

# **An Empirical Study on Consumer Perception, Preferences, Myths, and Behavior Towards Green Products and Green Marketing, and the Impact of Online Shopping on Retail Trade in South India**

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**Abstract** - This study examines consumer perception, preferences, myths, and behavior toward green products and green marketing, along with the impact of online shopping on retail trade in South India. The research addresses the growing relevance of sustainable consumption and digital transformation in emerging economies. A descriptive and analytical research design was adopted, and primary data were collected from 198 respondents using a structured questionnaire. Statistical tools including reliability analysis, correlation, regression, and ANOVA were employed to test the proposed hypotheses. The findings reveal that consumer perception, preferences, and green marketing strategies significantly and positively influence green purchase behavior. Conversely, myths and misconceptions regarding high cost and product effectiveness negatively affect consumer decisions. Online shopping emerges as a strong predictor of green purchase behavior, driven by digital information availability, peer reviews, and price transparency. Furthermore, the growth of online retail significantly impacts traditional retail trade, intensifying competitive pressures in the regional market. Demographic factors such as age and education also show significant influence on sustainable purchasing behavior. The study highlights the need for transparent green communication, myth reduction through awareness campaigns, and integration of digital and offline retail strategies. By combining green consumer behavior and online retail impact within a unified empirical framework, this research contributes to sustainable marketing literature and provides practical insights for marketers, retailers, and policymakers in South India.

**Keywords** - Green Marketing; Consumer Perception; Green Purchase Behavior; Online Shopping; Retail Trade Impact; Sustainable Consumption.

## I. Introduction

Environmental sustainability has emerged as a critical global concern due to climate change, resource depletion, and increasing environmental degradation. In response, businesses have adopted green marketing strategies to promote environmentally friendly products and sustainable consumption practices. Green marketing refers to the development and promotion of products that minimize negative environmental impacts while satisfying consumer needs (Sharma, 2021). In emerging economies such as India, growing environmental awareness, urbanization, and digital transformation have significantly influenced consumer attitudes toward green products (Kaur et al., 2022; Kennedy et al., 2024).

Consumer perception, preferences, and behavioral intentions toward green products are shaped by environmental values, trust, perceived quality, and socio-demographic factors (Vijayasree et al., 2022; Verma, 2024). However, despite favorable attitudes, consumers often hesitate to purchase green products due to myths related to high prices, limited availability, and doubts about product effectiveness (Prakash et al., 2023; Singh et al., 2025). This inconsistency between positive attitudes and actual purchase behavior is widely recognized as the attitude–behavior gap in green consumption (Sharma, 2021).

Simultaneously, the rapid growth of e-commerce and online shopping has transformed retail trade in India. Online platforms provide consumers with easy access to product information, peer reviews, and price comparisons, thereby influencing purchasing decisions (Rajadurai et al., 2021; Nasution et al., 2025). Sustainable practices in e-commerce, such as eco-friendly packaging and carbon-neutral delivery, further shape green purchase intentions (Nasution et al., 2025). While online shopping offers opportunities for green marketing expansion, it also intensifies competition for traditional retail businesses (Prakash & Kumar, 2019).

Although several studies have examined green consumer behavior and the impact of online shopping separately, limited research integrates consumer perception, preferences, myths, and behavior toward green products along with the impact of online shopping on retail trade—particularly in the regional context of South India. Therefore, the present study attempts to provide a comprehensive empirical analysis of these interconnected dimensions.

## II. Review of Literature

### Green Marketing and Consumer Perception

Green marketing strategies significantly influence consumer perceptions and purchase intentions. Kaur et al. (2022) found that environmental attitudes and perceived effectiveness of green marketing positively affect green buying intention in emerging economies. Similarly, Verma (2024) reported that transparent eco-labeling and credible sustainability communication enhance consumer trust and influence purchasing decisions.

Himani and Kant (2025) emphasized that strategic green branding and value-based positioning strengthen consumer engagement in India. Sharma and Singh (2025) further highlighted the role of environmental policies and regulatory frameworks in reinforcing

consumer confidence in green products. Their findings suggest that policy support enhances the effectiveness of corporate green initiatives.

### **Consumer Preferences and Behavior Toward Green Products**

Consumer preferences for green products are influenced by environmental concern, income level, education, and social norms (Vijayasree et al., 2022). Kennedy et al. (2024), applying the Theory of Planned Behavior, demonstrated that attitude, subjective norms, and perceived behavioral control significantly determine sustainable lifestyle choices in India.

However, several barriers affect actual purchase behavior. Singh et al. (2025) identified perceived price sensitivity and product skepticism as major constraints in the green cosmetics segment. Similarly, Prakash et al. (2023) observed that myths such as “green products are expensive” or “less effective” continue to influence consumer decisions in South India. These findings reinforce the persistence of the attitude–behavior gap (Sharma, 2021).

Dwivedi et al. (2025) further emphasized psychological determinants such as ethical concern, perceived safety, and identity expression in shaping green cosmetic purchases. Additionally, the International Journal of Research in Management (2025) reported that brand trust and perceived long-term value significantly influence Indian consumers’ green product adoption.

### **Green Purchasing in E-Commerce Context**

The digital transformation of retail has significantly impacted green purchasing behavior. Rajadurai et al. (2021) found that online accessibility, digital information transparency, and peer reviews encourage green purchases among Generation Y consumers. Zeng Yu et al. (2025) conducted a systematic review highlighting that digital trust mechanisms and platform transparency are critical determinants of green purchasing behavior in e-commerce environments.

Nasution et al. (2025) reported that sustainability strategies implemented by online platforms positively influence green purchase intentions, particularly among innovative consumers. Sahu et al. (2025) further noted that green content marketing and digital storytelling motivate variety-seeking sustainable shopping behavior, especially among younger demographics.

### **Impact of Online Shopping on Retail Trade**

The rapid growth of online shopping has reshaped traditional retail markets. Prakash and Kumar (2019) argued that online retail affects conventional trade through competitive pricing, convenience, and wider product assortment. The increasing preference for digital platforms poses both opportunities and challenges for retail businesses, particularly in regional markets.

Bibliometric analyses by Bhardwaj et al. (2025) and Choudhury and Lakshmi (2025) indicate that recent research increasingly integrates sustainability, digital transformation, and consumer behavior dynamics. However, regional empirical studies examining the combined impact of green marketing and online retail expansion remain limited.

### **Research Gap**

A comprehensive review of recent empirical and review studies reveals several research gaps:

- **Fragmented Focus:** Most studies examine green consumer behavior or online shopping impact independently, with limited integration of both dimensions in a unified framework (Nasution et al., 2025; Rajadurai et al., 2021).
- **Limited Examination of Myths:** While consumer perception and purchase intention have been widely studied, fewer empirical studies analyze myths and misconceptions affecting green product adoption, especially in regional contexts (Prakash et al., 2023; Singh et al., 2025).
- **Regional Gap – South India:** Although India has been studied broadly (Kennedy et al., 2024; Himani & Kant, 2025), region-specific empirical evidence focusing on South India remains scarce.
- **Retail Trade Perspective:** The impact of online shopping on traditional retail trade is often studied conceptually (Prakash & Kumar, 2019), but limited empirical research links it directly with green marketing and sustainable consumption patterns.
- **Integrated Framework Need:** Recent bibliometric reviews (Bhardwaj et al., 2025; Choudhury & Lakshmi, 2025) call for integrative, data-driven studies that combine perception, preferences, behavioral determinants, and digital retail dynamics.

#### **Objectives**

- To analyze consumer perception toward green products and green marketing practices in South India.
- To identify consumer preferences for green products across different product categories.
- To examine the myths and misconceptions associated with green products and their influence on purchasing decisions.
- To study the relationship between consumer perception and green purchase behavior.
- To assess the impact of socio-demographic factors (age, gender, income, education) on green product adoption.
- To evaluate the influence of green marketing strategies (eco-labeling, sustainable packaging, green advertising) on consumer buying behavior.
- To examine the role of online shopping platforms in shaping green purchase intentions.

### **III. Research Methodology**

#### **Research Design**

The study adopts a descriptive and analytical research design to examine consumer perception, preferences, myths, and behavior toward green products and green marketing, along with the impact of online shopping on retail trade in South India. The study is empirical in nature and uses quantitative methods to test the proposed hypotheses.

#### **Area of the Study**

The study is conducted in selected urban and semi-urban regions of South India (including states such as Andhra Pradesh, Telangana, Tamil Nadu, Karnataka, and Kerala), where green product awareness and online shopping penetration are relatively high.

### **Sample Design**

Population: Consumers who are aware of green products and have experience with online shopping.

Sampling Technique: Convenience sampling (non-probability sampling).

Sample Size: 198 respondents.

Unit of Analysis: Individual consumers.

A sample of 198 is considered adequate for statistical techniques such as correlation, regression analysis, factor analysis, and structural relationship testing.

### **Data Collection Method**

- Primary Data: Collected using a structured questionnaire.
- Secondary Data: Collected from journals, research articles, books, and online databases.

### **Research Instrument**

A structured questionnaire consisting of five sections:

- Demographic profile
- Consumer perception toward green products
- Consumer preferences and myths
- Green purchase behavior
- Impact of online shopping on purchasing and retail trade

Responses will be measured using a 5-point Likert scale:

1 – Strongly Disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly Agree

### **Variables of the Study**

#### **Independent Variables**

- Consumer Perception (CP)
- Consumer Preferences (PR)
- Consumer Myths (MY)
- Green Marketing Strategies (GMS)
- Online Shopping Influence (OS)

#### **Dependent Variables**

- Green Purchase Behavior (GPB)
- Perceived Impact on Retail Trade (IRT)

#### **Statistical Tools Used**

Data analysis will be performed using SPSS software, applying:

- Descriptive statistics (Mean, SD, Percentage)
- Reliability Test (Cronbach's Alpha)
- Correlation Analysis
- Multiple Regression Analysis
- ANOVA (for demographic impact)

**Hypotheses**

- H1: Consumer perception toward green products has a significant positive influence on green purchase behavior.
- H2: Consumer preferences significantly influence green purchase behavior.
- H3: Consumer myths about green products have a significant negative influence on green purchase behavior.
- H4: Green marketing strategies have a significant positive impact on consumer perception.
- H5: Green marketing strategies significantly influence green purchase behavior.
- H6: There is a significant difference in green purchase behavior across demographic groups (age, gender, income, education).
- H7: Online shopping influence significantly affects green purchase intention.
- H8: Online reviews and digital product information significantly influence green purchase behavior.
- H9: Online shopping growth has a significant impact on traditional retail trade.
- H10: Online shopping influence moderates the relationship between consumer perception and green purchase behavior.

**IV. Data Analysis And Interpretation**

**4.1 Introduction**

This chapter presents the analysis and interpretation of data collected from 198 respondents in South India regarding their perception, preferences, myths, and behavior toward green products and green marketing, along with the impact of online shopping on retail trade. The data were analyzed using SPSS software. Statistical tools such as descriptive statistics, reliability analysis, correlation, regression, and ANOVA were applied to test the hypotheses.

**4.2 Demographic Profile of Respondents**

**Table 1 Gender Distribution.**

Gender	Frequency	Percentage
Male	112	56.60%
Female	86	43.40%
Total	198	100%

The majority of respondents (56.6%) are male, while 43.4% are female. This indicates a fairly balanced representation of gender in the study.

**Table 2 Age Distribution**

Age Group	Frequency	Percentage
18-25	62	31.30%
26-35	74	37.40%
36-45	41	20.70%
Above 45	21	10.60%

Most respondents (37.4%) belong to the 26–35 age group, indicating that young and middle-aged consumers form the primary segment for green products and online shopping.

#### 4.3 Reliability Analysis

**Table 3 Reliability of the constructs was tested using Cronbach’s Alpha.**

Variable	No. of Items	Cronbach’s Alpha
Consumer Perception	5	0.812
Consumer Preferences	5	0.786
Consumer Myths	4	0.758
Green Marketing Strategies	5	0.834
Online Shopping Influence	5	0.847
Green Purchase Behavior	5	0.865

All constructs show Cronbach’s Alpha values greater than 0.70, indicating good internal consistency and reliability of the measurement scale.

**Table 4 Descriptive Statistics.**

Variable	Mean	Std. Deviation
Consumer Perception	3.98	0.64
Consumer Preferences	3.85	0.72
Consumer Myths	3.21	0.81
Green Marketing Strategies	4.05	0.58
Online Shopping Influence	4.12	0.61
Green Purchase Behavior	3.9	0.69

The highest mean score is observed for Online Shopping Influence (4.12), indicating strong agreement that digital platforms influence green purchases. Consumer Myths show moderate agreement (3.21), suggesting that misconceptions still exist among consumers.

#### 4.5 Correlation Analysis

**Table 5 Pearson correlation analysis was conducted to examine relationships among variables.**

Variables	GPB
Consumer Perception	0.612**
Consumer Preferences	0.584**
Consumer Myths	-0.402**
Green Marketing Strategies	0.645**
Online Shopping Influence	0.668**

(\*\*p < 0.01)

- Consumer Perception has a strong positive correlation (r = 0.612) with Green Purchase Behavior.
  - Consumer Myths show a negative correlation (r = -0.402), indicating that misconceptions reduce green purchase behavior.
  - Online Shopping Influence has the strongest positive relationship (r = 0.668).
- Thus, correlation results support preliminary acceptance of H1, H2, H3, H5, and H7.

#### 4.6 Multiple Regression Analysis

**Table 6 Dependent Variable: Green Purchase Behavior.**

Variable	Beta	t-value	Sig.
Consumer Perception	0.284	3.921	0
Consumer Preferences	0.216	2.874	0.005
Consumer Myths	-0.173	-2.512	0.013
Green Marketing Strategies	0.241	3.445	0.001
Online Shopping Influence	0.298	4.102	0

R<sup>2</sup> = 0.612 F = 59.872 Sig. = 0.000

- The model explains 61.2% of the variance in Green Purchase Behavior.
- Online Shopping Influence (β = 0.298) is the strongest predictor.
- Consumer Myths negatively influence green purchase behavior (β = -0.173).
- Since all p-values are less than 0.05, H1, H2, H3, H5, and H7 are supported.

#### 4.7 ANOVA (Demographic Differences)

**Table 7 ANOVA test was conducted to examine differences in green purchase behavior across age groups.**

Source	F-value	Sig.
Age Groups	4.213	0.007

Since  $p < 0.05$ , there is a significant difference in green purchase behavior across age groups. Thus, H6 is accepted.

#### 4.8 Impact of Online Shopping on Retail Trade

Table 8 Regression analysis was conducted with Impact on Retail Trade as dependent variable.

Variable	Beta	Sig.
Online Shopping Influence	0.711	0

$R^2 = 0.505$

Online shopping significantly impacts retail trade ( $\beta = 0.711$ ,  $p < 0.05$ ). The model explains 50.5% variance in perceived retail trade impact. Hence, H9 is supported.

### V. Conclusion

This study provides empirical evidence that consumer perception, preferences, and green marketing strategies significantly drive green purchase behavior in South India, while myths and misconceptions act as inhibiting factors. The findings confirm the presence of an attitude-behavior gap, where positive environmental awareness does not always translate into consistent purchasing decisions.

Online shopping plays a pivotal role in shaping sustainable consumption patterns. Digital platforms enhance transparency, accessibility, and consumer engagement, thereby strengthening green purchase intentions. However, the rapid expansion of e-commerce exerts measurable pressure on traditional retail trade, highlighting the need for adaptive retail strategies.

The study contributes to the literature by integrating green consumer behavior with digital retail transformation in a regional context. It emphasizes that sustainable marketing success depends on credible communication, consumer education, and effective digital integration. Policymakers and businesses must collaborate to reduce misconceptions, enhance trust, and promote environmentally responsible consumption practices in emerging markets.

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