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Determinants of Consumer Purchase Intention toward Green Food Products: Examining the Mediating Role of Attitude

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Growing environmental degradation, rising health awareness, and recurring food safety concerns have significantly altered consumer decision-making in emerging economies. This study investigates the factors influencing consumer purchase intention toward green food products, with particular emphasis on the mediating role of attitude. Drawing on survey data collected from 260 consumers in West Bengal, the study examines the effects of green marketing, environmental consciousness, pricing perception, and food safety concern on attitude and, subsequently, on purchase intention. Exploratory and confirmatory factor analyses were conducted to validate the measurement model, followed by structural equation modeling to test the hypothesized relationships. The results reveal that food safety concern and environmental consciousness significantly influence consumer attitude, whereas green marketing and pricing do not exert a direct effect. Attitude was found to be a strong predictor of purchase intention, mediating the influence of key antecedents. The findings suggest that consumers in West Bengal prioritize intrinsic product attributes related to safety and environmental responsibility over promotional messaging and price considerations. This study offers valuable insights for policymakers, marketers, and food producers seeking to promote sustainable consumption practices in developing market contexts.

Keywords: green marketing, food safety concern, environmental consciousness, attitude, purchase intention, sustainable consumption

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1. Introduction

Sustainable consumption has emerged as a critical global priority due to escalating environmental degradation, climate change, and public health challenges. Among various sustainability-oriented product categories, green food products have received increasing attention as consumers become more aware of the long-term consequences of conventional food production and consumption practices. Green food products are generally associated with environmentally responsible production methods, reduced chemical inputs, and enhanced safety and health benefits. Consequently, understanding the factors that shape consumer acceptance of such products has become a central concern for researchers and practitioners alike.

In developing economies, the transition toward sustainable consumption presents unique challenges. Consumers often balance environmental and health considerations against economic constraints, limited product availability, and skepticism toward marketing claims. In the Indian context, frequent reports of food adulteration, pesticide residue, and contamination have intensified public concern regarding food safety. Simultaneously, environmental awareness has gradually increased due to educational initiatives, media exposure, and policy interventions. These developments create a complex decision-making environment in which consumers evaluate green food products not only on the basis of price or promotion but also on perceived safety and ethical value.

West Bengal represents a particularly relevant context for examining green food consumption behavior. The state combines densely populated urban centers with vast semi-urban and rural areas, resulting in heterogeneous consumer preferences and purchasing power. While urban consumers increasingly encounter green and organic food products through modern retail formats, many remain cautious about price premiums and the credibility of green claims. This context raises an important question: which factors truly shape consumer attitudes and intentions toward green food products?

Although prior studies have examined the influence of green marketing, environmental concern, and pricing on sustainable purchase behavior, findings remain inconsistent, particularly regarding the relative importance of promotional efforts versus intrinsic product attributes. Moreover, limited research has explored the mediating role of attitude in linking these antecedents to purchase intention in the context of food safety concerns within developing markets.

To address these gaps, the present study proposes and empirically tests a conceptual model in which green marketing, environmental consciousness, pricing perception, and food safety concern influence consumer attitude, which in turn affects purchase intention toward green food products. By applying a rigorous structural equation modeling approach, this study aims to provide a nuanced understanding of sustainable food consumption behavior in West Bengal and contribute to the broader literature on green consumer behavior in emerging economies.

2. Literature Review

Green Marketing (GM)

Green marketing encompasses organizational strategies that communicate a product's environmental benefits through advertising, labeling, packaging, and sustainability messaging. Early conceptual work emphasized that green marketing aims not only to promote environmentally friendly products but also to reshape consumer values and consumption norms (Peattie, 1995). Subsequent studies suggest that green marketing can positively influence consumer attitudes by enhancing perceived environmental responsibility and ethical value associated with products (Ottman et al., 2006).

However, empirical evidence indicates that the effectiveness of green marketing is highly contingent on credibility and institutional trust. When consumers perceive green claims as exaggerated or unverifiable, promotional efforts may fail to influence attitudes or may even generate resistance (Delmas & Burbano, 2011). This issue is particularly pronounced in food markets, where consumers are more risk-averse and demand concrete assurances regarding quality and safety rather than abstract environmental promises (Chen & Chang, 2013).

Several scholars argue that green marketing primarily functions as an informational cue that supports attitude formation rather than a decisive determinant of purchase behavior (Nyilasy et al., 2014). In developing economies, weak certification systems and inconsistent enforcement further limit the persuasive power of green marketing messages (Leonidou et al., 2011). Empirical studies conducted in Asian contexts reveal that consumers often rely on personal experience and social recommendations rather than promotional claims when evaluating green food products (Rahman et al., 2017). Therefore, green marketing is expected to exert an indirect and context-dependent influence on consumer attitudes.

Environmental Consciousness (EC)

Environmental consciousness reflects an individual's awareness of environmental degradation, concern for ecological sustainability, and sense of responsibility toward environmental protection. Research consistently identifies environmental consciousness as a foundational antecedent of positive attitudes toward green products (Schlegelmilch et al., 1996). Consumers with high environmental consciousness are more likely to evaluate products based on their environmental impact rather than solely on functional attributes (Mostafa, 2007).

Despite its importance, environmental consciousness does not uniformly translate into purchasing behavior. Numerous studies document an "attitude–behavior gap," wherein environmentally concerned consumers fail to purchase green products due to situational barriers such as price, availability, and lack of trust (Kollmuss& Agyeman, 2002). Ajzen's Theory of Planned Behavior provides a useful explanation, suggesting that environmental consciousness influences intention indirectly through attitude and perceived behavioral control (Ajzen, 1991).

Empirical research across emerging markets demonstrates that environmental consciousness exerts a stronger influence on attitude formation than on actual purchase intention (Joshi & Rahman, 2015). Studies focusing on food consumption indicate that while environmentally conscious consumers express favorable evaluations of green food products, their purchasing decisions are often overridden by safety and economic considerations (Yadav & Pathak, 2016).

Consequently, environmental consciousness is best conceptualized as a cognitive antecedent that shapes evaluative judgments rather than a direct driver of behavior.

Pricing Perception (PRC)

Pricing perception refers to consumers' subjective evaluation of price fairness, affordability, and value relative to perceived benefits. In the context of green products, pricing perception is particularly critical due to the prevalence of price premiums associated with sustainable production and certification processes (Laroche et al., 2001). Research indicates that while some consumers are willing to pay a premium for green products, this willingness is conditional on perceived quality, trust, and personal relevance (Biswas & Roy, 2015).

Studies conducted in developing economies consistently report high price sensitivity among consumers, limiting the market penetration of green food products (Gleim et al., 2013). Even environmentally conscious consumers may resist purchasing green alternatives if price premiums are perceived as unjustified or economically burdensome (Young et al., 2010). Furthermore, price perception often interacts with risk perception; consumers are more likely to accept higher prices when green food products are associated with tangible health or safety benefits (Grunert, 2005).

Several empirical investigations suggest that pricing perception does not directly influence attitude toward green products but moderates the relationship between attitude and purchase intention (Teng & Wang, 2015). In food markets, price is often evaluated after attitude formation, functioning as a constraint rather than a motivator. Thus, pricing perception is expected to have a weak or indirect effect on consumer attitude toward green food products.

Food Safety Concern (FSC)

Food safety concern represents consumers' anxiety regarding contamination, pesticide residues, adulteration, and hygiene standards. It has emerged as one of the most influential determinants of food choice behavior, particularly in regions where food safety incidents are widely reported (Yeung & Morris, 2001). Compared to environmental concern, food safety concern is more immediate and personally relevant, directly linked to health outcomes.

Empirical studies consistently demonstrate that food safety concern strongly predict favorable attitudes toward organic and green food products (Magnusson et al., 2003). Consumers often perceive green food products as safer due to reduced chemical inputs and regulated production practices (Padel & Foster, 2005). This perception is reinforced in developing economies, where trust in conventional food supply chains may be limited (Liu et al., 2013).

Research further indicates that food safety concern can override price sensitivity, leading consumers to prioritize safety over affordability (Hughner et al., 2007). Several studies conducted in Asian contexts confirm that food safety concern is a stronger driver of attitude than environmental values or marketing communication (Chen, 2009). Consequently, food safety concerns are expected to exert a dominant influence on consumer attitudes toward green food products.

Attitude toward Green Food Products (ATT)

Attitude refers to an individual's overall evaluation of a product based on cognitive beliefs and affective responses. In consumer behavior theory, attitude is widely recognized as a central mediator linking beliefs to behavioral intentions (Ajzen, 1991). Favorable attitudes toward green food products emerge when consumers perceive such products as beneficial, trustworthy, and aligned with personal values.

Empirical research confirms that attitude is a robust predictor of purchase intention across product categories (Fishbein & Ajzen, 2010). In sustainable consumption research, attitude mediates the effects of environmental concern, perceived risk, and product knowledge on purchase intention (Vermeir& Verbeke, 2006). Studies focusing on green food products consistently report that attitude explains a substantial proportion of variance in purchase intention (Tarkiainen & Sundqvist, 2005).

Furthermore, attitude is particularly influential in contexts where consumers face uncertainty or limited information, as it serves as a heuristic guiding decision-making (Sheeran, 2002). Therefore, attitude is conceptualized in this study as a mediating construct that translates evaluations of green marketing, environmental consciousness, pricing perception, and food safety concern into purchase intention.

Purchase Intention (PI)

Purchase intention reflects the likelihood that a consumer will buy a product in the future and is widely used as a proxy for actual purchasing behavior. In green consumption research, purchase intention captures consumers' readiness to select environmentally friendly alternatives over conventional products (Dodds et al., 1991).

Empirical studies indicate that purchase intention toward green food products is primarily driven by attitude, trust, and perceived benefits (Chen, 2010). While situational factors such as price and availability may moderate this relationship, attitude remains the most consistent predictor of intention (Armitage & Conner, 2001). In regions such as West Bengal, where consumers are increasingly exposed to sustainability discourse but remain cautious about food safety, purchase intention is shaped largely by personal evaluation rather than promotional influence.

Longitudinal studies further suggest that strong purchase intention increases the probability of repeated buying behavior, reinforcing market growth for green food products (Morwitz et al., 2007). Thus, understanding the antecedents of purchase intention is essential for promoting sustainable food consumption.

3. Conceptual Integration and Research Gap

The reviewed literature highlights that green marketing, environmental consciousness, pricing perception, and food safety concern influence consumer decision-making through distinct yet interconnected mechanisms. Among these, food safety concern and environmental consciousness consistently emerge as dominant antecedents of attitude, while green marketing and pricing demonstrate context-specific and often indirect effects. However, limited empirical research has simultaneously examined these constructs within a unified structural framework focusing on green food products in emerging economies. Addressing this gap, the present study integrates these variables into a single SEM model to assess their relative influence on purchase intention through the mediating role of attitude.

4. Hypotheses Development

Based on the proposed conceptual framework, this study examines the relationships between green marketing, environmental consciousness, pricing perception, food safety concern, attitude toward green food products, and purchase intention. Attitude is conceptualized as a key evaluative construct influencing purchase intention.

H1: Green marketing has a significant effect on consumer attitude toward green food products.

H2: Environmental consciousness has a significant positive effect on consumer attitude toward green food products.

H3: Pricing perception has a significant effect on consumer attitude toward green food products.

H4: Food safety concern has a significant positive effect on consumer attitude toward green food products.

H5: Consumer attitude toward green food products has a significant positive effect on purchase intention.

Mediation Hypotheses

Building upon the mediating role of attitude, the indirect relationships between each antecedent variable and purchase intention are examined separately.

H6a: Consumer attitude mediates the relationship between green marketing and purchase intention toward green products.

H6b: Consumer attitude mediates the relationship between environmental consciousness and purchase intention toward green products.

H6c: Consumer attitude mediates the relationship between pricing perception and purchase intention toward green products.

H6d: Consumer attitude mediates the relationship between food safety concern and purchase intention toward green products.

5. Conceptual Model

Model Description

Based on the hypotheses developed, this study proposes a conceptual model in Figure 1, that integrates cognitive, affective, and evaluative determinants of green food purchase intention.

The model positions green marketing, environmental consciousness, pricing perception, and food safety concern as exogenous variables that influence consumer attitude toward green food products. Attitude is conceptualized as a mediating variable that directly affects purchase intention.

The model reflects the belief–attitude–intention framework commonly applied in consumer behavior research. It assumes that consumers first form evaluations (attitudes) based on informational cues (green marketing communication), personal values (environmental consciousness), economic considerations (pricing perception), and perceived risk (food safety concern). These evaluations subsequently shape their intention to purchase green food products.

Structure of the Conceptual Model

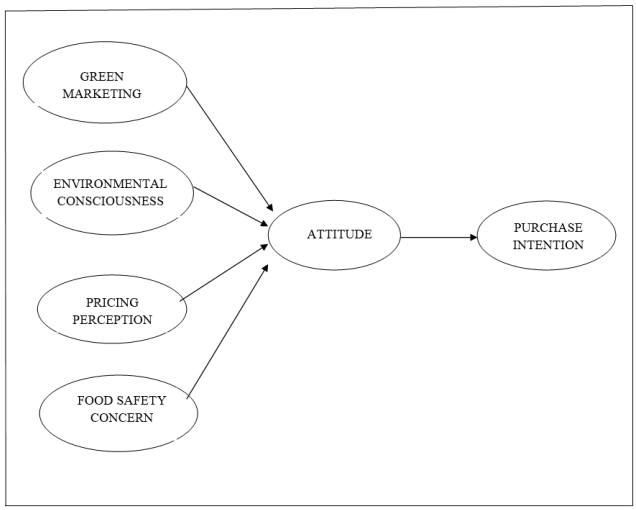

Figure 1: Proposed Research Model

- **Independent variables:** Green Marketing (GM), Environmental Consciousness (EC), Pricing Perception (PRC), Food Safety Concern (FSC)
- **Mediating variable:**Attitude toward Green Food Products (ATT)
- **Dependent variable:**Purchase Intention (PI)

The conceptual model assumes direct paths from GM, EC, PRC, and FSC to ATT, and a direct path from ATT to PI. Indirect paths from the independent variables to purchase intention are expected through the mediating role of attitude.

Conceptual Model Rationale

The proposed model acknowledges that green food purchasing behavior is influenced by both ethical considerations and practical concerns. While environmental consciousness reflects long-term ethical orientation, food safety concern addresses immediate personal risk. Pricing perception represents economic evaluation, and green marketing serves as an informational stimulus. Attitude integrates these influences into a unified evaluative judgment, which ultimately drives purchase intention.

By empirically testing this model using structural equation modeling, the study aims to identify the relative strength of each antecedent and clarify the psychological mechanism through which consumer beliefs are translated into purchase intention in the context of green food consumption in West Bengal.

6. Research Methodology

Research Design

The present study adopts a quantitative, cross-sectional research design to examine the determinants of consumer purchase intention toward green food products. A structured questionnaire survey was employed to collect primary data from consumers, enabling the empirical testing of the proposed conceptual model. The study follows a deductive approach, drawing on established theories of consumer behavior and sustainable consumption to formulate hypotheses and validate them using statistical techniques.

Structural equation modeling (SEM) was selected as the primary analytical technique, as it allows for the simultaneous examination of multiple relationships among latent constructs and the assessment of both direct and indirect effects.

Study Area and Sample Size

The study was conducted in West Bengal, a region characterized by a diverse consumer base, varying levels of urbanization, and increasing exposure to green and organic food products. West Bengal provides an appropriate context for examining green food consumption behavior due to rising concerns related to food safety, health awareness, and environmental sustainability. A structured questionnaire was employed to collect primary data from consumers residing in four districts of West Bengal, namely Kolkata, North 24 Parganas, South 24 Parganas, and Nadia. These districts were selected to ensure adequate representation of both urban and semi-urban consumers.

The target population comprised adult consumers who were aware of green or environmentally friendly food products. Although 460 completed questionnaires were initially obtained, a rigorous data screening procedure was conducted prior to structural equation modeling to ensure the reliability and validity of the analysis. Following recommended practices for SEM (Hair et al., 2019), the dataset was examined for missing values, straight-lining responses, multivariate outliers, and response inconsistencies.

First, questionnaires containing excessive missing data (greater than 10% per case) were excluded. Second, response patterns were assessed to detect straight-lining or uniform answering behavior, which may indicate lack of engagement. Third, multivariate outliers were identified using Mahalanobis distance at $p < 0.001$. Cases exceeding the critical chi-square threshold were removed to maintain multivariate normality and prevent distortion of model estimation.

After applying these screening criteria, 260 responses met all statistical assumptions required for SEM analysis. Although a larger number of usable responses were available, retaining only statistically robust observations ensured greater accuracy, model stability, and validity of parameter estimates. The final sample size of 260 exceeded the minimum requirement based on the "rule of ten" (Nunnally & Bernstein, 1984), which recommends at least ten observations per estimated parameter.

Instrument Development

Data were collected using a structured self-administered questionnaire. The questionnaire was divided into two sections. The first section captured demographic information such as age, gender, education level, and income. The second section measured the latent constructs included in the conceptual model.

All construct items were adapted from previously validated scales in the green consumption and consumer behavior literature, with minor wording modifications to ensure contextual relevance. Responses were measured using a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree").

The constructs and number of items used in the study are summarized below:

Green Marketing (GM): 4 items (Chen & Chang, 2013; Leonidou et al., 2011; Kumar &Ghodeswar, 2015)

Environmental Consciousness (EC): 4 items (Schlegelmilch et al., 1996; Mostafa, 2007; Joshi & Rahman, 2015)

Pricing Perception (PRC): 4 items (Laroche et al., 2001; Biswas & Roy, 2015; Lusk et al., 2018)

Food Safety Concern (FSC): 4 items (Grunert, 2005; Magnusson et al., 2003; Chen, 2009)

Attitude toward Green Food Products (ATT): 4 items (Ajzen, 1991; Tarkiainen & Sundqvist, 2005; Paul et al., 2016)

Purchase Intention (PI): 4 items (Dodds et al., 1991; Chen, 2010; Yadav & Pathak, 2016)

Prior to the main survey, the questionnaire was reviewed by academic experts to ensure content validity and clarity of wording.

7. Data Collection Procedure

Data were collected through both online and offline modes to ensure wider coverage and participation. Respondents were informed about the academic purpose of the study and assured of the confidentiality and anonymity of their responses. Participation was voluntary, and respondents were free to withdraw at any time.Incomplete or inconsistent questionnaires were excluded from the final dataset to maintain data quality.

Data Analysis Techniques

The data analysis was conducted in multiple stages using statistical software. Following this initial screening, the cleaned data were subjected to confirmatory factor analysis (CFA) using R (lavaan package) to assess the measurement model. Model adequacy was evaluated using standard goodness-of-fit indices, and the reliability and validity of the constructs were examined prior to structural analysis.

Ethical Statement

This study involved human participants and followed ethical standards. Informed consent was obtained from all respondents, and participation was voluntary and anonymous.

Exploratory Factor Analysis (EFA)

Exploratory factor analysis was performed to identify the underlying factor structure and assess the dimensionality of the measurement items. The suitability of the data for factor analysis was evaluated using the Kaiser–Meyer–Olkin (KMO) measureand Bartlett's test of sphericity.Principal axis factoring with oblimin rotation was employed, as the constructs were theoretically expected to be correlated. Items with factor loadings greater than 0.40 were retained for further analysis.

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis was conducted to validate the measurement model and assess convergent and discriminant validity. Model fit was evaluated using multiple goodness-of-fit indices. Reliability was assessed using Cronbach's alpha and composite reliability (CR), while average variance extracted (AVE) was used to evaluate convergent validity. Discriminant validity was examined by comparing inter-construct correlations and AVE values.

Structural Equation Modeling (SEM)

Structural equation modeling was employed to test the hypothesized relationships among the constructs and examine the mediating role of attitude. The structural model estimated the direct effects of green marketing, environmental consciousness, pricing perception, and food safety concern on attitude, as well as the effect of attitude on purchase intention.

In summary, this study employed a quantitative survey-based approach to investigate the determinants of purchase intention toward green food products. By combining EFA, CFA, and SEM, the study ensured rigorous validation of measurement instruments and robust testing of the proposed conceptual model. The methodological approach adopted in this research provides a reliable foundation for interpreting the empirical findings and drawing meaningful conclusions.

8. Results

Demographic Profile

A total of 260 valid responses were analyzed. The demographic profile indicated a relatively balanced gender distribution, with approximately 55% male and 45% female respondents.

The majority of participants (around 66%) were within the 25–45 years age group, reflecting a predominantly young to middle-aged consumer segment. In terms of education, nearly 76% of respondents possessed graduate or postgraduate qualifications, indicating a well-educated sample. Regarding income distribution, most participants (57%) fell within the middle-income categories (₹20,000–₹60,000 per month), suggesting moderate purchasing capacity. Additionally, respondents represented diverse occupational backgrounds, including private sector employees, government staff, self-employed individuals, and students. These demographic characteristics align with emerging consumption patterns in developing economies, where younger, educated, and economically active consumers demonstrate greater awareness of food safety and environmental sustainability (Ajzen, 1991; Joshi & Rahman, 2015).

Exploratory Factor Analysis (EFA)

To explore the underlying dimensional structure of the variables and to establish the construct validity of the measurement scale, an Exploratory Factor Analysis (EFA) was conducted using the Principal Axis Factoring method with Oblimin rotation, which permits correlated factors. The extraction yielded a six-factor solution consistent with the proposed conceptual framework, comprising Green Marketing (GM), Environmental Consciousness (EC), Pricing Perception (PRC), Food Safety Concern (FSC), Attitude (ATT), and Purchase Intention (PI), thereby supporting the theoretical structure of the study (Hair et al., 2019).

The adequacy of the data for factor analysis was first assessed using the Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy in table 1, which exceeded the recommended threshold of 0.70, indicating satisfactory sampling adequacy (Kaiser, 1974). Bartlett's Test of Sphericity was statistically significant ($p < 0.001$), confirming that the correlation matrix was suitable for factor extraction (Hair et al., 2010).

Table 1: KMO and Bartlett's Test

Test	Value	Result
KMO Measure	> 0.75	Adequate
Bartlett's Test	p < 0.001	Significant

The EFA results revealed six distinct factors with eigenvalues greater than 1. Collectively, these factors explained 51.2% of the total variance, which is considered acceptable for behavioral and social science research (Hair et al., 2010). All measurement items demonstrated factor loadings above the minimum acceptable threshold of 0.40, with the majority exceeding 0.60. No substantial cross-loadings were observed, indicating that each item loaded clearly onto its intended construct. Specifically, items measuring Green Marketing and Environmental Consciousness exhibited strong loadings above 0.70, while Food Safety Concern and Purchase Intention showed particularly robust factor loadings exceeding 0.75. Although a few items under Pricing Perception and Attitude demonstrated relatively moderate loadings, all remained within acceptable limits, supporting the convergent and discriminant validity of the constructs (Field, 2013). The EFA findings confirm that the measurement instrument demonstrates satisfactory construct validity and aligns with the theoretical expectations of the study.

Reliability and Validity Assessment

The study employed various constructs to measure consumers' perceptions and intentions regarding organic food products, assessing their reliability and validity shown in table 2. All constructs demonstrate satisfactory reliability, with Cronbach's alpha and composite reliability values exceeding the recommended threshold of 0.70. Convergent validity is supported by significant factor loadings and AVE values above 0.50 for most constructs. Although Pricing Perception and Attitude exhibit marginally lower AVE values, their composite reliability exceeds 0.70, which is acceptable as per Fornell and Larcker (1981). Overall, the measurement model shows adequate reliability and convergent validity, supporting its suitability for subsequent structural analysis.

All standardized factor loadings were statistically significant ($p < 0.001$) and exceeded 0.60, ranging from 0.604 to 0.807. These results indicate that the observed items adequately represent their respective latent constructs. The strong and significant loadings provide support for item reliability and convergent validity at the indicator level.

Internal consistency reliability was assessed using Cronbach's alpha and composite reliability. All constructs exhibited Cronbach's alpha and composite reliability values above the recommended threshold of 0.70, indicating satisfactory reliability.

Composite reliability values ranged from 0.742 to 0.868, demonstrating consistent measurement across constructs.

Convergent validity was further evaluated using average variance extracted (AVE). The AVE values for Green Marketing, Environmental Consciousness, Food Safety Concern, and Purchase Intention exceeded the recommended threshold of 0.50, indicating that these constructs explain more than half of the variance in their indicators. Although the AVE values for Pricing Perception (0.418) and Attitude (0.453) were marginally below 0.50, their composite reliability values exceeded 0.70. Following the criterion suggested by Fornell and Larcker (1981), convergent validity is considered acceptable under such conditions.

Discriminant validity was assessed through inter-construct correlations. The correlations among constructs were below the recommended threshold of 0.85, with the highest correlation observed between Attitude and Purchase Intention (r = 0.539). This indicates that the constructs are empirically distinct and do not suffer from multicollinearity issues.

Table 2: Reliability and Convergent Validity Results

Construct	Cronbach's α	Composite Reliability (CR)	AVE
Green Marketing (GM)	0.862	0.862	0.609
Environmental Consciousness (EC)	0.836	0.837	0.562
Pricing Perception (PRC)	0.741	0.742	0.418
Food Safety Concern (FSC)	0.861	0.861	0.607
Attitude (ATT)	0.766	0.767	0.453
Purchase Intention (PI)	0.868	0.868	0.622

Note: CR = Composite Reliability; AVE = Average Variance Extracted. Convergent validity is acceptable when CR > 0.70 even if AVE < 0.50 (Fornell & Larcker, 1981).

Measurement Model

Confirmatory factor analysis (CFA) was conducted to assess the adequacy of the measurement model prior to testing the structural relationships. The measurement model comprised six latent constructs —Green Marketing, Environmental Consciousness, Pricing Perception, Food Safety Concern, Attitude toward Green Food Products, and Purchase Intention—measured by a total of 24 observed indicators.

The CFA results shown in figure 2 indicate that the measurement model demonstrates an excellent fit with the data. The chi-square statistic (χ^2 = 241.13, df = 237, p = 0.413) was non-significant, suggesting no substantial discrepancy between the observed and model-implied covariance matrices. Additional fit indices further confirm the adequacy of the model, with the Comparative Fit Index (CFI = 0.998) and Tucker–Lewis Index (TLI = 0.998) exceeding the recommended threshold of 0.90. The Root Mean Square Error of Approximation (RMSEA = 0.008) and Standardized Root Mean Square Residual (SRMR = 0.037) were well below the recommended cut-off values, indicating a very close model fit.

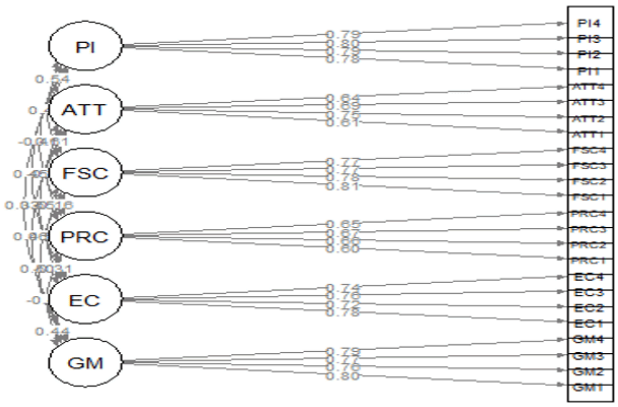

Figure 2: Confirmatory Factor Analysis

Structural Model Assessment

After establishing the adequacy of the measurement model, the proposed structural model was evaluated using structural equation modeling to test the hypothesized relationships among the constructs. The structural model shown in Figure 3 examined the effects of Green Marketing, Environmental Consciousness, Pricing Perception, and Food Safety Concern on Attitude toward Green Food Products, as well as the effect of Attitude on Purchase Intention.

The structural model demonstrated a very good fit with the data. The chi-square statistic (χ^2 = 262.62, df = 241, p = 0.162) was non-significant, indicating that the proposed model adequately represents the observed data. The goodness-of-fit indices further support this conclusion, with the Comparative Fit Index (CFI = 0.992) and Tucker–Lewis Index (TLI = 0.990) exceeding the recommended threshold of 0.90. Additionally, the Root Mean Square Error of Approximation (RMSEA = 0.019) and the Standardized Root Mean Square Residual (SRMR = 0.050) were well below the acceptable cut-off values, confirming an excellent overall model fit.

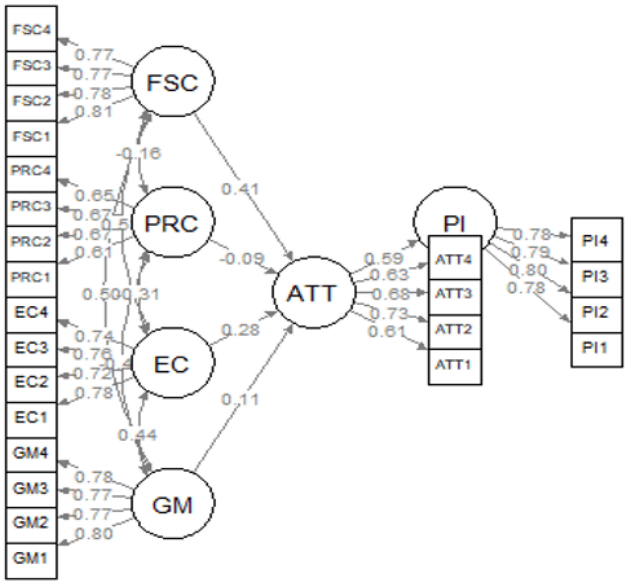

Figure 3: Structural equation model

9. Hypothesis Testing Results

The results of hypothesis testing reveal partial support for the proposed relationships in the structural model. As presented in Table 3, Environmental Consciousness (β = 0.280, p = 0.011) and Food Safety Concern (β = 0.409, p < 0.001) exhibit significant positive effects on Attitude toward green food products, thereby supporting H2 and H4. These findings indicate that consumers who are environmentally aware and concerned about food safety tend to develop more favorable attitudes toward green food products.

In contrast, the effects of Green Marketing (β = 0.113, p = 0.210) and Pricing Perception (β = −0.093, p = 0.276) on Attitude were not statistically significant, leading to the rejection of H1 and H3. This suggests that promotional green messages and price considerations do not play a decisive role in shaping consumer attitudes in the present context.

Furthermore, Attitude toward green food products was found to have a strong and positive effect on Purchase Intention (β = 0.586, p < 0.001), providing robust support for H5. This result confirms the pivotal role of attitude in translating consumer evaluations into purchase intention.

Table 3: Standardized Path Coefficients and Significance Level

Hypothesis	Path	Std. β	p-value	Result
H1	GM → ATT	0.113	0.210	Not supported
H2	EC → ATT	0.280	0.011	Supported
H3	PRC → ATT	−0.093	0.276	Not supported
H4	FSC → ATT	0.409	<0.001	Supported
H5	ATT → PI	0.586	<0.001	Supported

Bootstrapped mediation analysis (5,000 resamples) shown in table 4 revealed that attitude significantly mediates the effects of environmental consciousness and food safety concern on purchase intention. The indirect effect of environmental consciousness was positive and significant (β = 0.164, 95% CI [0.059, 0.385], p < 0.05), indicating that consumers' ecological awareness influences purchase intention through the formation of favorable attitudes. Similarly, food safety concern demonstrated a stronger indirect effect (β = 0.240, 95% CI [0.152, 0.470], p < 0.001), suggesting that safety-related motivations substantially enhance purchase intention via attitudinal evaluation.

In contrast, the indirect effects of green marketing (β = 0.066, p = 0.206) and pricing perception (β = -0.055, p = 0.305) were not significant, as their confidence intervals included zero. These findings indicate that attitude selectively mediates value-driven constructs rather than externally driven factors. Overall, the results underscore the pivotal role of attitude as a psychological mechanism that translates environmental and safety concerns into green purchase intention.

Table 4: Mediation Hypothesis Testing Results

Hypo-thesis	Path	Indirect Effect (Std. β)	95% Bootstrap CI	p-value	Results	Mediation Type
H6a	GM → ATT → PI	0.066	[-0.046, 0.208]	0.206	Not Supported	No Mediation
H6b	EC → ATT → PI	0.164	[0.059, 0.385]	0.015	Supported	Full Mediation
H6c	PRC → ATT → PI	-0.055	[-0.213, 0.047]	0.305	Not Supported	No Mediation
H6d	FSC → ATT → PI	0.240	[0.152, 0.470]	<0.001	Supported	Full Mediation

Explained Variance (R^2)

The explanatory power of the structural model was assessed using the coefficient of determination (R^2).

The results indicate that the model explains 50.1% of the variance in Attitude, suggesting that Green Marketing, Environmental Consciousness, Pricing Perception, and Food Safety Concern collectively provide a substantial explanation of consumers' attitudinal formation. Additionally, 34.4% of the variance in Purchase Intention is explained by Attitude, indicating a moderate to strong predictive capability.

10. Findings and Discussion

The findings of this study are derived from the structural equation modeling results and provide a comprehensive understanding of the factors influencing consumer purchase intention toward green food products. The structural model demonstrated an excellent fit to the data, indicating that the proposed relationships adequately explain consumer behavior in the studied context. The standardized path coefficients, significance levels, and explained variance collectively offer meaningful insights into consumer decision-making.

Influence of Green Marketing on Attitude

The results reveal that Green Marketing does not have a statistically significant effect on consumer Attitude toward green food products ($\beta = 0.113$, $p = 0.210$). Although the relationship is positive, the lack of statistical significance indicates that green promotional activities alone are insufficient to shape favorable consumer attitudes. This finding suggests that consumers may exhibit skepticism toward green advertising claims or may perceive such messages as generic or exaggerated. As a result, green marketing communication does not emerge as a decisive factor in attitudinal formation within the examined context.

Influence of Environmental Consciousness on Attitude

Environmental Consciousness was found to have a significant and positive effect on Attitude toward green food products ($\beta = 0.280$, $p = 0.011$). This result indicates that consumers who are more aware of environmental issues and who feel a sense of responsibility toward environmental protection tend to hold more favorable evaluations of green food products. The magnitude of the coefficient reflects a moderate influence, suggesting that environmental values play an important role in shaping attitudes, although they are not the sole determinant.

This finding highlights the relevance of internalized ethical values in consumer evaluations of sustainable food products.

Influence of Pricing Perception on Attitude

The path from Pricing Perception to Attitude was negative and statistically insignificant ($\beta = -0.093$, $p = 0.276$). This finding indicates that price considerations do not significantly influence consumers' evaluative judgments toward green food products. The negative sign of the coefficient suggests a tendency for higher perceived prices to slightly reduce positive attitudes; however, this effect is not strong enough to be statistically meaningful. This result implies that consumers may form attitudes toward green food products independently of price considerations, possibly prioritizing non-economic attributes such as health and safety.

Influence of Food Safety Concern on Attitude

Food Safety Concern emerged as the strongest predictor of Attitude toward green food products ($\beta = 0.409$, $p < 0.001$). This finding demonstrates that concerns related to food contamination, chemical residues, and health risks play a dominant role in shaping consumer attitudes. The relatively high standardized coefficient indicates that food safety considerations exert a stronger influence on attitude formation than environmental consciousness or marketing communication. This result reflects the increasing salience of health-related risk perceptions in food purchasing decisions and underscores the importance of safety assurance in the evaluation of green food products.

Influence of Attitude on Purchase Intention

Attitude toward green food products was found to have a strong and positive effect on Purchase Intention ($\beta = 0.586$, $p < 0.001$). This finding confirms that consumers who hold favorable attitudes toward green food products are significantly more likely to express an intention to purchase them. The magnitude of this coefficient indicates that attitude is a key determinant of behavioral intention and serves as a critical link between consumer perceptions and future purchasing behavior.

The findings indicate that intrinsic consumer concerns, particularly food safety and environmental awareness, are more influential in shaping attitudes toward green food products than extrinsic cues such

as marketing communication and pricing perception. Attitude emerges as a pivotal construct that translates these concerns into purchase intention. The results suggest a value-driven decision-making process in which consumers prioritize personal health and ethical considerations over promotional appeals when evaluating green food products.

11. Conclusion

This study set out to examine the determinants of consumer purchase intention toward green food products by empirically testing the roles of green marketing, environmental consciousness, pricing perception, food safety concern, and attitude. The structural equation modeling results provide clear and robust evidence that consumer decision-making in the green food context is primarily driven by intrinsic concerns rather than external marketing cues.

The findings demonstrate that food safety concern is the most influential determinant of consumer attitude, followed by environmental consciousness. These two variables significantly and positively shape consumer attitudes, collectively explaining a substantial proportion of attitudinal variance. In contrast, green marketing and pricing perception do not exert a statistically significant influence on attitude, indicating that consumers do not form favorable evaluations of green food products based solely on promotional messaging or price considerations.Furthermore, attitude toward green food products emerges as a strong and decisive predictor of purchase intention, explaining over one-third of the variance in consumers' buying intentions. This result confirms that attitude functions as a critical psychological mechanism through which consumers' safety concerns and environmental values are translated into behavioral intention.

Overall, the results suggest that consumers evaluate green food products through a risk-reduction and value-driven lens, where personal health protection and environmental responsibility outweigh advertising appeals or price sensitivity. The study therefore reinforces the notion that green food consumption is less influenced by traditional marketing tactics and more by trust-based and value-oriented considerations.

Marketing Implications

The results of this study offer important insights for marketers and policymakers seeking to promote green food products more effectively, particularly in contexts where consumer skepticism toward green claims exists.

Emphasizing Safety and Environmental Value as Core Drivers

Given the strong influence of food safety concern, marketing strategies should prioritize safety assurance and health credibility. Marketers should highlight verifiable attributes such as chemical-free production, residue-free certification, traceability systems, and quality control standards. Clear labeling, third-party certifications, and transparent supply chain communication can reinforce consumer trust and strengthen favorable attitudes.

The significant role of environmental consciousness suggests that long-term promotional efforts should focus on environmental education rather than short-term advertising. Campaigns that explain the environmental consequences of conventional food production and the ecological benefits of green alternatives can deepen consumers' value-based commitment and enhance attitudinal acceptance.

Reframing Green Marketing Communication for Credibility

The non-significant effect of green marketing indicates that conventional promotional messages may lack credibility or relevance. To overcome this limitation, marketers should shift from claim-based marketing to evidence-based communication. Instead of broad environmental slogans, marketing efforts should integrate factual, product-specific information supported by certifications, demonstrations, and consumer testimonials. Partnerships with trusted institutions, such as food safety authorities or environmental organizations, may further enhance message credibility.

Managing Price Perceptions through Value Justification

The absence of a significant relationship between pricing perception and attitude suggests that price alone does not shape consumers' evaluations. However, high prices may still act as a latent barrier at the purchase stage.

Marketers should therefore focus on value justification rather than price reduction, emphasizing the long-term health benefits and risk-avoidance advantages associated with green food consumption. Smaller packaging options, trial offers, or loyalty programs may also help reduce perceived economic risk without undermining product positioning.

Strengthening Consumer Attitude to Enhance Purchase Intention

Since attitude is the strongest predictor of purchase intention, marketing strategies should be designed to systematically build positive consumer evaluations. This can be achieved through consistent messaging, credible information, experiential marketing (such as sampling or farm visits), and positive word-of-mouth. By reinforcing trust, safety, and ethical value, marketers can strengthen attitudes and thereby increase purchase intention more effectively than through promotional intensity alone.The findings clearly indicate that promoting green food products requires a shift from promotional persuasion to trust-based engagement. Marketers who align their strategies with consumers' safety concerns and environmental values while addressing skepticism toward green marketing and price sensitivity are more likely to foster sustainable demand and long-term adoption.

Limitations

Although this study provides valuable insights into consumer purchase intention toward green food products, certain limitations should be noted. First, the cross-sectional nature of the research restricts the ability to capture changes in consumer attitudes and intentions over time. Second, the model focuses on a selected set of psychological and perceptual variables; additional constructs such as trust in certification, perceived availability, and subjective norms were not incorporated and may further enrich the explanatory power of the framework. Third, the study examines purchase intention rather than actual purchasing behavior, and future research could extend the model by incorporating behavioral or longitudinal data to validate intention–behavior consistency.

References

1. 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

2. Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology, 40*(4), 471–499. https://doi.org/10.1348/014466601164939

3. Biswas, A., & Roy, M. (2015). Green products: An exploratory study on the consumer behavior in emerging economies. *International Journal of Consumer Studies, 39*(2), 119–127. https://doi.org/10.1111/ijcs.12168

4. Chen, Y. S. (2009). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics, 93*(2), 307–319. https://doi.org/10.1007/s10551-009-0223-9

5. Chen, Y. S. (2010). The drivers of green purchase intentions: The role of green perceived value, green perceived risk, and green trust. *Management Decision, 48*(2), 307–325. https://doi.org/10.1108/00251741011022530

6. Chen, Y. S., & Chang, C. H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics, 114*(3), 489–500. https://doi.org/10.1007/s10551-012-1360-0

7. Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review, 54*(1), 64–87. https://doi.org/10.1525/cmr.2011.54.1.64

8. Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research, 28*(3), 307–319. https://doi.org/10.1177/002224379102800305

9. Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Sage Publications.

10. Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.

11. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104

12. Gleim, M. R., Smith, J. S., Andrews, D., & Cronin, J. J. (2013). Against the Green: A multi-method examination of the barriers to green consumption. *Journal of Retailing, 89*(1), 44–61. https://doi.org/10.1016/j.jretai.2012.10.001

13. Grunert, K. G. (2005). Food quality and safety: Consumer perception and demand. *European Review of Agricultural Economics, 32*(3), 369–391. https://doi.org/10.1093/eurrag/jbi011

14. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis.* (7th ed.). Pearson Education.

15. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM).* (2nd ed.). Sage Publications.

16. Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour, 6*(2–3), 94–110. https://doi.org/10.1002/cb.210

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

18. Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31–36. https://doi.org/10.1007/BF02291575

19. Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research, 8*(3), 239–260. https://doi.org/10.1080/13504620220145401

20. Kumar, P., &Ghodeswar, B. M. (2015). Factors affecting consumers' green product purchase decisions. *Marketing Intelligence & Planning, 33*(3), 330–347. https://doi.org/10.1108/MIP-03-2014-0068

21. Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing, 18*(6), 503–520. https://doi.org/10.1108/EUM0000000006155

22. Leonidou, L. C., Leonidou, C. N., &Kvasova, O. (2011). Antecedents and outcomes of consumer environmentally friendly attitudes and behavior. *Journal of Marketing Management, 26*(13–14), 1319–1344. https://doi.org/10.1080/0267257X.2010.523710

23. Liu, R., Pieniak, Z., & Verbeke, W. (2013). Consumers' attitudes and behavior towards safe food in China. *Food Control, 33*(1), 93–104. https://doi.org/10.1016/j.foodcont.2013.02.014

24. Magnusson, M. K., Arvola, A., Hursti, U. K. K., Åberg, L., &Sjödén, P. O. (2003). Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behavior.*Appetite, 40*(2), 109–117. https://doi.org/10.1016/S0195-6663(03)00002-3

25. Morwitz, V. G., Steckel, J. H., & Gupta, A. (2007). When do purchase intentions predict sales?. *International Journal of Forecasting, 23*(3), 347–364. https://doi.org/10.1016/j.ijforecast.2007.05.015

26. Mostafa, M. M. (2007). Gender differences in Egyptian consumers' green purchase behavior. *Journal of Consumer Marketing, 24*(2), 85–95. https://doi.org/10.1108/07363760710737011

27. Nyilasy, G., Gangadharbatla, H., & Paladino, A. (2014). Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance. *Journal of Business Ethics, 125*(4), 693–707. https://doi.org/10.1007/s10551-013-1944-3

28. Nunnally, J. C., & Bernstein, I. H. (1984). *Psychometric theory.* (3rd ed.). McGraw-Hill.

29. Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia. *Environment: Science and Policy for Sustainable Development, 48*(5), 22–36. https://doi.org/10.3200/ENVT.48.5.22-36

30. Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behavior: Understanding why consumers buy or do not buy organic food. *British Food Journal, 107*(8), 606–625. https://doi.org/10.1108/00070700510611002

31. Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services, 29*, 123–134. https://doi.org/10.1016/j.jretconser.2015.11.006

32. Peattie, K. (1995). *Environmental marketing management: Meeting the green challenge*. Pitman Publishing.

33. Rahman, M. S., Barua, A., & Hoque, R. (2017). Green marketing practices and consumer buying intention toward green products. *Asia Pacific Journal of Marketing and Logistics, 29*(4), 843–859. https://doi.org/10.1108/APJML-02-2017-0028

34. Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing, 30*(5), 35–55. https://doi.org/10.1108/03090569610118740

35. Sheeran, P. (2002). Intention–behavior relations: A conceptual and empirical review. *European Review of Social Psychology, 12*(1), 1–36. https://doi.org/10.1080/14792772143000003

36. Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British Food Journal, 107*(11), 808–822. https://doi.org/10.1108/00070700510629760

37. Teng, C. C., & Wang, Y. M. (2015). Decisional factors driving organic food consumption. *British Food Journal, 117*(3), 1066–1081. https://doi.org/10.1108/BFJ-12-2013-0361

38. Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude–behavioral intention" gap. *Journal of Agricultural and Environmental Ethics, 19*(2), 169–194. https://doi.org/10.1007/s10806-005-5485-3

39. Yadav, R., & Pathak, G. S. (2016). Young consumers' intention toward buying green products. *Journal of Cleaner Production, 135*, 732–739. https://doi.org/10.1016/j.jclepro.2016.06.120

40. Yeung, R. M. W., & Morris, J. (2001). Food safety risk: Consumer perception and purchase behavior.*British Food Journal, 103*(3), 170–187. https://doi.org/10.1108/00070700110386728

41. Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: Green consumer behavior when purchasing products. *Sustainable Development, 18*(1), 20–31. https://doi.org/10.1002/sd.394