

Unlocking Green Buying: Exploring How Environmental Cues Shape Value Perceptions and Consumer Choices

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ABSTRACT

Purpose – Clean water is an essential resource for human life, making it a central focus for consumer product industries. Among various sustainability strategies, the use of eco-labels on product packaging has emerged as a key approach to attract environmentally conscious consumers. This study aims to examine the influence of eco-labels on consumer purchase decisions, with a particular focus on the mediating role of perceived value. The research targets consumers of Le Minerale, a bottled water brand known for implementing eco-label strategies.

Design/methods/approach – A quantitative approach was adopted, employing both descriptive and verification methods. Data were collected through simple random sampling from 200 respondents who had purchased and consumed Le Minerale. The analysis measured the direct and indirect effects of eco-labels on purchase decisions through perceived value using path analysis and Sobel test.

Findings – The findings reveal that eco-labels are perceived positively, perceived value is rated high, and purchase decisions are evaluated as good. Eco-labels significantly influence purchase decisions both directly and indirectly through perceived value, confirming its role as a mediating variable.

Research implications/limitations – This study is limited to a single product category and a specific geographic area. Therefore, caution is advised when generalizing the results. Additionally, the sampling design may restrict the broader applicability of the findings.

Originality/value – This research contributes to the literature on sustainable consumer behavior by providing empirical evidence on how eco-labels affect purchase decisions in the bottled water industry. It highlights the strategic importance of perceived value as a psychological mechanism that links environmental labeling with consumer behavior.

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Introduction

The accelerating pace of global environmental challenges—such as climate change, resource depletion, and pollution—has underscored the urgent need for more sustainable consumption practices. In response, green consumerism, defined as the deliberate purchase of environmentally friendly products, has emerged as a central theme in contemporary

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marketing and public policy discourse (Öztek & Çengel, 2013). Among the strategies adopted to support green behavior, eco-labels have gained prominence for their role in communicating environmental information to consumers and influencing purchasing behavior (Panopoulos et al., 2023).

Eco-labels serve as signaling mechanisms that help reduce information asymmetry between producers and consumers by indicating a product's environmental benefits in a simple and accessible format. Prior studies suggest that eco-labels positively influence green purchase intentions, especially when consumers possess strong environmental awareness and trust in the labeling system (Wandosell et al., 2021; Ansu-Mensah, 2021). However, their effectiveness often hinges on perceived value, which refers to a consumer's overall assessment of a product's utility based on functional, emotional, and environmental dimensions (Luo et al., 2022).

Understanding the role of perceived value is particularly important for Generation Z, a demographic known for its digital fluency, social consciousness, and pragmatic decision-making. While members of Gen Z often express concern for environmental issues, their willingness to pay a premium for green products is influenced by the perceived quality, benefits, and trustworthiness of the product and its labeling (Gomes et al., 2023).

This study is motivated by the complexities surrounding green consumer behavior, particularly in the context of eco-label credibility and consumer skepticism. Although prior research has explored the influence of eco-labels and green marketing strategies independently, relatively few studies have examined the interplay between eco-labels and perceived value, particularly in influencing green purchase intentions among younger consumers. Additionally, the rise of greenwashing practices has increased public skepticism regarding the authenticity of environmental claims (Adamkiewicz et al., 2022), making it essential to investigate not only the presence of eco-labels but how they are interpreted and internalized by consumers.

The present study aims to address this gap by empirically investigating the mediating role of perceived value in the relationship between eco-labels and purchase decisions. Using *Le Minerale*—a bottled water brand that actively promotes eco-labels—as a case study, this research explores how eco-labels influence consumer behavior through the lens of perceived value.

The remainder of this paper is structured as follows. First, the relevant literature on eco-labels, perceived value, and purchase behavior is reviewed to develop a conceptual framework. Then, the research methodology is explained, followed by data analysis and discussion of key findings. Finally, the study concludes with theoretical and practical implications, along with suggestions for future research.

Methods

This study employed a quantitative research design using both descriptive and verification approaches. The descriptive method was used to explain the characteristics of *Le Minerale* consumers in relation to eco-label perception, perceived value, and purchase decision behavior (Priyono, 2016). The verification method aimed to empirically test the causal relationships among the variables through a structured statistical analysis.

Research Context and Sample

The research focused on consumers familiar with *Le Minerale*, a bottled water brand that incorporates eco-labeling in its marketing and packaging strategies. The target population

included the 74,200 followers of the brand's official Instagram account (@lemineraleid), as they were considered to have a reasonable level of brand awareness and engagement.

A simple random sampling technique was applied to ensure representativeness and minimize selection bias. From this population, a sample of 200 respondents was selected, all of whom had purchased and consumed Le Minerale products. The data collection process was conducted through a structured online questionnaire administered at a single point in time, following a cross-sectional design (Sekaran & Bougie, 2013; Hermawan, 2006).

Data Analysis Techniques

To examine the direct and indirect effects among variables, this study employed path analysis and the Sobel test, utilizing IBM SPSS 25 software.

Path analysis, an extension of multiple linear regression, allows for testing the strength and direction of hypothesized causal relationships among variables. In this study, the path model includes:

- The direct effect of eco-label on perceived value (*path a*);
- The direct effect of perceived value on purchase decision (*path b*);
- The direct effect of eco-label on purchase decision (*path c*);
- The indirect effect of eco-label on purchase decision via perceived value ($a \times b$);
- The total effect, which combines both direct and indirect paths ($c + a \times b$).

The Sobel test was used to statistically assess the significance of the mediation effect, determining whether perceived value meaningfully transmits the influence of eco-labels on consumer decisions.

All variables in the model were measured using Likert-scale-based indicators, and data validity and reliability were confirmed prior to conducting the structural analysis.

Result

This study aimed to examine the influence of eco-labels on consumer purchase decisions, with perceived value as a mediating variable. Data analysis was conducted using path analysis and the Sobel test, enabling an assessment of both direct and indirect causal relationships between variables.

Descriptive Analysis

The descriptive results revealed that the implementation of eco-labels was perceived as moderate, while both perceived value and purchase decisions were rated positively by respondents. These findings suggest that while consumers recognize the environmental labeling on *Le Minerale* products, the interpretation of this label gains stronger meaning when accompanied by perceived value attributes such as functional utility, emotional resonance, and environmental impact.

Path Analysis

The path analysis identified the strength of relationships among the three core variables. The direct path from eco-labels to perceived value yielded a coefficient of 0.547, indicating that the presence of eco-labels significantly enhances consumers' value perceptions of the product. In turn, perceived value strongly influenced purchase decisions, with a coefficient of 0.692, demonstrating that consumers are more likely to make a purchase when they perceive the product as beneficial and aligned with their values.

Interestingly, eco-labels also had a direct effect on purchase decisions, albeit at a lower coefficient of 0.382. This suggests that eco-labels alone can influence purchasing behavior, but their effectiveness is amplified when mediated through perceived value.

The indirect effect of eco-labels on purchase decisions, calculated as the product of path a and b ($0.547 \times 0.692 = 0.378$), is nearly equivalent to the direct effect, reinforcing the role of perceived value as a significant mediating factor. The total effect of eco-labels on purchase decision was found to be 0.760, combining both direct and indirect influences.

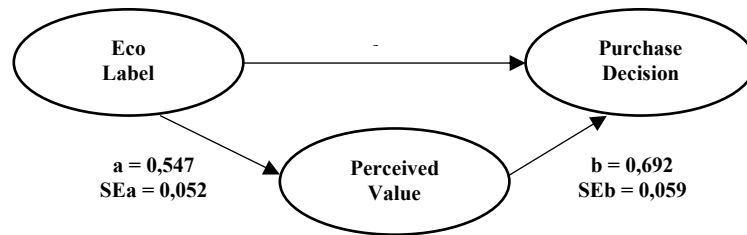


Figure 1. Path Analysis

These causal relationships are visualized in Figure 1, which illustrates the model's directional flows and coefficient strengths between variables. Path Model Showing the Direct and Mediated Effects of Eco-Labels on Purchase Decision through Perceived Value.

Mediation Analysis

To assess the statistical significance of the mediation effect, a Sobel test was conducted. The test produced a t-value of 7.831, which exceeds the critical value of 1.96 at a 5% significance level. This confirms that perceived value significantly mediates the relationship between eco-labels and consumer purchase decisions.

Table 1. Summary of Findings

Relationship	Coefficient	Std. Error	Significance
Eco-label → Perceived Value (a)	0.547	0.052	Significant
Perceived Value → Purchase Decision (b)	0.692	0.059	Significant
Eco-label → Purchase Decision (c)	0.382	—	Significant
Indirect Effect (a × b)	0.378	—	Significant
Total Effect (c + a × b)	0.760	—	Significant
Sobel Test (t-value)	7.831	—	p < 0.05

Interpretation

The findings of this study highlight the psychological mechanism through which eco-labels influence consumer behavior. Eco-labels are more than just symbols; their impact becomes profound when consumers perceive value—whether through functional benefits, emotional alignment, or environmental contribution. This suggests that companies promoting green products should focus not only on labeling but also on enhancing the perceived utility and authenticity behind those labels.

Moreover, the relatively lower direct effect of eco-labels on purchase decisions compared to the indirect effect indicates that perceived value is not just an accompanying factor but a

pivotal enabler of green consumerism. Therefore, building consumer trust and enhancing their value perception should be prioritized in sustainable marketing strategies.

Discussion

The results of this study underscore the significant role that eco-labels play in shaping consumer perceptions and behavior in the context of environmentally friendly products. The direct influence of eco-labels on purchase decisions reaffirms findings from prior research (e.g., Shabbir et al., 2020; Song et al., 2019) which emphasized that clear and credible labeling can drive consumer trust and positively impact decision-making. However, the magnitude of this influence, while statistically significant, is modest when considered in isolation, indicating that eco-labels must be complemented by other psychological drivers to achieve full effectiveness.

A central contribution of this study lies in identifying perceived value as a mediating mechanism that strengthens the effect of eco-labels on purchase intention. This finding is consistent with Luo et al. (2022) and Fleith de Medeiros et al. (2015), who argued that green marketing efforts are more persuasive when consumers associate products with functional utility, emotional satisfaction, and social relevance. The strong path coefficient from perceived value to purchase decision suggests that consumers are not only aware of eco-labels but also interpret them through a lens of personal benefit and moral alignment. This supports the notion that environmental signals must be internalized through value-based cognition to effectively influence behavior.

The significant mediation effect, confirmed by the Sobel test, also implies that eco-label strategies should not be implemented superficially. Without the reinforcement of perceived value—through quality communication, consistent brand messaging, and authentic sustainability practices—eco-labels may fail to motivate actual purchasing behavior. This aligns with critiques of greenwashing (Adamkiewicz et al., 2022), where the presence of labels without substance can lead to consumer skepticism. Thus, perceived value acts as both a filter and an amplifier of eco-label messaging, especially in markets where consumers are increasingly discerning.

From a practical perspective, the results offer strategic insights for marketers and policymakers. To increase the effectiveness of eco-label campaigns, firms should integrate value-based branding that resonates with consumers' environmental concerns and lifestyle aspirations. Additionally, social marketing initiatives can elevate the social value dimension of perceived value, emphasizing community impact and shared responsibility. These strategies are particularly important for appealing to Generation Z, a segment that is socially conscious but also critically evaluates the authenticity of sustainability claims. Future research may benefit from expanding this model across product categories and cultural contexts to enhance its generalizability.

Conclusion

This study investigated the influence of eco-labels on consumer purchase decisions in the bottled water industry, with a specific focus on the mediating role of perceived value. The findings confirm that eco-labels significantly affect consumer behavior, both directly and indirectly. However, the indirect pathway—mediated by perceived value—exerts a stronger influence, underscoring the importance of psychological interpretation in the effectiveness of green marketing strategies.

The analysis reveals three key insights. First, while eco-labels are becoming increasingly relevant in the market, consumer awareness and understanding remain limited. Many

consumers are either unaware of the label's presence or unclear about its credibility and implications. Second, the social value dimension of perceived value was found to be the weakest, suggesting that consumers do not yet strongly associate eco-labeled products with social prestige or collective environmental responsibility. Third, the quantity choice aspect of purchase behavior—how often and how much consumers buy—was also relatively low, indicating a gap between environmental concern and actual buying behavior.

To address these gaps, companies should enhance consumer education and label transparency, utilize social narratives to elevate perceived social value, and apply incentive-based marketing strategies that encourage repeat purchases. For example, offering eco-themed loyalty programs, influencer collaborations, or digital tools like QR codes can help build stronger consumer engagement and perceived authenticity.

In conclusion, this study reinforces the notion that eco-label effectiveness depends not only on visibility but also on value alignment. Perceived value serves as a crucial bridge that transforms environmental cues into concrete behavioral intentions. Future research should consider testing additional mediating variables such as green trust, environmental concern, or brand credibility, and expanding the model to different product categories and cultural settings to enhance generalizability. The insights gained here offer practical guidance for marketers aiming to build sustainable brand equity in increasingly environmentally conscious markets.

Declarations

Author contribution statement

The lead author participated in the study's conceptualization and design, analysis, interpretation of data, and initial drafting of the paper. Each author contributed to the critical revision of the content for intellectual rigor and provided final approval for the published version. All authors are responsible for every aspect of the work.

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Data availability statement

The data supporting this study's findings are available from the corresponding author upon reasonable request. However, due to privacy and ethical considerations, the data are not publicly accessible.

Declaration of Interests Statement

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