli, R., & Naspetti, S. (2002). Consumer motivations in the purchase of organic food: A means-end approach. *British Food Journal*, 104(8), 643–653. <https://doi.org/10.1108/00070700210425930...>