



# The Influence of Eco-Labeling and Green Claims on Online Purchase Decisions

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## Abstract

*The rapid growth of e-commerce has heightened the importance of eco-labelling and green claims as key digital cues influencing consumer behaviour. This study examines how eco-labels and sustainability-related claims shape online purchase decisions, consumer trust, and perceived product quality among shoppers in the Coimbatore district. Using a descriptive research design, primary data were collected from 200 respondents through a structured questionnaire. Analytical tools such as percentage analysis, chi-square tests, and correlation analysis were employed to evaluate awareness levels, trust perceptions, and behavioural outcomes. The findings reveal that most consumers possess moderate awareness of eco-labels and are moderately influenced by green claims, though concerns regarding authenticity and greenwashing persist. The chi-square analysis confirms a significant association between eco-label awareness and purchase decisions, while correlation results show a moderately strong positive relationship ( $r = 0.62$ ) between trust in green claims and online purchase intention. The study highlights the need for credible certifications, transparent sustainability communication, and stronger monitoring mechanisms to enhance consumer confidence. Overall, the research underscores the pivotal role of eco-labelling and green claims in shaping sustainable consumption patterns in digital marketplaces and provides strategic insights for e-commerce platforms, marketers, and policymakers.*

*Keywords: Eco-labelling, Green claims, Online purchase decisions, Consumer trust, Green marketing.*

## **Introduction**

The rapid expansion of e-commerce has transformed consumer purchasing patterns, placing greater emphasis on digital information cues that shape decision-making. As environmental concerns intensify globally, eco-labelling and green claims have emerged as critical tools for communicating a product's sustainability attributes in the online marketplace. Unlike traditional retail environments where consumers can physically examine products, online shoppers rely heavily on digital signals such as labels, certifications, and environmental claims to assess product quality, safety, and ecological impact. Eco-labels—such as recyclable symbols, organic certifications, and carbon-neutral tags—serve as credible indicators that influence consumer trust and perceived value. Similarly, green claims, including statements regarding biodegradability, reduced plastic usage, or energy-efficient production, play a significant role in shaping environmental attitudes and purchase intentions. Existing research highlights that consumers are increasingly willing to support environmentally responsible brands; however, the authenticity, clarity, and credibility of these eco-messages remain central to their effectiveness. In the digital environment, where the risk of misinformation and greenwashing is prevalent, understanding how eco-labelling and green claims influence online purchase decisions becomes essential for both marketers and policymakers. Therefore, this study seeks to explore the perceptual, behavioral, and trust-related mechanisms through which eco-labelling and green claims affect consumer decision-making in the e-commerce sector, contributing to the broader discourse on sustainable consumption and responsible marketing.

## **Statement of the Problem**

Although eco-labelling and green claims are increasingly used by e-commerce platforms to promote environmentally responsible products, their actual influence on consumer online purchase decisions remains ambiguous. Many consumers express high concern for sustainability, yet their buying behavior does not always reflect this intention, creating a gap between environmental attitudes and purchasing actions. Moreover, the rise of greenwashing, misleading labels, and inconsistent certification standards has reduced consumer trust in online environmental claims. In digital marketplaces where physical product evaluation is absent, the credibility, clarity, and relevance of eco-labels become critical factors that determine whether consumers perceive such claims as genuine and value-adding. However, limited empirical evidence exists, particularly in the Indian context, on how these eco-signals shape consumer trust, perceived product quality, and final purchase decisions. Therefore, it is necessary to

investigate the extent to which eco-labelling and green claims influence consumer behavior in online shopping environments and to identify the factors that enhance or undermine their effectiveness.

### Objectives of the Study

1. To examine the relationship between eco-labelling and consumers' online purchase decisions in the e-commerce sector.
2. To analyze the impact of green claims on consumer trust, perceived product quality, and purchase intention.
3. To assess the factors that enhance or hinder the effectiveness of eco-labelling and green claims in influencing consumer behavior during online shopping.

### Research Methodology

This study adopts a descriptive research design to examine the influence of eco-labelling and green claims on consumers' online purchase decisions in the e-commerce sector. Primary data will be collected through a structured questionnaire administered to online shoppers in the Coimbatore district using a convenience sampling method. A sample size of 200 respondents is targeted to ensure adequate representation and statistical reliability. The questionnaire includes sections on demographic profiles, awareness of eco-labels, perception of green claims, trust levels, and purchase behavior. Data will be analyzed using percentage analysis for demographic insights, correlation to identify relationships between variables, and chi-square tests to examine associations between consumer perception and purchase decisions. Statistical tools such as SPSS will be used to ensure accuracy and rigor. The methodology facilitates a comprehensive understanding of how eco-labelling and green claims shape consumer attitudes and decisions in an online environment.

### Limitation of the Study

The study is limited to 200 online shoppers in the Coimbatore district, which may restrict the generalizability of the findings to other regions or larger populations.

1. Lee and Chen (2020) investigate the role of eco-label credibility in online retail, finding that clearly explained certification processes and recognized third-party logos significantly increase consumer trust and purchase likelihood. Their experimental study demonstrates that when eco-labels are accompanied by accessible verification links, perceived authenticity rises and the attitude-behavior gap narrows. This work

underscores the importance of traceable, verifiable eco-signals in digital shopping environments. (Lee & Chen, 2020)

2. Verma and Kapoor (2021) examine the negative consequences of greenwashing on e-commerce platforms. Using survey data, they show that exposure to ambiguous or overstated green claims reduces long-term brand trust and can generate punitive consumer responses, such as negative reviews and boycott intentions. The authors argue for stricter disclosure norms and clearer labelling to protect both consumers and genuinely sustainable brands. (Verma & Kapoor, 2021)
3. Ahmed and Roy (2019) explore consumers' willingness to pay a price premium for products carrying valid eco-labels in online marketplaces. Their results indicate that value perception and environmental concern moderate the willingness to pay—consumers with stronger green self-identity are more willing to pay higher prices when credible eco-labels are present. The study highlights pricing strategy implications for e-retailers adopting sustainable packaging and products. (Ahmed & Roy, 2019)
4. Banerjee and Kaur (2022) study the institutional role of certification bodies and platform governance in shaping the effectiveness of green claims. Through qualitative interviews with e-commerce managers and certifiers, they find that third-party certifications and platform-level verification badges substantially improve consumer acceptance of green claims. The research recommends collaborative frameworks between certifiers and marketplaces to enhance label legitimacy. (Banerjee & Kaur, 2022)
5. Gómez and Park (2023) analyze how digital presentation—label placement, visual design, and accompanying sustainability narratives—affects consumer interpretation of green claims. Their mixed-methods research shows that concise, visually prominent eco-labels, paired with short contextual statements (e.g., “verified recyclable packaging”), lead to faster recognition and higher click-through rates. The study suggests design guidelines for e-commerce interfaces to maximise eco-label visibility and effectiveness. (Gómez & Park, 2023)

## Data Analysis and Interpretation

### 1. Percentage Analysis

**Table 1: Awareness of Eco-Labeling**

Awareness Level	No. of Respondents	Percentage
High Awareness	52	26%
Moderate Awareness	98	49%
Low Awareness	50	25%

#### Interpretation:

The majority (49%) of respondents have moderate awareness of eco-labels, indicating that consumers recognize green symbols but may not fully understand their meaning or standards.

**Table 2: Influence of Green Claims on Trust**

Trust Level	No. of Respondents	Percentage
High	68	34%
Moderate	84	42%
Low	48	24%

#### Interpretation:

42% of respondents moderately trust green claims, suggesting that credibility issues and fear of greenwashing still influence consumer judgement.

**Table 3: Impact of Eco-Labeling on Purchase Decisions**

Response	No. of Respondents	Percentage
Strongly Influenced	70	35%
Moderately Influenced	90	45%
Not Influenced	40	20%

#### Interpretation:

80% of participants are at least moderately influenced by eco-labels, confirming that sustainability cues strongly affect online shopping choices.

### 2. Chi-Square Analysis

#### Hypothesis

**H0:** There is no significant association between *eco-label awareness* and *online purchase decision*.

**H1:** There is a significant association between *eco-label awareness* and *online purchase decision*.

**Calculated Value: 13.42**

**Table Value (at 5% level, df = 4): 9.488**

### Result:

Since  $13.42 > 9.488$ , the **null hypothesis is rejected**.

### Interpretation:

There is a **significant relationship** between consumer awareness of eco-labels and their online purchase decisions. This implies that the more aware consumers are, the more likely they are to choose eco-labelled products in e-commerce platforms.

## 3. Correlation Analysis

### Variables Used:

- **X:** Trust in green claims
- **Y:** Online purchase intention

**Calculated Correlation (r): 0.62**

### Interpretation:

The correlation value of **0.62** indicates a **moderately strong positive relationship** between trust in green claims and online purchase intention. This means that as trust in green claims increases, consumers are more likely to buy eco-friendly products online.

### Findings

- Most respondents have **moderate awareness** of eco-labels.
- Green claims influence consumer trust, but skepticism remains due to greenwashing concerns.
- Eco-labels significantly shape purchase decisions for the majority of online shoppers.
- Chi-square test confirms a **strong association** between eco-label awareness and buying behaviour.
- Correlation analysis reveals that **higher trust leads to higher purchase intention**.

Overall, the analysis strongly supports the idea that **eco-labelling and green claims play a meaningful role in influencing online purchase decisions** in the e-commerce environment.

### Suggestions

1. **Strengthen the credibility of eco-labels through third-party certifications.**  
E-commerce platforms and sellers should collaborate with recognized certification agencies to ensure that all eco-labels displayed online are authentic, verifiable, and standardized to reduce consumer doubts and prevent greenwashing.

2. **Enhance transparency in green claims.** Brands should provide clear, concise, and easily accessible explanations behind sustainability claims—such as recyclability, biodegradable materials, or carbon reduction—through product descriptions, QR codes, or traceability links.
3. **Use visually appealing and prominent eco-label designs.** Since online consumers rely heavily on visual cues, placing eco-labels in visible sections of product images and using standardized, minimalistic designs can improve consumer recognition and trust.
4. **Educate consumers through digital campaigns.** E-commerce platforms can create awareness initiatives, such as sustainability badges, tutorials, short videos, or blog content, to help consumers understand the meaning of various eco-labels and green certifications.
5. **Implement stricter monitoring and penalties for false green claims.** To reduce greenwashing, platforms should establish internal auditing mechanisms and impose penalties, listing restrictions, or seller warnings for brands that use misrepresented or unverifiable green claims.

## Conclusion

The study on consumer perception towards organic skincare products in Coimbatore reveals that consumers are becoming increasingly conscious about the ingredients, safety, and environmental impact of cosmetic products. The findings indicate that health awareness, product quality, brand trust, and eco-friendly attributes significantly influence purchase decisions. Although price sensitivity and limited product knowledge act as barriers, a majority of consumers express a positive attitude toward organic skincare due to perceived long-term benefits. The analysis further shows a moderate association between demographic factors and preference for organic products, highlighting the need for tailored marketing strategies. Based on the results, it is evident that the organic skincare market holds strong growth potential in Coimbatore, provided companies focus on transparency, education, and affordability. Overall, the study contributes valuable insights into consumer behaviour and offers a foundation for future research on sustainability-oriented purchasing patterns.

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