

Effect of Eco-Labels on Consumers' Buying Decisions: An Empirical Study

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Abstract

Rising environmental concerns and awareness of sustainable consumption have motivated business organizations to adapt eco-labels as a means of communicating the environmental attributes of their products. Eco-labels help customers identify products that meet specific environmental standards and support informed buying decisions. However, the effectiveness of eco-labels depends on awareness of consumers, their trust, perceived credibility, environmental knowledge, and willingness to pay for environment friendly products. This empirical study examines the effect of eco-labels on consumer's buying decisions by analysing the relation between eco-labels awareness, perceived credibility, environmental concern, product quality perception, and purchase intention. It is indicated that eco-labels positively influence consumer's buying decisions by improving trust level, increasing credibility of products, and strengthening perceptions of environmental responsibility. Consumers with higher environmental awareness and trust in eco-label certifications are more likely to buy eco-labelled products despite of their higher prices. A sample of 351 was collected to find the result of the study. The factors studying the Effect of Eco-Labels on Consumers' Buying Decisions are Eco-label awareness, Trust in eco-labels, Environmental Concern and Perceived Product Quality.

Keywords: Consumer Buying decisions, sustainable consumption, eco-labels, green marketing, environmental awareness

Introduction

Eco-labels work as an educational element on the environment and measures the level of customer control. The customer engagement is formulated completely by trust and awareness. Investing in transparency, standardised certification and integrated storytelling are highly important for brands. Advocacy come with trust, it enables customers to be brand ambassadors and also sustainable way of living a life. Trust signals of green brands are eco-labels, it assists eco-label awareness of brands, perception towards the brand, their custodianship and eco-labels perceptions mapping through transparency of information (Krupa & Agnes, 2026). Information regarding green friendliness is provided by eco-labels of products, motivating manufacturers, government as well as dealers for improving product's environmental standards that would boost sustainable consumption. The credibility of eco-labeling system must be transparent as green washing has appeared in environmentally friendly purchasing. Manufacturers along with the government must take initiatives for spreading awareness regarding eco-label and promotion must be done regarding purchasing environment friendly products. A big and important role is played by manufacturers in this case. They must have a commitment towards the society, they need to be more transparent and trustworthy related to environment friendly products (Salini & Thomas, 2017). These days green marketing is one of rising issue in the world of marketing that cannot be ignored by marketers. The purpose here is to identify how eco-labeled products influence buying behavior of consumers. Products with eco-labeling is creating good influence not just on national level but also internationally. It is encouraging eco-friendly practices for government and helping in recognition and setup of markets for marketers. Eco-products mean environment friendly and harmless for the earth. Even though there are worldwide certification and principles form considering any product as environment friendly, but there are available eco-labeling companies that provide certification (Samal, 2023). Eco-labeling is a main element of green marketing model, providing substantial information on dynamic nexus of sustainability, customer behavior and organizational practices. As the fields remains in their infancy, future researches must analyse the process and situational elements within psychology supporting the usefulness of eco-label products that impact sustainable consumer buying behavior. Consumer buying behavior, sustainable

development and eco-labeling main themes within this field and therefore, eco-labeling become important aspect of modern green marketing approach (Kiran & Wajih, 2026). A crucial role is played by eco-labeling that encourages sustainable consumer buying behavior as it gives clear information about environmental impact of products. It is shown by the study that eco-labeling makes a positive influence on buying choice of young customers and can be considered as a valuable tool to promote sustainable consumption. To make eco-labeling successful, customers must have the ability of recognising, understanding and trusting the labels. When customers can identify and make sense of eco-labels, they are likely to trust the provided information. Rising concerns towards the environment have necessitated the investigation of impact of eco-labeling on the tastes of young consumers. For providing sustainable development and environment conservation efforts, it is essential to investigate how eco-labeling activities impact buying decisions of young consumers (Emmanuel & Chukwunonye, 2024), (Das & Mittal, 2023). In another study, impact of eco-labeling is investigated on buying decisions of young generation, it focuses on the role as trust-enhancing signs in context of sustainable product choice. With the rising global environmental consciousness, brands are leveraging eco-labeling for attracting young consumers, sustainability aware customers. However, a substantial gap is present between presence of eco-labels and their impact on consumer buying behavior. It is further revealed that credibility of eco-label makes significant influence on purchase intentions on customers who are willing to pay high prices for eco-labeled products. However, neutrality in responses towards eco-labeled products make influence over brand, which suggests that sensitivity of price and familiarity with the brand still compete with sustainability considerations (Vishwakarma, 2026).

Literature Review

Tullani & Dahiya (2017) stated that in order to catch consumers and for sustaining on the market, eco-labeling has appeared as a buzzword. Eco-labels are defined as an apparatus influencing the buying intentions of customers. Eco-labels are recognized leading to consumer attritions that impact the buying decisions of consumers. Eco-labeling creates customer attrition with factors like awareness creation, trust and knowledge and so on make impact on buying intentions of consumers. It is shown in the findings that eco-labeling pressurizes on the green buying intentions of consumers and it is being considered as a unique source for marketers. A positive attitude towards eco-labeled products follows automatically with trust and knowledge, but it forms a positive attitude towards purchasing a particular eco-labeled product.

Arsyistawa & Hartono (2022) highlighted that a positive and significant impact is made by eco-labels on the attributes of products. It is assumed by the customers that products are designed to be environment friendly and are of good quality. A positive and significant impact is made by eco-labels on the perceived customer effectiveness. For customers, eco-labels make it easier to recognize the environment friendly products as the role of eco-labels assist customers in understanding information about the product as well. Attributes of products makes a positive and significant effect on the environment. The perceived customer effectiveness makes a positive and significant influence on the environment. Customers concerned about environmental issues are likely to pay more attention to the cause and effect of their actions choose to purchase products that are environment friendly. These customers feel to be making their contribution towards preserving and protecting the environment by making green purchases, as customers feel they assist in solving problems related to natural resources by saving water and energy.

Lu & Pan (2025) revealed that in response to rising environmental issues and rising importance of eco-labeled products as a market-based sustainability tool. With intensifying challenges related to global environment, an important role is played by eco-labeling in promotion of sustainable patterns of consumptions across all international markets. Eco-labels evolved from niche environmental marketing tools to main element of international trade governance; it serves as a vital tool to interact about features of environment friendly products to its customers. The efficacy of eco-labels as tools of communication and policy in international context stays limited by cultural elements influencing perceptions and acceptance of customers. With the presence of certification infrastructure in developed markets, emerging economies usually show scattered approach towards environmentally friendly product labeling, it reflects distinct sustainability priorities and regulatory framework.

Vukasovic & Stanton (2026) studied that psychological elements and environmental responsibility mainly trust in ECO labels have statistically significant and strong impact on consumer buying behavior that economic

considerations like price sensitivity. Young customers show high level of awareness related to environment and great importance on eco-friendliness while selecting products. Although, eco-labeled products are considered as influencing by considerable share of customers, partial familiarity and limited skepticism towards credibility of eco-labels remain evident. It is shown in the results that environmental as well as psychological elements plays a vital role that shapes buying decisions than economic considerations, it highlights the main significance of sustainability awareness and trust in eco-labels in modern market. Business organizations and policymakers might be benefitted from initiatives improving the transparency of eco-labels and education of customers, while strategies of communication making emphasis on credibility of environment might be effective in promotion of sustainable choices of products.

Negi (2026) revealed from the findings that awareness about eco-labels and its credibility making significant impact on green buying decisions, with credibility making strong influence. The relationship between credibility of eco-labels and green buying decisions is mediated partially by green trust, while concerns towards the environment moderates the relation between green trust and green buying intention. With regards to green consumption, eco-labels work as a sign conveying environmental quality of the product that cannot directly observe the process of production of environmental influence. The efficacy of those signs is dependent on the credibility and ability of receiver to interpret them accurately.

Kharbanda (2023) stated that government along with other authorities are working towards the development of a complete regulatory framework for eco-labels. It involves setting up of clear standards, it ensures enforcement and promote awareness among producers as well as customers. Enhancing of reputation is advised to sellers by raising awareness regarding eco-friendly products, recognition of such awareness serves as a foundation for trust of customers that eventually leads to buying intentions of customers. Green consumption can be increased and further promoted as it strengthens the system of eco-labels in nation, it creates awareness among customers and instil trust among them for certification of green products.

Panjaitan & Sinaga (2025) highlighted that perception towards eco-label makes a substantial positive influence on trust and buying decisions of customers. Moreover, mediating role is played by customer trust, it strengthens the relation between perception towards eco-labels and their buying behavior. Environmental awareness has appeared as a strong determinant of buying decisions, it shows that customers who are conscious towards the environment and are responsive towards eco-labels. It is shown by the results that perception towards eco-labels makes significant impact on customer trust as well as their buying behavior, which confirms the significance of label clarity and credibility. The relationship between eco-label perception and buying decisions is mediated by customer trust, it highlights the necessity of credibility to ensure effectiveness of eco-labeling. Moreover, the awareness about the environment has appeared as a vital element, it reinforced the idea that informed and environmentally conscious customers are more likely to buy products that are eco-labeled.

Ismail et al. (2018) stated that implementing green products or eco-friendly innovation in the products or services by the company can be proved costly development and might not bring any benefit for the company in case customers do not understand or accept it. Awareness towards the environment makes no substantial impact that would affect the purchase behavior of customers, while Green Branding as well as Eco-labeling does not influence buying behavior of customers. The outcome was because of lacking understanding on the purpose of corporate green branding and eco-labeling to be implemented on eco-friendly products and services. A significant impact was shown by environmental awareness on buying behavior of customers towards products that are labelled as eco-friendly.

Objective

1. To know the factors impacting “Effect of Eco-Labels on Consumers' Buying Decisions”
2. To measure the impact of Eco-Labels on consumer buying decisions.

Methodology

351 participants were surveyed from participants using different product type. The method of sampling was “Random sampling” for collection of data and examination was done by “Explanatory Factor Analysis” for results.

Findings

Table 1 demonstrates demographic details, it shows that 53.85% are Male, 46.15% are female. Looking at the age, 31.62% are below 25 years of age, 34.47% are between 25 to 35 years of age, and 33.91% are above 35 years of age. With regards to Product type, 36.75% are food & beverages, 28.21% are clothing & apparel and 35.04% are other type of product.

Table. 1 Respondent's Details

Variables	Participants	Percentage
Gender		
Male	189	53.85%
Female	162	46.15%
Total	351	100
Ages in years		
Below 25	111	31.62%
25 to 35	121	34.47%
Above 35	119	33.91%
Total	351	100
Product Type		
Food & Beverages	129	36.75%
Clothing & Apparel	99	28.21%
Others	123	35.04%
Total	351	100

“Factor Analysis”**“KMO and Bartlett's Test”****Table. 2 “Kaiser-Meyer-Olkin Measure of Sampling Adequacy”**

“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.765
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	6251.492
	Df	91
	Significance	.000

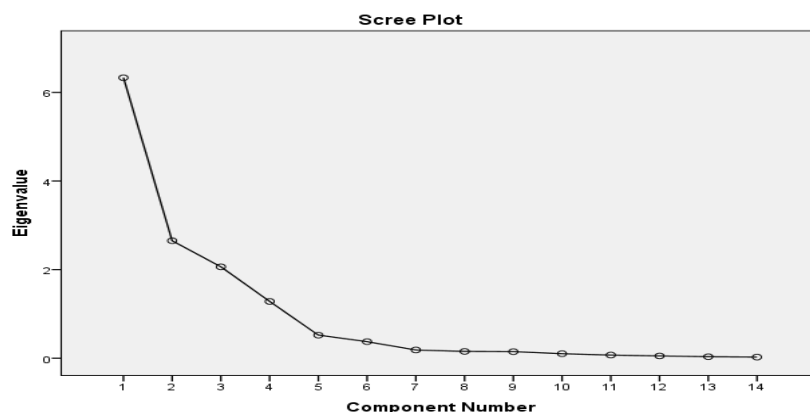
“KMO and Bartlett's Test”, value of KMO is .765 (Table 2).

Table 3 “Total Variance Explained”

“Component”	“Initial Eigenvalues”			“Rotation Sums of Squared Loadings”		
	“Total”	“% Of Variance”	“Cumulative %”	“Total”	“% Of Variance”	“Cumulative %”

1.	6.331	45.220	45.220	3.826	27.327	27.327
2.	2.652	18.943	64.163	3.642	26.018	53.345
3.	2.063	14.732	78.895	2.501	17.861	71.206
4.	1.283	9.163	88.058	2.359	16.853	88.058
5.	.521	3.722	91.781			
6.	.374	2.671	94.452			
7.	.186	1.330	95.782			
8.	.154	1.098	96.880			
9.	.148	1.057	97.937			
10.	.103	.737	98.674			
11.	.072	.514	99.188			
12.	.052	.373	99.560			
13.	.035	.252	99.812			
14.	.026	.188	100.000			

The four factors contribute towards explaining total 88.058% of variance. Variance explained by Eco-label awareness is 27.327%, Trust in eco-labels is 26.018%, Environmental Concern is 17.861%, and Perceived Product Quality is 16.853%. (Table 3).



“Scree Plot”

Table. 4 “Rotated Component Matrix”

S. No.	Statements	Factor Loading	Factor Reliability
	Eco-label awareness		.951
1.	Customers are aware about eco-labels displayed on the product	.952	
2.	Customer recognize eco-labels while shopping	.903	
3.	Understanding the meaning of eco-labels influence their buying decisions	.856	
4.	Aware customers actively look for eco-labelled products before purchasing	.844	
	Trust in eco-labels		.963

1.	Buying decision is influenced by the trust in the information provided by eco-labels	.962	
2.	Eco-labels help in identifying environment friendly products	.908	
3.	Customer believe certified eco-labels are reliable	.902	
4.	Eco-labels increase confidence in making buying decisions	.879	
	Environmental Concern		.881
1.	Purchase decisions are influenced with the concern about environmental protection	.921	
2.	Customers prefer product that are environment friendly	.854	
3.	Customers believe that their purchase decision can help protecting the environment	.782	
	Perceived Product Quality		.845
1.	Eco-labelled products are of high quality than conventional products	.931	
2.	Eco-labels indicate that product is safe to use	.931	
3.	Eco-labels improve customer's perception of product quality	.667	

Factors of the study and its related variables

The first factor of the study is Eco-label awareness, it includes variables like Customers are aware about eco-labels displayed on the product, Customer recognize eco-labels while shopping, Understanding the meaning of eco-labels influence their buying decisions and Aware customers actively look for eco-labelled products before purchasing. Trust in eco-labels is the second factor, its variables are Buying decision is influenced by the trust in the information provided by eco-labels, Eco-labels help in identifying environment friendly products, Customer believe certified eco-labels are reliable and Eco-labels increase confidence in making buying decisions. Environmental Concern is the third factor, the variables it includes are Purchase decisions are influenced with the concern about environmental protection, Customers prefer product that are environment friendly, and Customers believe that their purchase decision can help protecting the environment. Last and fourth factor is Perceived Product Quality, its variables are Eco-labelled products are of high quality than conventional products, Eco-labels indicate that product is safe to use and Eco-labels improve customer's perception of product quality.

Table 5 "Reliability Statistics"

"Cronbach's Alpha"	"Number of Items"
.896	14

Total reliability of 14 items that includes variables for "Effect of Eco-Labels on Consumers' Buying Decisions" 0.896 (Table 5).

"Table 6 Model Summary"

"Model"	"R"	"R Square"	"Adjusted Square"	"Std. Error of the Estimate"
1	.864 ^a	.746	.743	.39704
Predictors: (Constant), Eco-label awareness, Trust in eco-labels, Environmental Concern, and Perceived Product Quality				

The adjusted R-squared value is 0.743 with approximately 74% of the variation.

“Table 7 ANOVA”

“Model”		“Sum Squares”	“df”	“Mean Square”	“F”	“Sig.”
1	“Regression”	160.533	4	40.133	254.584	.000 ^b
	Residual	54.544	346	.158		
	Total	215.077	350			
a. Dependent Variable: Overall impact of Eco-Labels on consumer buying decisions						
b. Predictors: (Constant), Eco-label awareness, Trust in eco-labels, Environmental Concern, and Perceived Product Quality						

Value under significant column indicates a significant relationship between eco-labels (Eco-label awareness, Trust in eco-labels, Environmental Concern, and Perceived Product Quality) and Consumer buying decision.

“Table 8 Coefficients”

“Model”	“Un standardized Coefficients”		“Standardized Coefficients”	“t”	“Sig.”
	“B”	“Std. Error”	“Beta”		
(Constant)	3.949	.021		186.326	.000
Eco-label awareness	.328	.021	.418	15.446	.000
Trust in eco-labels	.056	.021	.072	2.652	.008
Environmental Concern	.273	.021	.348	12.845	.000
Perceived Product Quality	.523	.021	.667	24.652	.000
DV: Overall impact of Eco-Labels on consumer buying decisions					

All the factors Eco-label awareness, Trust in eco-labels, Environmental Concern, and Perceived Product Quality are showing significant impact on consumer buying decision. Highest impact is shown by Perceived Product Quality with beta value (.667) followed by Eco-label awareness (.418), Environmental Concern (.348), and Trust in eco-labels (.072).

Conclusion

Growing environmental concerns and increasing awareness of sustainable consumption have led to the widespread use of eco-label products. Eco-labels provide customers with information about the environmental friendliness, sustainability, and ethical production practices of products, enabling them to make informed purchase decisions. This empirical study examines the effect of eco-labels on consumer’s buying decisions by analysing the factors that influence their perceptions and purchase intentions. The study focuses on key dimensions such as environmental awareness, trust in eco-labels, perceived product quality, willingness to pay premium, and purchase intentions. The findings are expected to reveal that consumers with higher environmental awareness and greater trust in eco-labels are more likely to prefer eco-labeled products despite of their relatively higher prices. It is concluded that businesses must improve transparency, simplify eco-label information, and educate consumers to strengthen trust and encourage sustainable purchase behavior. The factors studying the Effect of Eco-Labels on Consumers' Buying Decisions are Eco-label awareness, Trust in eco-labels, Environmental Concern and Perceived Product Quality. The study concludes that there is significant impact of eco-labels on consumer buying decision.

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