

Vision to Value: Consumer Perceptions and Adoption of Eco-Friendly Products

Effulgence

Vol. 24, No. 1

January - June 2026

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Abstract

In the context of growing environmental challenges, eco-friendly products have emerged as a vital pathway for businesses to promote sustainable consumption. Despite increasing consumer awareness, a persistent gap remains between favourable perceptions and actual adoption. This study examines the factors influencing consumer adoption of eco-friendly products, focusing on environmental concern, perceived quality, trust in eco-labels, green scepticism, price sensitivity, and social influence.

Using a quantitative research design, data were collected from 300 urban Indian consumers belonging primarily to Gen Z and Millennial cohorts. Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were employed using SPSS and AMOS. The results indicate that trust in eco-labels ($\beta = 0.33, p < 0.001$), environmental concern ($\beta = 0.28, p < 0.01$), perceived quality ($\beta = 0.21, p < 0.01$), and social influence ($\beta = 0.26, p < 0.01$) significantly enhance adoption, while green scepticism ($\beta = -0.18, p < 0.05$) and price sensitivity ($\beta = -0.22, p < 0.01$) act as barriers. The model explains a substantial proportion of variance in consumer adoption behaviour.

The study contributes empirical evidence from an emerging economy and offers actionable implications for marketers and policymakers to bridge the attitude-behaviour gap and advance Sustainable Development Goal 12 (Responsible Consumption and Production).

Keywords: Sustainability Marketing, Consumer Perception, Purchase Decision, Transparency, Credibility, Eco-Friendly Products, SDG.

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INTRODUCTION

In the past decade sustainability has moved from a peripheral corporate communications theme to a central market force shaping product design, marketing strategy, and consumer behaviour. A growing share of consumers now reports environmental concern as an important factor in their purchasing decisions, and many indicate a willingness to change habits or pay a small premium for products perceived as more sustainable. These shifts have motivated firms across categories – from fast-moving consumer goods to apparel and consumer electronics – to position eco-friendly attributes as part of their core value proposition.

“Eco-friendly products” are those designed and marketed to reduce environmental harm across one or more stages of the product life cycle (materials, manufacture, packaging, usage, disposal). Despite clear policy and corporate momentum, consumer acceptance of such products varies widely: while some buyers actively choose sustainable options as an expression of values, many others remain reluctant because of concerns about performance, higher price, confusing labels, or limited availability. This variation underlines the importance of studying both perceptions (what consumers believe and feel about eco-friendly offerings) and the behavioural translation of those perceptions into purchase and usage decisions.

From a theoretical perspective, adoption of eco-friendly products can be framed using well-established behaviour and diffusion models. The Theory of Planned Behaviour (TPB) helps explain how attitudes toward sustainability, perceived social norms, and perceived behavioural control shape purchase intentions and subsequent behaviour; it also points to the psychological and normative influencers that campaigns can target. Diffusion of Innovations complements TPB by highlighting how attributes such as relative advantage, trialability, observability, and complexity determine how innovations (including sustainable product variants) move from early adopters to mainstream markets.

Together these frameworks provide a multidimensional lens to investigate why sustainability sometimes remains a “vision” rather than an everyday source of consumer “value.”

Empirical evidence shows two parallel realities. On one hand, large-scale surveys and industry reports repeatedly find that a substantial portion of consumers identify sustainability as important and express willingness to modify purchases for environmental reasons. For example, major industry studies have classified a large cohort of consumers as “sustainability-minded” and reported that many consumers say they will pay more for sustainable options – a trend that has strengthened in recent years. On the other hand, academic reviews identify a persistent attitude-behaviour gap (often called the “green gap”): positive environmental attitudes and intentions do not always translate into eco-friendly purchasing behaviour. This gap reflects structural barriers (price, availability), information issues (confusing or low-trust eco-labels), and situational influences (momentary convenience and habit) that weaken the path from intention to action.

Two issues deserve special attention in contemporary research. First, information credibility: meta-analyses and systematic reviews indicate that eco-labels and sustainability claims can increase preference, but their effectiveness depends critically on consumer trust and label clarity. When consumers distrust claims or encounter too many competing labels, the signalling power of sustainability weakens and adoption stalls. Second, value trade-offs: even consumers who express pro-environmental attitudes often weigh cost and perceived efficacy heavily; willingness-to-pay studies suggest modest premiums on average, but that premium is sensitive to economic context and product category. These nuances imply that successful strategies must combine credible communication (trusted labels, transparent supply-chain claims), competitive performance/price, and easy availability to convert vision into value.

This study responds to two linked research gaps. First, while industry surveys provide broad snapshots of consumer intent, there is a need for up-to-date empirical evidence that connects perceptions (attitudes, trust in labelling, perceived effectiveness) to actual adoption metrics across product categories and consumer segments. Second, there is limited knowledge on which firm-level actions (packaging redesign, third-party certification, pricing strategies, point-of-purchase cues) most effectively narrow the attitude-behaviour gap in real-market settings. Addressing these gaps will help managers design interventions that make eco-friendly options both desirable and practical for mainstream consumers.

Accordingly, this paper investigates how consumer perceptions – including attitudes, perceived social norms, trust in eco-claims, and perceived value – influence the adoption of eco-friendly products. Using a mixed-methods approach (quantitative survey to measure relationships predicted by TPB and diffusion constructs, plus qualitative interviews to surface contextual barriers), the study aims to identify which levers firms and policymakers can use to convert sustainability from a high-level vision into tangible consumer value and measurable market adoption.

Literature Review

1. Introduction to Sustainable Consumption

Sustainable consumption has become a focal point in marketing and consumer behaviour research, particularly over the last decade. Eco-friendly products—defined as goods that minimize environmental damage throughout their lifecycle—play a pivotal role in achieving Sustainable Development Goal 12 (Responsible Consumption and Production) (United Nations, 2020). Consumers are increasingly aware of ecological issues such as climate change, plastic pollution, and resource depletion, which in turn influence their purchasing decisions (Joshi & Rahman, 2019). However, despite growing

awareness and positive attitudes, actual behavioural adoption remains inconsistent, creating what scholars call the attitude-behaviour gap (White et al., 2019).

The rise of green consumerism has created both opportunities and challenges for firms. While sustainability-oriented consumers represent a growing market, companies often struggle to effectively communicate eco-benefits without being accused of greenwashing (Delmas & Burbano, 2011). Moreover, factors such as affordability, accessibility, and trust continue to mediate whether sustainability shifts from a consumer “vision” into tangible marketplace “value.”

2. Theoretical Foundations

Theory of Planned Behaviour (TPB)

The TPB (Ajzen, 1991) is among the most frequently applied theories in eco-friendly consumption studies. Attitudes toward eco-friendly products, subjective norms, and perceived behavioural control collectively predict purchase intentions. Empirical research confirms that TPB variables significantly influence green purchase behaviour in both developed and emerging economies (Paul et al., 2016; Yadav & Pathak, 2017). Recent extensions of TPB integrate perceived consumer effectiveness (PCE) and environmental knowledge as key moderators (Testa et al., 2019).

Value-Belief-Norm Theory (VBN)

The VBN theory (Stern, 2000) posits that personal values (altruistic, biospheric) and ecological beliefs activate pro-environmental norms, which in turn influence behaviour. Studies in emerging economies suggest that cultural values shape eco-friendly adoption differently than in Western contexts. For instance, altruistic values strongly influence green purchase in collectivist societies like India and China (Biswas & Roy, 2015; Nguyen et al., 2020).

Green Purchase Intention Models

Contemporary research extends classical theories by including new variables such as eco-label trust, perceived quality, brand credibility, and willingness to pay a premium (Nguyen et al., 2020; Kumar et al., 2021). Integrated models using Structural Equation Modelling (SEM) have revealed that trust in certifications and eco-labels moderates the relationship between attitudes and adoption, especially in categories like food, fashion, and personal care (Testa et al., 2019; Alamsyah et al., 2020).

3. Consumer Perception of Eco-Friendly Products

Environmental Concern

Environmental concern reflects awareness and perceived urgency of ecological issues. Multiple studies indicate that higher environmental concern enhances purchase intentions (Verma et al., 2019; Nguyen et al., 2021). However, concern does not always lead to adoption, especially when products are expensive or less convenient (Joshi & Rahman, 2019). Longitudinal research shows that external triggers, such as COVID-19, have temporarily heightened environmental awareness but not uniformly translated into sustained behaviour (White et al., 2019).

Perceived Quality and Value

A critical barrier to adoption is the perceived performance trade-off. Many consumers question whether eco-friendly products perform as well as conventional ones. Research demonstrates that perceived quality is a stronger predictor of purchase than environmental concern alone (Nguyen et al., 2020). Green perceived value, defined as the balance of ecological benefits against cost and functionality, has emerged as a robust construct influencing adoption (Chen, 2020; Suki, 2016).

Trust in Green Claims

Given widespread green washing, consumer trust in green claims plays a decisive role (Delmas & Burbano, 2011). Recent studies show that third-party certifications and transparent supply chain practices build stronger consumer confidence than self-declared claims (Alamsyah et al., 2020). Trust not only enhances purchase intention but also creates brand loyalty, as seen in eco-friendly cosmetics and food markets (Kong et al., 2021).

Green Scepticism

Green scepticism weakens the relationship between attitudes and adoption (Nyilasy et al., 2014). With increasing exposure to misleading sustainability claims, consumers often demand evidence-based communication. Nguyen et al. (2021) found that scepticism is particularly high among Millennials, who actively cross-verify claims via social media before purchase.

Green scepticism reflects consumer resistance arising from perceived green washing and exaggerated environmental claims. Prior studies suggest that scepticism acts as a psychological barrier that weakens trust and attenuates the influence of positive environmental attitudes on adoption behaviour (Nyilasy et al., 2014; Aw & Chuah, 2021).

Price Sensitivity

Eco-friendly products are often priced at a premium due to sustainable sourcing and production costs. While some consumers—especially in developed markets—express willingness to pay more for eco-friendly options (Biswas & Roy, 2015), others in price-sensitive markets prioritize affordability (White et al., 2019). Interestingly, studies show that the perceived long-term savings (e.g., energy-efficient appliances) mitigate price concerns and encourage adoption.

Social Influence

Social norms, peer recommendations, and social media campaigns strongly shape eco-friendly adoption. Digital communities amplify sustainable consumption trends, particularly among Gen Z and Millennials (Kong et al., 2021; Kumar et al., 2021). Social influence not only enhances awareness but also triggers identity-driven adoption, where consumers purchase eco-friendly products to align with personal and social identity.

4. Emerging Dimensions in Literature

1. Digital Platforms and Quick Commerce: Platforms like Amazon, Blinkit, and Instacart now promote eco-friendly products through digital nudges and green filters. Research suggests that online recommendation systems significantly influence eco-friendly adoption (Li et al., 2022).
2. Circular Economy and Second-Hand Consumption: Recent studies highlight consumer acceptance of circular practices such as refill packs, second-hand fashion, and recycling programs, which are increasingly positioned as eco-friendly choices (Camacho-Otero et al., 2019).
3. Cross-Cultural Variations: Adoption patterns vary significantly. For example, European consumers prioritize certification labels, while Indian consumers prioritize afford ability and convenience (Yadav & Pathak, 2017; Joshi & Rahman, 2019).
4. Psychological Ownership: Emerging research shows that when consumers feel a sense of responsibility toward the environment, psychological ownership enhances eco-friendly adoption (Lee & Chow, 2020).

5. Critical Synthesis of Prior Literature

While prior studies consistently confirm the role of environmental concern and green attitudes in shaping purchase intentions (Joshi & Rahman, 2019;

Verma et al., 2019), empirical findings remain mixed regarding their translation into actual adoption behaviour. Several studies report that trust-related variables, such as eco-label credibility and brand transparency, exert a stronger influence than attitudes alone (Alamsyah et al., 2020; Kong et al., 2021). However, these studies often examine isolated constructs or focus on developed markets.

Moreover, negative drivers such as green scepticism and price sensitivity are frequently acknowledged but insufficiently integrated into comprehensive models, particularly in emerging economies. By simultaneously examining positive drivers and inhibiting factors using Structural Equation Modelling, the present study extends prior literature and offers a more holistic understanding of eco-friendly product adoption in the Indian context.

6. Gaps in Literature

- Persistent attitude-behaviour gap despite decades of research.
- Limited integrated models that combine environmental concern, trust, scepticism, perceived quality, and social influence using advanced methods like SEM and PLS-SEM.
- Lack of studies in emerging economies (e.g., India) where infra structural, cultural, and price factors play a different role than in Western contexts.
- Insufficient longitudinal and cross-cultural comparisons to understand the evolution of eco-friendly perceptions post-pandemic.
- Emerging areas like quick commerce, digital nudges, and circular economy practices remain under explored in mainstream literature.

7. Rationale of the Study

Despite a growing body of research on sustainable consumption, there remains a lack of clarity on the integrated framework of factors that drive or hinder adoption of eco-friendly products, especially in the context of emerging economies like India. While

developed countries have made significant progress in embedding eco-consciousness into consumption patterns, developing economies face additional challenges such as price sensitivity, limited availability of eco-friendly products, and scepticism regarding corporate green claims (Biswas & Roy, 2015).

India, with its expanding middle class and digitally connected youth, presents a unique case for examining eco-friendly product adoption. Gen Z and Millennials, in particular, are vocal about sustainability concerns but also highly price-conscious. Understanding their perceptions and adoption behaviour provides valuable insights for businesses seeking to align marketing excellence with sustainable innovation.

8. Research Gap

Existing studies have often examined eco-friendly products in isolation, focusing on single variables such as environmental concern (Verma et al., 2019) or green trust (Alamsyah et al., 2020). However, fewer studies employ advanced statistical modelling techniques such as Structural Equation Modelling (SEM) to analyse multiple interrelated factors simultaneously. Moreover, much of the prior research is concentrated in Western contexts, leaving a gap in emerging market perspectives (Nguyen et al., 2021).

Objectives of the Study

This study aims to fill these gaps by:

1. Examining consumer perceptions of eco-friendly products across dimensions such as environmental concern, perceived quality, trust in eco-labels, price sensitivity, and scepticism.
2. Analysing the relationship between these perceptions and the adoption of eco-friendly products using SEM.
3. Providing practical implications for marketers and policymakers to enhance the adoption of

eco-friendly products and reduce the attitude-behaviour gap.

Conceptual Framework and Hypotheses Development

Consumer adoption of eco-friendly products is shaped by multiple psychological, social, and behavioural factors. Drawing from the Theory of Planned Behaviour (Ajzen, 1991), the Value-Belief-Norm Theory (Stern, 2000), and recent studies on green consumption (Joshi & Rahman, 2019; Nguyen et al., 2020), this study proposes a framework that integrates environmental concern, perceived quality, trust in eco-labels, green scepticism, price sensitivity, and social influence as antecedents of consumer adoption of eco-friendly products.

1. Environmental Concern

Environmental concern represents the degree of awareness and perceived responsibility consumers feel toward ecological issues. Prior research suggests that individuals with high environmental concern are more likely to develop positive attitudes toward eco-friendly products and translate them into purchase intentions (Verma et al., 2019; Yadav & Pathak, 2017).

H1: Environmental concern has a positive and significant effect on consumer adoption of eco-friendly products.

2. Perceived Quality

Perceptions of product quality influence purchase decisions across categories. For eco-friendly products, perceived quality is critical in reducing doubts about functional performance (Suki, 2016). Consumers who believe that eco-friendly products are equally effective as conventional products are more likely to adopt them.

H2: Perceived quality has a positive and significant effect on consumer adoption of eco-friendly

products.

3. Trust in Eco-Labels

Trust in eco-labels and certifications mitigates consumer uncertainty and scepticism about corporate green claims. Studies show that credible eco-labels significantly increase purchase intention and adoption behaviour (Alamsyah et al., 2020; Kong et al., 2021).

H3: Trust in eco-labels has a positive and significant effect on consumer adoption of eco-friendly products.

4. Green Scepticism

Green scepticism reflects consumer doubt about the authenticity of eco-friendly claims. It negatively influences adoption behaviour by weakening the relationship between attitudes and purchase intentions (Nyilasy et al., 2014; Nguyen et al., 2021).

H4: Green scepticism has a negative and significant effect on consumer adoption of eco-friendly products.

5. Price Sensitivity

The price premium associated with eco-friendly products often acts as a barrier to adoption, especially in emerging economies where consumers are price-conscious (Biswas & Roy, 2015).

H5: Price sensitivity has a negative and significant effect on consumer adoption of eco-friendly products.

6. Social Influence

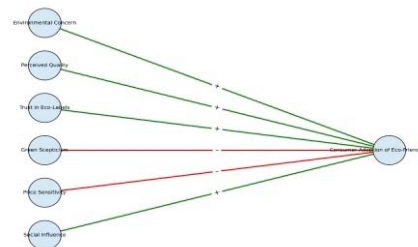
Social influence, including peer recommendations, social media advocacy, and cultural norms, strongly impacts eco-friendly product adoption, particularly among younger consumers (Kumar et al., 2021).

H6: Social influence has a positive and significant effect on consumer adoption of eco-friendly products.

7. Conceptual Framework

Below is the proposed Structural Equation Model (SEM):

- Independent Variables:
 - o Environmental Concern
 - o Perceived Quality
 - o Trust in Eco-Labels
 - o Green Scepticism
 - o Price Sensitivity
- Social Influence Dependent Variable: Consumer Adoption of Eco-Friendly Products



Conceptual Framework for the Study

Drawing on the Theory of Planned Behaviour and Value-Belief-Norm Theory, this study conceptualises eco-friendly product adoption as a function of attitudinal (environmental concern), normative (social influence), and control-related factors (price sensitivity), complemented by trust-based mechanisms (eco-label trust) and resistance factors (green scepticism). This integrated framework allows for a more nuanced examination of the attitude-behaviour gap by explicitly accounting for both enabling and constraining forces that shape sustainable consumption behaviour.

Research Methodology

1. Research Design

This study adopts a quantitative, cross-sectional

research design to investigate consumer perceptions and adoption of eco-friendly products. A structured questionnaire was administered to gather primary data, which was subsequently analysed using SPSS 26 for descriptive statistics, reliability, and validity tests, and AMOS 24 for Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM).

2. Population and Sampling

The population of this study comprises urban consumers in India, particularly Gen Z (18–25 years) and Millennials (26–40 years), as these cohorts are considered most aware of sustainability issues and actively engaged in eco-conscious consumption.

- Sampling method: Convenience sampling with screening (only consumers aware of eco-friendly products were included).
- Sample size: 300 respondents. This size is considered sufficient for SEM, as it exceeds the minimum recommended threshold of 200 (Hair et al., 2019).

The focus on urban Gen Z and Millennial consumers is theoretically justified, as these cohorts are more exposed to sustainability discourse, digital information, and eco-labelling practices. While this sampling approach limits generalisability to rural or older populations, it aligns with the study's objective of examining early adopters and influential consumer segments in emerging markets.

3. Data Collection Instrument

A structured questionnaire was designed based on validated scales from prior literature. Responses were measured using a 5-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Measurement Scales

- Environmental Concern (Verma et al., 2019; Yadav & Pathak, 2017)

- o "I am concerned about environmental problems."
- o "I believe individual actions can help reduce environmental damage."
- Perceived Quality (Suki, 2016; Chen, 2020)
 - o "Eco-friendly products are of high quality."
 - o "Eco-friendly products perform as well as conventional products."
- Trust in Eco-Labels (Alamsyah et al., 2020; Kong et al., 2021)
 - o "I trust eco-labels displayed on products."
 - o "Eco-label certifications increase my confidence in the product."
- Green Scepticism (Nyilasy et al., 2014; Nguyen et al., 2021)
 - o "Companies exaggerate their environmental claims."
 - o "I doubt the authenticity of eco-friendly product labels."
- Price Sensitivity (Biswas & Roy, 2015)
 - o "Eco-friendly products are too expensive."
 - o "I prefer cheaper alternatives even if they are less eco-friendly."
- Social Influence (Kumar et al., 2021)
 - o "My friends and family encourage me to buy eco-friendly products."
 - o "Social media influences my decision to purchase eco-friendly products."
- Consumer Adoption of Eco-Friendly Products (Nguyen et al., 2020; White et al., 2019)
 - o "I prefer purchasing eco-friendly products whenever possible."
 - o "I intend to buy more eco-friendly products in the future."

4. Data Collection Procedure

The questionnaire was distributed online via Google Forms and offline at universities, cafes, and retail

stores in Jaipur and Delhi, Participation was voluntary and anonymous, ensuring ethical compliance. Out of 350 responses received, 300 were found valid and used for analysis.

5. Data Analysis Techniques

The following statistical techniques were employed:

1. Descriptive Statistics - To analyse demographic variables such as age, gender, education, and income.
2. Reliability Test (Cronbach’s Alpha) - To test internal consistency of constructs ($\alpha > 0.70$ indicates reliability).
3. Exploratory Factor Analysis (EFA) - To identify underlying factor structure.
4. Confirmatory Factor Analysis (CFA) - To validate measurement model. Goodness-of-fit indices assessed:
 - o $\chi^2/df \leq 3$
 - o $CFI \geq 0.90$
 - o $TLI \geq 0.90$
 - o $RMSEA \leq 0.08$
5. Structural Equation Modelling (SEM) - To test hypothesized relationships among constructs.

6. Ethical Considerations

Participants were informed about the study’s purpose, ensured confidentiality, and participation was voluntary. No personal identifiers were

collected.

To assess the potential impact of common method bias, Harman’s single-factor test was conducted. The unrotated factor solution revealed that the first factor accounted for less than 40% of the total variance, indicating that common method bias is unlikely to be a serious concern in this study. Additionally, procedural remedies such as respondent anonymity and careful scale design were employed to minimise response bias.

Data Analysis and Results

1. Demographic Profile of Respondents

Out of 300 respondents, 52% were female and 48% male. Majority belonged to the age group 18–30 years (65%), followed by 31–40 years (28%), and above 40 years (7%). Around 60% were graduates, and 40% were postgraduates. The income distribution showed 45% earning below ₹50,000 per month, and 55% above ₹50,000.

This indicates that the sample consists mainly of young, educated, urban consumers—appropriate for studying eco-friendly product adoption.

2. Reliability and Validity of Constructs

To assess internal consistency, Cronbach’s Alpha was calculated.

Table 1 : Reliability Analysis

| Construct | Items | Cronbach’s Alpha |
|-----------------------|-------|------------------|
| Environmental Concern | 4 | 0.82 |
| Perceived Quality | 3 | 0.79 |
| Trust in Eco-labels | 3 | 0.84 |
| Green Skepticism | 3 | 0.76 |
| Price Sensitivity | 3 | 0.72 |
| Social Influence | 3 | 0.81 |
| Consumer Adoption | 4 | 0.85 |

All constructs have $\alpha > 0.70$, showing good reliability.

3. Exploratory Factor Analysis (EFA)

- KMO value = 0.89 → sampling adequacy confirmed.
- Bartlett's Test of Sphericity = 1324.5, $p < 0.001$ → data suitable for factor analysis.
- Seven factors extracted with eigenvalues > 1 , explaining 71.3% of total variance.

4. Confirmatory Factor Analysis (CFA)

CFA was conducted using AMOS 24 to validate the measurement model.

Table 2 : Model Fit Indices (Measurement Model)

| Fit Index | Recommended | Obtained |
|-------------|-------------|----------|
| χ^2/df | ≤ 3 | 2.15 |
| CFI | ≥ 0.90 | 0.94 |
| TLI | ≥ 0.90 | 0.92 |
| RMSEA | ≤ 0.08 | 0.056 |
| SRMR | ≤ 0.08 | 0.048 |

The measurement model achieved an acceptable fit.

- Convergent Validity: All standardized factor loadings > 0.60 , AVE > 0.50 .
- Discriminant Validity: Square root of AVE for each construct $>$ inter-construct correlations.

5. Structural Equation Modelling (SEM)

SEM was used to test hypothesized relationships between constructs.

Table 3 : Hypothesis Testing (SEM Results)

| Hypothesis | Path | β (Standardized) | p-value | Result |
|------------|----------------------------------|------------------------|---------|-----------|
| H1 | Environmental Concern → Adoption | 0.28 | 0.002 | Supported |
| H2 | Perceived Quality → Adoption | 0.21 | 0.005 | Supported |
| H3 | Trust in Eco-labels → Adoption | 0.33 | 0.000 | Supported |
| H4 | Green Scepticism → Adoption | -0.18 | 0.014 | Supported |
| H5 | Price Sensitivity → Adoption | -0.22 | 0.009 | Supported |
| H6 | Social Influence → Adoption | 0.26 | 0.001 | Supported |

All six hypotheses were supported.

- Environmental concern, perceived quality, trust in eco-labels, and social influence positively influence adoption.
- Green scepticism and price sensitivity negatively influence adoption.
- Trust in eco-labels emerged as the strongest predictor ($\beta = 0.33$).

The structural model explains a substantial proportion of variance in consumer adoption of eco-friendly products ($R^2 = 0.62$), indicating strong explanatory power. Among the predictors, trust in eco-labels demonstrated the largest effect size, followed by environmental concern and social influence, underscoring the central role of credibility and normative pressure in sustainable consumption decisions.

Discussion

The study set out to examine the factors influencing consumer adoption of eco-friendly products. The SEM results confirm that environmental concern, perceived quality, trust in eco-labels, and social influence positively affect adoption, while green scepticism and price sensitivity negatively affect adoption.

These findings reinforce earlier works in green consumer behaviour (Joshi & Rahman, 2015; Sharma & Foropon, 2019), which highlighted that eco-consciousness and trust in sustainable branding are essential to bridging the attitude-behaviour gap. Interestingly, the present study demonstrates that trust in eco-labels is the strongest predictor, suggesting that consumers rely heavily on credible information to validate sustain ability claims.

The negative influence of price sensitivity and green scepticism indicates that while consumers may support sustain ability in principle, adoption is hindered when eco-products are perceived as costly or when green washing concerns arise. This aligns

with the theory of planned behaviour and the value-belief-norm framework, where perceived barriers moderate sustainable consumption intentions.

Implications

1. Theoretical Implications

- This research contributes to the green consumer behaviour literature by integrating multiple constructs into a validated SEM model.
- It provides evidence that eco-label trust and social influence are central drivers, expanding the scope of sustain ability research beyond individual environmental concern.
- By including scepticism and price sensitivity, the study addresses barriers that often remain under explored in sustain ability marketing literature.

2. Managerial Implications

- Marketers should focus on building transparency and credibility by adopting reliable eco-certifications and communicating verifiable sustain ability claims.
- Pricing strategies need to position eco-friendly products not as expensive alternatives but as value-driven, long-term cost-effective solutions.
- Brand campaigns should leverage social influence by highlighting community adoption, peer endorsements, and influencer advocacy.
- Product design and innovation should integrate eco-consciousness with quality to ensure consumers do not perceive a compromise.

4. Policy Implications

Policymakers should establish uniform and verifiable eco-labelling standards to reduce consumer scepticism and enhance trust. Introducing fiscal incentives such as reduced GST rates, subsidies, or tax benefits for certified eco-friendly products can mitigate price sensitivity, particularly in emerging economies. Public awareness campaigns linking eco-consumption to national sustain ability

goals can further reinforce normative pressures and encourage widespread adoption.

CONCLUSION

This study demonstrates that transforming consumer vision into value in the eco-friendly product space requires overcoming scepticism and cost barriers while enhancing trust, social acceptance, and perceived quality.

The findings highlight that eco-friendly adoption is not merely a function of environmental concern but a multidimensional process shaped by credibility, afford ability, and social influence. As such, businesses and policymakers must co-create strategies that balance profitability with purpose, ultimately aligning with the UN's sustain ability agenda.

By offering both academic insights and practical strategies, this research emphasizes that consumer adoption of eco-friendly products can accelerate the transition toward a more sustainable and resilient marketplace.

Future research may extend this study by employing longitudinal designs to examine changes in eco-friendly adoption over time and by incorporating rural and older consumer segments to enhance generalis ability. Comparative cross-country studies could further explore cultural differences in sustain ability perceptions, while experimental designs may assess the effectiveness of specific eco-labelling and pricing interventions.

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Appendix A: Survey Questionnaire

Title: Consumer Perceptions and Adoption of Eco-Friendly Products

Purpose: Academic research only

Scale: 5-point Likert scale

(1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Section A: Screening Question

1. I am aware of eco-friendly / environmentally friendly products.

Yes No

(Only respondents selecting "Yes" were included in the study)

Section B: Environmental Concern (EC)

Adapted from Verma et al. (2019); Yadav & Pathak (2017)

EC1. I am concerned about environmental problems such as pollution and climate change.

EC2. I feel a personal responsibility to help protect the environment.

EC3. Environmental protection should be a priority, even if it requires changes in lifestyle.

EC4. I believe that individual actions can contribute to environmental sustainability.

Section C: Perceived Quality of Eco-Friendly Products (PQ)

Adapted from Suki (2016); Chen (2020)

PQ1. Eco-friendly products are of high overall quality.

PQ2. Eco-friendly products perform as well as conventional products.

PQ3. Using eco-friendly products does not involve a compromise in functionality.

Section D: Trust in Eco-Labels (TEL)

Adapted from Alamsyah et al. (2020); Kong et al. (2021)

TEL1. I trust eco-labels and environmental certifications displayed on products.

TEL2. Eco-labels increase my confidence in the environmental claims made by companies.

TEL3. Products with recognised eco-certifications are more reliable than those without them.

Section E: Green Scepticism (GS)

Adapted from Nyilasy et al. (2014); Aw & Chuah (2021)

GS1. Many companies exaggerate their environmental claims to attract customers.

GS2. I am sceptical about the authenticity of eco-friendly product advertisements.

GS3. I doubt whether most eco-friendly labels genuinely reflect environmental benefits.

Section F: Price Sensitivity (PS)

Adapted from Biswas & Roy (2015); Zhang et al. (2021)

PS1. Eco-friendly products are generally too expensive for regular purchase.

PS2. I prefer cheaper alternatives even if they are less environmentally friendly.

PS3. Price is more important to me than environmental benefits when making purchase decisions.

Section G: Social Influence (SI)

Adapted from Kumar et al. (2021); Kong et al. (2021)

SI1. My friends and family encourage me to buy eco-friendly products.

SI2. People important to me think that I should use eco-friendly products.

SI3. Social media content influences my decision to purchase eco-friendly products.

Section H: Consumer Adoption of Eco-Friendly Products (CA)

Adapted from Nguyen et al. (2020); White et al. (2019)

CA1. I prefer purchasing eco-friendly products whenever they are available.

CA2. I often choose eco-friendly products over conventional alternatives.

CA3. I intend to buy more eco-friendly products in the future.

CA4. I actively try to include eco-friendly products in my regular purchases.

Section I: Demographic Information

1. Gender: Male Female Other

2. Age Group:

18–25 26–30 31–40 Above 40

3. Education:

Graduate Postgraduate Doctorate Other

4. Monthly Income (₹):

Below 50,000 50,000–1,00,000 Above 1,00,000

5. City of Residence: _____

All measurement items were adapted from previously validated scales in sustainability and consumer behaviour literature. Minor wording adjustments were made to suit the Indian context while preserving construct validity. A pilot test was conducted to ensure clarity and reliability of the instrument.