

THE INFLUENCE OF ECO-FRIENDLY PRODUCT LABELS ON UNIVERSITY STUDENTS' PURCHASING DECISIONS

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Abstract: *Eco-friendly product labels have become an important marketing tool for encouraging sustainable consumer behavior. This study examines the influence of eco-friendly product labels on the purchasing decisions of 182 students at an International University, focusing on environmental concern, perceived value, and the visibility of eco-labels in advertisements. Data were collected through an online questionnaire and analyzed using SPSS. The findings revealed that perceived value was the strongest predictor of purchasing decisions, followed by the visibility of eco-labels in advertisements and environmental concerns. Although most respondents demonstrated moderate awareness of eco-labels, this awareness did not consistently translate into actual purchasing behavior. The study highlights the importance of emphasizing the value, credibility, and visibility of eco-labels to encourage sustainable consumption. These findings provide useful insights for marketers and policymakers while contributing to the understanding of green consumer behavior among university students.*

Keywords: *Eco-friendly Product Labels, Purchasing Decisions and Perceived Value*

Introduction

Wasserman (2024) claims that in today's increasingly environmentally conscious world, consumers are becoming more aware of the environmental impact of the products they purchase. Eco-labels play a convenient role in helping consumers identify the sustainable products they seek. From food to fashion and electronics, people are looking for ways to reduce their environmental impact to align their purchases with their personal values. Eco-labels offer transparency, guide purchasing decisions, and help companies communicate their environmental efforts effectively.

Environmental labeling is a more widely utilized marketing tactic by businesses to draw in environmentally conscious customers and promote the sustainability of their products (Huang et al., 2024). This research explores the influence of eco-friendly product labels on the purchasing decisions of students at an International University.

Eco-labels serve as indicators of a product's sustainability, providing consumers with vital information about a product's adherence to environmental standards. Despite their increasing prevalence, gaps remain in understanding which variables significantly influence consumer decisions, particularly among young, environmentally conscious individuals. This study aims to address these gaps by exploring the interaction of critical factors:

- a) Environmental Concern: Examining the extent to which students prioritize sustainability when evaluating product options.
- b) Perceived Value: Understanding how students assess the benefits of purchasing eco-labeled products concerning cost, quality, and ethical considerations.
- c) Visibility of Eco-Labels in Advertising: Analyzing the role of clear and prominent eco-labels in influencing purchasing decisions when integrated into advertisements.

By exploring these dimensions, the study will provide valuable insights into the behavioral dynamics of young consumers in the unique cultural and academic environment at AIU. The research findings are expected to reveal the level of influence that eco-labels have on the purchasing decisions of students. Additionally, the study will seek to present practical recommendations for improving the efficacy of eco-labels in promoting eco-friendly behavior.

This research is not only expected to enrich academic discourse on green consumer behavior but also provide marketers with practical strategies to optimize eco-label designs. By making eco-labeling practices more compelling and visible, marketers can strategically address consumer demands while promoting sustainability. Hence, this study underscores the importance of aligning marketing practices with environmental stewardship, especially in nurturing the next generation of responsible consumers.

Problem Statement

These days, environmental sustainability has received increasing attention, encouraging businesses to adopt eco-friendly product labels as a means of communicating the environmental attributes of their products. Eco-labels are intended to assist consumers in identifying environmentally friendly products and may influence their purchasing decisions. However, the availability of eco-labels and consumers' environmental awareness do not necessarily translate into actual purchasing behaviour. Previous research has indicated that although consumers may demonstrate environmental concern and awareness, this does not always result in sustainable consumption behaviour, highlighting the existence of an environmental attitude-behaviour gap (Saari et al., 2021). Despite the growing use of eco-labels, it remains unclear which factors most

strongly influence university students' purchasing decisions regarding eco-friendly products. Therefore, this study addresses this gap by examining the influence of environmental concern, perceived value, and the visibility of eco-labels in advertisements on university students' purchasing decisions.

Research Questions

1. How do environmental concerns influence the purchasing decisions of university students?
2. Does the perceived value of eco-friendly products encourage purchase behavior among university students?
3. Is the visibility of eco-friendly labels in advertisements significant in shaping the purchasing choices of university students?

Research Objective

Purpose of the investigation is analyzing the environmental consciousness, perceived value and advertisement exposure with green product purchasing intention among university students. This will help the research to propose ways of improving the eco-design labeling in exerting its influence on consumer behavior.

Research Hypothesis

Environmental Concerns:

H1: There is a significant positive relationship between environmental concern and the purchasing decisions of university students regarding products with eco-friendly labels.

Perceived Value:

H2: There is a significant relationship between the perceived value of eco-friendly product labels and the purchasing decisions of university students.

Visibility in Advertisements:

H3: The visibility of eco-friendly labels in advertisements has a positive impact on customers' purchase decisions.

Literature Review

Environmental Concern, Green Purchasing Intention, and the Awareness–Behaviour Gap

Environmental concern is widely recognized as an important sustainable consumption, but its influence on actual purchasing behaviour is more complex than a direct relationship between environmental awareness and green consumption. As an example: Saari et al. (2021) demonstrate that environmental knowledge and perceived environmental risk can strengthen environmental concern, which subsequently contributes to behavioural intention. Similarly, Wang and Wu (2024) show that environmental knowledge and exposure to environmental risks can shape individuals' environmental concerns. These findings indicate that consumers who understand environmental problems are more likely to develop favourable attitudes toward environmentally responsible consumption. However, environmental concern should not be interpreted as sufficient evidence that consumers will consistently choose environmentally preferable products.

A critical issue in the literature is the awareness of behaviour gap, in which consumers express concern about environmental degradation or demonstrate positive attitudes toward sustainable consumption but do not necessarily translate these attitudes into actual purchasing decisions. Through a meta-analytic examination of green purchase intention, Zhuang et al. (2021) indicate that green purchasing is influenced by multiple psychological and contextual factors rather than environmental motivation alone. This distinction is important because purchase intention represents a predisposition to act, whereas the final purchase decision occurs in a market environment where consumers must simultaneously evaluate price, quality, usefulness, credibility, and perceived risk. Consequently, a consumer may genuinely value environmental protection but still select a conventional product when the green alternative is perceived as too expensive, less functional, insufficiently credible, or difficult to identify.

This inconsistency also challenges the assumption that stronger environmental concern will automatically result in stronger green purchasing behaviour. Akenji (2024) critically discusses the limitations of relying on individual consumers to solve environmental problems through consumption choices, suggesting that green consumerism can place excessive responsibility on consumers while overlooking broader structural and market constraints. In this sense, environmental concern may create the motivation to purchase sustainably, but the conversion of that motivation into behaviour depends on whether the marketplace provides accessible, credible, and economically acceptable alternatives. The literature therefore supports viewing environmental concern as an enabling factor rather than a sufficient condition for green purchasing.

The purchasing decision itself involves a further set of trade-offs. Traditional consumer decision-making involves recognizing a need, searching for information, evaluating alternatives, and selecting the option perceived to provide the greatest overall value (Kotler & Armstrong, 2014). In sustainable consumption, however, environmental attributes become only one component of this evaluation. Consumers may compare an eco-labelled product with a conventional alternative in terms of price, product performance, quality, convenience, brand reputation, and environmental benefits. Darmawan and Arifin (2021) and Retnowati et al. (2021) similarly illustrate the importance of price, quality, and perceived product attributes in consumer evaluations. Thus, even when environmental concern is high, competing product attributes can dominate the final decision.

Perceived value provides an important explanation for this inconsistency. Zeithaml (1988) conceptualizes perceived value as the consumer's assessment of what is received relative to what is sacrificed. In green consumption, this evaluation extends beyond functional benefits to include environmental and ethical benefits. Gallarza et al. (2021) further emphasize that consumer value is multidimensional and cannot be reduced to a simple monetary calculation. Juliana et al. (2020) and Chen and Chang (2022) similarly associate green perceived value with favourable green purchasing outcomes. Nevertheless, Zhuang et al. (2021) demonstrate that green purchasing intention is shaped by multiple interacting determinants, indicating that environmental benefits alone may not compensate for disadvantages in other dimensions of product value.

Price is particularly important in explaining why environmental concern may fail to produce actual green purchases. Khayru et al. (2021) identify price as one of the important factors affecting green purchase behaviour, while Zhuang et al. (2021) demonstrate that economic and psychological factors operate alongside environmental motivations. A consumer may therefore

recognize the environmental benefits of an eco-labelled product but reject it when the price premium is perceived as disproportionate to its functional or environmental benefits. This creates an important contradiction in sustainable consumption: the consumers who are most environmentally concerned may express strong intentions to purchase green products, yet those intentions can remain unrealized when economic constraints or unfavourable value perceptions intervene. The awareness–behaviour gap is therefore not necessarily a consequence of insufficient environmental awareness; it may instead emerge from the conflict between environmental values and practical purchasing considerations.

Accordingly, the literature suggests that understanding green purchasing requires moving beyond the question of whether consumers are environmentally concerned to examining under what conditions environmental concern is converted into purchasing behaviour. Price, perceived value, product quality, convenience, information availability, and trust can either facilitate or obstruct this conversion. This perspective provides a more appropriate foundation for examining eco-labelled product purchasing because it recognizes that sustainable consumption is a negotiated decision involving both environmental motivation and practical consumer constraints.

Eco-Label Credibility, Greenwashing, and the Conversion of Environmental Concern into Purchase Decisions

Within this decision-making process, eco-labels are intended to reduce information asymmetry by communicating the environmental characteristics of products at the point of purchase. Their importance arises from the difficulty consumers face in independently verifying environmental claims. Testa et al. (2015) identify eco-labels as potentially effective marketing instruments because they provide environmental information that can influence consumer evaluations. Similarly, Huang et al. (2024) highlight environmental labelling as an important component of green innovation and marketing strategies, while Mallick et al. (2024) identify eco-friendly marketing tools as mechanisms that can influence sustainable consumer choices. Eco-labels can therefore make otherwise difficult-to-observe environmental attributes more visible during product evaluation.

However, the presence of an eco-label does not automatically generate trust or purchasing behaviour. The effectiveness of eco-labelling depends substantially on whether consumers perceive the information as credible. Kumar et al. (2021) demonstrate that green information quality and green brand evaluation are influenced by eco-label credibility and consumer knowledge. This suggests that eco-labels operate not simply as informational symbols but as credibility signals within the purchasing decision. When consumers understand and trust the label, the environmental attribute may contribute positively to product evaluation and perceived value. When the label is ambiguous, unfamiliar, or perceived as commercially motivated, its ability to influence the decision may be substantially weaker.

This issue becomes particularly important in the context of greenwashing, whereby environmental claims may be exaggerated, misleading, or insufficiently substantiated. Gosselt et al. (2019) show that consumers respond differently to internal and external corporate social responsibility eco-labelling, emphasizing the importance of the source and credibility of environmental claims. The implication is that consumers do not necessarily treat every environmental label as equally informative. Instead, they evaluate whether the environmental claim appears authentic and trustworthy. This creates a critical tension within green marketing: increasing the visibility of environmental claims may attract consumer attention, but excessive

or poorly substantiated claims can simultaneously increase scepticism and reduce the credibility of green communication.

The problem is particularly relevant to the awareness–behaviour gap because environmental concern may increase consumers’ motivation to search for sustainable products while simultaneously making them more attentive to the credibility of environmental claims. A highly environmentally concerned consumer may therefore not simply respond positively to the presence of an eco-label. Instead, the consumer may question who issued the label, whether the environmental claim is independently verified, and whether the claimed benefit is meaningful. In such circumstances, greater environmental awareness does not necessarily lead directly to purchase; it can increase information scrutiny and perceived risk. Thus, environmental knowledge may facilitate green consumption in some circumstances while creating additional evaluation requirements in others.

Eco-label trust also interacts with perceived value and price. An eco-labelled product may command a higher price because consumers associate it with environmental benefits, ethical production, or superior sustainability performance. However, the price premium is more likely to be accepted when consumers believe that the environmental claims are authentic and that the additional cost corresponds to meaningful benefits. Conversely, if consumers distrust the label, the same price premium can be interpreted as an unjustified marketing cost. This relationship helps explain why price and trust should not be treated as independent barriers. The perceived legitimacy of the environmental benefit can determine whether a price premium is interpreted as acceptable value or excessive cost.

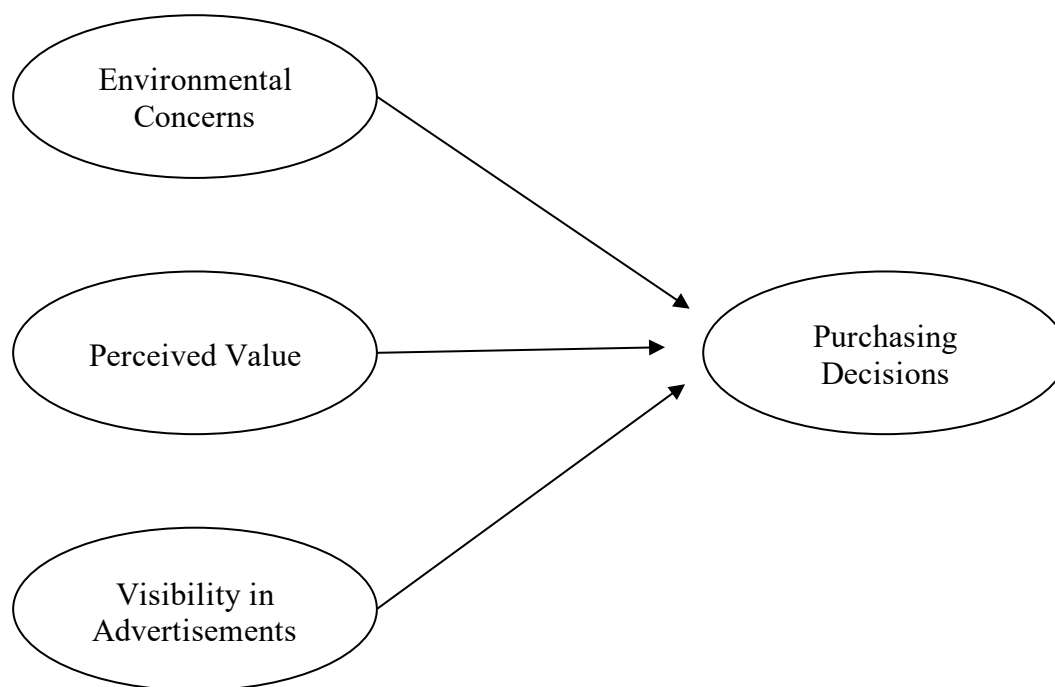
The literature therefore indicates that eco-labels can potentially reduce the awareness–behaviour gap, but only under specific conditions. Testa et al. (2015) suggest that eco-labels can function as effective marketing tools, while Kumar et al. (2021) demonstrate the importance of credibility and consumer knowledge in determining the effectiveness of green information. These findings, when considered alongside the evidence on perceived value and price (Zeithaml, 1988; Juliana et al., 2020; Khayru et al., 2021; Zhuang et al., 2021), suggest that eco-labelled purchasing should not be conceptualized as a simple response to environmental concern. Rather, the purchasing decision involves a sequence of evaluations in which environmental motivation must be translated into perceived product value, credible environmental information, and an acceptable economic trade-off.

Green advertising and product visibility can support this process by increasing consumers’ exposure to environmental information, but visibility alone is insufficient. Leonidou et al. (2021) show the growing importance of environmental themes in green advertising, while Schmuck et al. (2018) demonstrate that environmental brand attributes and nature-related imagery can shape consumer responses to green advertising. However, persuasive communication can only contribute to purchasing decisions when the environmental information communicated is perceived as credible and relevant. Consequently, advertising visibility should be understood as an information-access mechanism rather than a direct determinant of green purchasing. This distinction is important because repeated exposure to environmental claims may increase awareness without necessarily overcoming price, quality, trust, or perceived-risk barriers.

Overall, the literature reveals that the relationship between environmental concern and eco-labelled purchasing is conditional rather than linear. Environmental knowledge and concern

can create favourable intentions, but these intentions may not result in actual purchases when consumers encounter economic constraints, weak perceived value, uncertainty about product claims, or distrust in eco-labels. Conversely, credible eco-labels can reduce information uncertainty and strengthen the perceived environmental value of products, potentially making sustainable alternatives more competitive during evaluation. The central issue, therefore, is not simply whether consumers are environmentally concerned, but whether environmental concern can be converted into a sufficiently trusted and economically acceptable value proposition at the point of purchase. This provides a stronger conceptual basis for examining eco-labelled product purchasing and directly addresses the persistent awareness–behaviour gap identified in the sustainable consumption literature.

Research Framework



Methodology

Research Design

This study employed a cross-sectional research design to analyze university students' perceptions and behaviors towards eco-friendly products at a single point in time. Students responded to the survey questionnaire once during a specific period, allowing the researchers to examine current eco-friendly purchasing habits and mindsets. Using a hypothesis-based approach, the study examined the relationships between the independent variables and the dependent variable. The research questions were developed based on previous literature and established theories to identify factors influencing eco-friendly purchasing behavior. Statistical analyses, including descriptive statistics, correlation analysis, and multiple regression analysis, were conducted to examine purchasing trends and determine how the independent variables influence eco-friendly purchasing decisions. This research design provided a solid basis for understanding the factors influencing university students' purchasing decisions regarding eco-friendly products.

Sampling Design

The study population consisted of approximately 1,800 students enrolled at an International University, including both local and international students. The minimum sample size was determined using the finite population sample-size formula at a 95% confidence level, a 50% response distribution and an approximately 7% margin of error. Based on these parameters, the minimum required sample size was approximately 180 respondents. Because the survey was distributed without a fixed, traceable list of recipients, the exact number of students who received the invitation could not be determined, and a conventional response rate could therefore not be calculated. Therefore, the 182 valid questionnaires collected were considered adequate for the present study, representing approximately 101.1% of the minimum required sample size ($182 \div 180 \times 100$).

This study employed a non-probability convenience sampling technique. Participants were university students aged 18–29 years with prior exposure to eco-friendly labels and knowledge of green practices. To obtain a diverse sample, students from various academic schools and departments across the university were invited to participate.

Data Collection

We designed a structured online survey using Google Forms to collect data. The survey link was distributed to students through university WhatsApp groups, Telegram channels, student email, and peer-to-peer sharing. Participation was voluntary, and the collected responses were used for the subsequent statistical analyses. The survey launched on December 3rd, 2025, and remained open until the target number of responses had been collected. Data collection followed standard ethical procedures: all participants were required to give informed consent before completing the survey, and we assured them that their private details would be kept confidential. The collected data were analysed using SPSS, which provided descriptive statistics, correlation analysis among variables, and hypothesis testing. This analysis helped identify regular patterns, relationships between factors, and the variables most strongly associated with students' eco-friendly purchasing habits.

Questionnaire Design

We designed the survey based on our study goals, asking the university students questions about how they think and act when buying eco-friendly goods. By using Likert-scale ratings (Strongly Disagree to Strongly Agree), we measured students' views and beliefs quantitatively with fixed response options. Lastly, we let people answer in their own words via additional open-ended questions. The questionnaire is divided into six sections to address specific areas of interest:

Section 1 – Demographics.

Section 2 - Purchase Decision. (PD) (Östring & Sipponen, 2023).

Sections 3–5 - Environmental concerns (EC) (Boulianne & Ohme, 2022), Perceived values (PV) (Chen & Chang, 2022), Visibility in Advertisements (VIA) (Huang et al., 2024).

Sections 6 - Open-ended question

Findings

Table 1: Reliability Test

VARIABLES	CRONBACH ALPHA	NO. OF ITEM
Purchasing Decisions	0.879	7
Environmental Concerns	0.851	5
Perceived Value	0.870	5
Visibility in Advertisements	0.866	5

Source: Author's Own Survey Data (2026)

Table 1 illustrates the result of the reliability test. The reliability coefficient of Cronbach's alpha is considered acceptable if the value is greater than 0.7. From the result of the reliability test, one could observe that all variables within the study have Cronbach's alphas higher than 0.7, which generally indicates high internal consistency. The Cronbach's alpha for Purchase Decisions, being the DV, is 0.879 with 7 items, showing a reliable measurement of consumer decision-making. The items were internally consistent to analyze environmental awareness, with Cronbach's alpha of 0.851 (5 items) for IV1: Environmental Concerns, while IV2, Perceived Value, at 0.870 (5 items), showed reliability for items assessing perceived benefits; likewise, items assessing advertisement visibility at 0.866 (5 items) showed reliability for IV3: Visibility in Advertisements.

Table 2: Demography

	Frequencies	Percentage
Gender		
Male	88	48.4
Female	94	51.6
Age		
19 or below	17	9.3
20-24	154	84.6
25-29	11	6.0
School		
School of Business and Social Sciences	74	40.7
School of Education and Human Sciences	18	9.9
School of Computing and Informatics	35	19.2
Centre for Foundation and General Studies	36	19.8
Centre for Graduate Studies	7	3.8
Language Centre	12	6.6
How frequently do you purchase eco-friendly products?		
Never	41	22.5
Rarely	94	51.6
Often	43	23.6
Always	4	2.2
How aware are you of eco-friendly labels on products?		
Completely unaware	9	4.9
Somewhat aware	29	15.9
Moderately aware	98	53.8
Fully aware	46	25.3

Source: Author's Own Survey Data (2026)

The demographic characteristics of the respondents as presented in Table 1. Of these 88 respondents (48.4%) are male and 94 respondents (51.6%) are female. Over 154 respondents (84.6%) are within the 20–24 years age group, 17 respondents (9.3%) are 19 or below age group, and 11 respondents (6.0%) are within the 25–29 years age group.

On the statistical side, the majority of respondents are in School of Business and Social Sciences (74 respondents or 40.7 percentage), Center for Foundation and the General Services (36 respondents or 19.8 percentage), School of Computing and Informatics (35 respondents or 19.2 percentage), School of Education and Human Sciences (18 respondents or 9.9 percentage), Language Centre (12 respondents or 6.6 percentage), Centre for Graduate Studies (7 respondents or 3.8 percentage),

The frequency of eco-friendly product purchases is also highlighted in the table. 94 respondents (51.6 %) never purchase eco-friendly products, 43 respondents (23.6%) always purchase, 41 respondents (22.5%) rarely purchase, and just 4 respondents (2.2%) always purchase.

Finally, the table looks at awareness of eco-friendly labels on products. Almost all the respondents (98 respondents, 53.8%) are moderately aware while 46 respondents (25.3%) are fully aware. 29 respondents (15.9%) are somewhat aware, 9 respondents (4.9%) are completely unaware.

Table 3: Purchase Decision

	N statistics	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
B1. I feel secure in buying eco-friendly products only if they have reliable certifications	182	3.10	.740	-.914	.180	1.342	.358
B2. I am more likely to buy eco-friendly items if they are reasonably priced compared to conventional alternatives.	182	3.23	.772	-.923	.180	.754	.358
B3. I prioritize purchasing eco-friendly products that align with my values on sustainability.	182	3.15	.833	-.991	.180	.730	.358
B4. My decision to purchase eco-friendly products mainly depends on their visibility and accessibility in the market.	182	3.20	.821	-1.015	.180	.833	.358

B5. I am only concerned about purchasing eco-friendly products when they meet my quality expectations.	182	3.17	.742	-.777	.180	.679	.358
B6. My decision to buy eco-friendly products is driven by their potential to decrease environmental harm.	182	3.23	.820	-.986	.180	.599	.358
B7. I am less likely to purchase eco-friendly products if the environmental benefits from purchasing them are not properly explained.	182	3.08	.776	-.852	.180	.861	.358
Valid N (listwise)	182						

Source: Author's Own Survey Data (2026)

Table 3 represents the 4-point Likert scale questions assessing various factors related to eco-friendly purchasing behavior. In the descriptive statistics shown, the skewness statistics indicate the distribution's deviation from symmetry, reflecting the level of agreement among respondents.

The highest mean was observed for the statement: "I am more likely to buy eco-friendly items if they are reasonably priced compared to conventional alternatives" (Mean = 3.23, Std. Dev. = 0.772, Skewness = -0.923). Similarly, respondents indicated strong agreement with the environmental impact factor, as shown by the statement: "My decision to buy eco-friendly products is driven by their potential to decrease environmental harm" (Mean = 3.23, Std. Dev. = 0.820, Skewness = -0.986). The alignment of products with sustainability values was also emphasized, with a slightly lower agreement level for "I prioritize purchasing eco-friendly products that align with my sustainability values" (Mean = 3.15, Std. Dev. = 0.833, Skewness = -0.991).

Respondents also considered the visibility and accessibility of eco-friendly products as important, with the statement "My decision to purchase eco-friendly products mainly depends on their visibility and accessibility in the market" scoring a mean of 3.20, a standard deviation of 0.812, and a skewness of -1.015. Additionally, quality expectations influenced decisions, as highlighted by "I am only concerned about purchasing eco-friendly products when they meet my quality expectations" (Mean = 3.17, Std. Dev. = 0.742, Skewness = -0.777).

Finally, security in purchasing was noted in the statement "I feel secure in buying eco-friendly products only if they have reliable certifications" (Mean = 3.10, Std. Dev. = 0.740, Skewness = -0.914). However, the need for proper explanation of environmental benefits to drive purchases was slightly less endorsed, as indicated by "I am less likely to purchase eco-friendly

products if the environmental benefits from purchasing them are not properly explained” (Mean = 3.08, Std. Dev. = 0.776, Skewness = -0.852).

Overall, the findings suggest that affordability, environmental harm reduction, sustainability alignment, accessibility, quality expectations, and reliable certifications are significant factors influencing eco-friendly product purchasing behavior, with moderate to high agreement levels reflected in the descriptive statistics.

Table 4: Environmental Concerns

	N statistic s	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosi s Std. Error
C1. I consider the environmental impact of a product before deciding to purchase it.	182	2.99	.740	-.737	.180	.879	.358
C2. Eco-friendly labels on products influence my purchasing decisions.	182	3.12	.843	-.894	.180	.446	.358
C3. My decision to purchase eco-friendly products is influenced by recommendations from friends or family.	182	3.04	.799	-.801	.180	.580	.358
C4. I feel a personal responsibility to support products that promote environmental sustainability.	182	3.30	.772	-1.150	.180	1.349	.358
C5. I am willing to pay a higher price for eco-friendly products compared to conventional ones.	182	3.01	.857	-.756	.180	.153	.358
Valid N (listwise)	182						

Source: Author's Own Survey Data (2026)

Table 4 represents the 4-point Likert scale questions assessing various factors related to environmental concerns. From the descriptive statistics, the average mean for purchasing eco-friendly products ranged between 2.99 and 3.30.

Respondents agreed most with the statement, “I feel a personal responsibility to support products that promote environmental sustainability” ($M = 3.30$, $SD = 0.772$, Skewness = -1.150). This was followed by the statement, “Eco-friendly labels on products influence my purchasing decisions” ($M = 3.12$, $SD = 0.843$, Skewness = -0.894). Additionally, respondents moderately agreed with “My decision to purchase eco-friendly products is influenced by recommendations from friends or family” ($M = 3.04$, $SD = 0.799$, Skewness = -0.801). Respondents also demonstrated agreement with “I consider the environmental impact of a product before deciding to purchase it” ($M = 2.99$, $SD = 0.740$, Skewness = -0.737) and “I am willing to pay a higher price for eco-friendly products compared to conventional ones” ($M = 3.01$, $SD = 0.857$, Skewness = -0.756).

Overall, the findings suggest that respondents' purchasing decisions are influenced by personal responsibility for environmental sustainability and trust in eco-friendly labels, while factors like recommendations and willingness to pay a premium are considered less strongly.

Table 5: Perceived Value

	N statistics	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
D1. The decisions I make on purchasing products with eco-friendly labels benefit me in the long term.	182	3.09	.785	-.791	.180	.578	.358
D2. The products with eco-friendly labels that I decide to purchase are safe for me to use.	182	3.19	.771	-.847	.180	.618	.358
D3. The decisions I make to purchase products with eco-friendly labels improve the quality of my life.	182	3.14	.808	-.965	.180	.849	.358
D4. I choose products with eco-friendly labels because I believe they minimize health risks, such as cancer, by containing fewer toxic materials.	182	3.26	.739	-.951	.180	1.039	.358
D5. I purchase products with eco-friendly labels that I trust will minimize environmental impacts, such as	182	3.27	.781	-1.089	.180	1.118	.358

air pollution, water pollution, and land pollution.							
Valid N (listwise)	182						

Source: Author's Own Survey Data (2026)

Table 5 represents the 4-point Likert scale questions assessing various factors related to the perceived value of the customers. From the descriptive statistics, the average mean for purchasing eco-friendly products ranged between 3.09 and 3.27.

Respondents agreed most with the statement, “I purchase products with eco-friendly labels that I trust will minimize environmental impacts, such as air pollution, water pollution, and land pollution” ($M = 3.27$, $SD = 0.781$, Skewness = -1.089). This was followed by the statement, “I choose products with eco-friendly labels because I believe they minimize health risks, such as cancer, by containing fewer toxic materials” ($M = 3.26$, $SD = 0.739$, Skewness = -0.951). Additionally, respondents moderately agreed with “The products with eco-friendly labels that I decide to purchase are safe for me to use” ($M = 3.19$, $SD = 0.771$, Skewness = -0.847).

Respondents also demonstrated agreement with “The decisions I make to purchase products with eco-friendly labels improve the quality of my life” ($M = 3.14$, $SD = 0.808$, Skewness = -0.965) and “The decisions I make on purchasing products with eco-friendly labels benefit me in the long term” ($M = 3.09$, $SD = 0.785$, Skewness = -0.791).

Overall, the findings suggest that respondents' purchasing decisions are influenced strongly by the perceived environmental and health benefits of eco-friendly products, while factors like long-term personal benefits and safety considerations are viewed slightly less strongly.

Table 6: Visibility in Advertisements

	N statistics	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
E1. Advertisements featuring eco-friendly labels attract me more than those without them.	182	3.09	.805	-.941	.180	.882	.358
E2. The placement of eco-friendly labels in advertisements influences my perception of the product.	182	3.20	.826	-.930	.180	.439	.358
E3. Eco-friendly labels in advertisements are often accompanied by clear explanations.	182	3.12	.798	-.880	.180	.699	.358
E4. The use of symbols and icons	182	3.22	.740	-.872	.180	.875	.358

for eco-friendly labels enhances their visibility in advertisements.							
E5. I believe eco-friendly labels in advertisements affect my purchasing decisions.	182	3.15	.833	-.991	.180	.730	.358
Valid N (listwise)	182						

Source: Author's Own Survey Data (2026)

Table 6 represents the 4-point Likert scale questions assessing various factors related to eco-friendly labels in advertisements. Based on the descriptive statistics below, the average mean for the influence of eco-friendly labels is in the range of 3.09 to 3.22.

The respondents agreed the most with the statement, "The use of symbols and icons for eco-friendly labels enhances their visibility in advertisements" ($M = 3.22$, $SD = 0.740$, Skewness = -0.872). This is followed by the statement, "The placement of eco-friendly labels in advertisements influences my perception of the product" ($M = 3.20$, $SD = 0.826$, Skewness = -0.930). Respondents also agreed that "I believe eco-friendly labels in advertisements affect my purchasing decisions" ($M = 3.15$, $SD = 0.833$, Skewness = -0.991).

The statement "Eco-friendly labels in advertisements are often accompanied by clear explanations" was rated slightly lower ($M = 3.12$, $SD = 0.798$, Skewness = -0.880). The lowest mean was observed for the statement, "Advertisements featuring eco-friendly labels attract me more than those without them" ($M = 3.09$, $SD = 0.805$, Skewness = -0.941).

Table 7. Correlation Test

		M_PD	M_EC	M_PV	M_VIA
M_PD	Pearson Correlation	1	.764**	.843**	.793**
	Sig. (2-tailed)		.000	.000	.000
	N	182	182	182	182
M_PV	Pearson Correlation	.843**	.773**	1	.816**
	Sig. (2-tailed)	.000	.000		.000
	N	182	182	182	182

Source: Author's Own Survey Data (2026)

Table 7 represents correlation analysis to test the relationship of Purchase Decisions with the independent variables of Environmental Concerns, Perceived Value, and Visibility in Advertisement. The Pearson's correlation coefficients explain that there is a positive significant relationship between Purchase Decisions and all other independent variables at 0.01 levels.

The perceived value is the highest correlation value at 0.843, showing that it is an important consumption decision factor. These results, as obtained from the sample size of 182, identify the interaction of these factors with consumer decision-making and, hence, their relevance for strategic marketing.

Table 8: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870 ^a	.757	.753	.29734

Source: Author's Own Survey Data (2026)

Summary of the regression model is shown in this table. The R value is at 0.870, meaning a strong relationship between the predictors and the outcome variable. An R Square value of 0.757 also states that approximately 75.7% variation in the dependent variable could be explained by independent variables in the model. The Adjusted R Square, considering the number of predictors included in the model, accounted for 0.753, making this explanation robust. The standard error of the estimate is 0.29734, which suggests how far, on average, the observed values fall from the regression line.

Table 9: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.965	3	16.322	184.616	.000 ^b
	Residual	15.737	178	.088		
	Total	64.702	181			

Source: Author's Own Survey Data (2026)

This table checks for the overall significance of the regression model. The Sum of Squares values depict how variance partitions into regression and residual parts. The F-statistic is 184.616, which means, at a level of $p < 0.001$, the model as a whole is highly significant, so altogether predictors do contribute individually to make a statistically significant contribution toward explaining the outcome variable. The mean square values for both regression and residual elaborate more on the breakdown in the variance.

Table 10: Regression Coefficients

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.401	.120		3.344	.001
	M_EC	.184	.060	.196	3.074	.002
	M_PV	.483	.065	.509	7.381	.000
	M_VIA	.207	.065	.224	3.198	.002

Source: Author's Own Survey Data (2026)

This table shows the coefficients of independent variables which were included in the regression model. The unstandardized coefficients show the raw influence of each predictor on the outcome, while the standardized coefficients, Beta, enable comparison across the variables.

- Constant: The intercept (0.401) means the base value of the dependent variable when predictors are zero.
- M_EC: Significant at $p = 0.002$, the variable has a Beta of 0.196, meaning that it is positive.
- M_PV: The strongest predictor ($p < 0.001$, Beta = 0.509) highlights its critical role.
- M_VIA: Significant at $p = 0.002$, with a Beta value of 0.224, indicating a moderate effect.

These findings confirm that all predictors contribute significantly to the outcome variable, with M_PV being the most influential.

Discussion on Findings

Introduction

This section presents findings obtained from the analysis of data to inform the reader about the impact of environmental product labels on the buying decisions made by students at an international University. An overview of demographic characteristics like gender, age, and academic backgrounds forms a contextual back-drop for analyzing eco-label awareness, perceived value, and purchasing behaviors. Further discussions focus on the relationships between independent and dependent variables, as evidenced by correlation and regression analyses, alongside descriptive insights into environmentally conscious behavior. This introduction lays the groundwork for an in-depth examination of the key findings and their implications.

Discussion of Findings

Eco-Label Awareness and Purchasing Frequency

Analysis of awareness of eco-labels indicated that 53.8% of the respondents were moderately aware and 25.3% were fully aware of eco-friendly labels. However, 51.6% of the respondents rarely purchased eco-friendly products, indicating a gap between awareness and actual purchasing behaviour. This finding suggests that awareness alone is insufficient to encourage sustainable purchasing. Consumers should pay greater attention to the credibility and benefits of eco-friendly labels when making purchasing decisions.

Descriptive and Inferential Analysis

The factors that influenced purchasing behaviour were environmental concern, perceived value, and visibility in advertisements. Perceived value had the highest Beta value ($\beta = 0.509$), followed by visibility in advertisements ($\beta = 0.224$) and environmental concern ($\beta = 0.196$). The correlation analysis also showed that perceived value had the strongest positive relationship with purchasing decisions ($r = 0.843$). This indicates that perceived value is the most important factor influencing consumers' purchasing decisions. Therefore, marketers should emphasise the quality, environmental benefits, and overall value of eco-friendly products, while consumers should consider these benefits rather than focusing only on price.

Key Trends in Purchasing Behavior

Respondents displayed a higher tendency to purchase eco-friendly products when they perceived greater value, such as environmental benefits and alignment with their sustainability values. However, affordability and accessibility remained potential barriers. Therefore, businesses should improve the accessibility and affordability of eco-friendly products to encourage more sustainable purchasing behaviour.

Limitations and Recommendations

This study offers valuable insights into the influence of eco-friendly product labels on purchasing decisions; however, it is not without limitations. One significant limitation is the scope of the sample, as it focuses solely on students from an international university, limiting the generalizability of the findings to broader populations. Additionally, the use of self-reported survey responses introduces potential biases, such as social desirability, which may have impacted the accuracy of data regarding eco-label awareness and purchasing behavior. The study's cross-sectional nature is another limitation, as it captures data at a single point in time, making it difficult to establish causality or observe changes in behavior over an extended period. Furthermore, while the research includes respondents from diverse academic backgrounds, it may not fully capture the impact of cultural variability on sustainability perceptions and purchasing behavior, as most participants were from a specific institution and region.

To address these limitations, future research should consider expanding the participant base to include multiple institutions across different regions and cultural settings, ensuring a more diverse and representative sample. Employing longitudinal study designs can offer insights into how eco-label awareness and purchasing behaviors evolve, helping establish causal relationships. Additionally, alternative data collection methods, such as interviews, focus groups, or observational studies, should be used to reduce reliance on self-reported data and minimize biases. Greater cultural diversity in the participant pool is recommended to explore how regional and cultural differences shape attitudes toward eco-friendly products. Lastly, organizations and marketers should emphasize improving the affordability and accessibility of eco-friendly products, alongside using clear and credible eco-label designs. Educational initiatives highlighting the tangible benefits of eco-friendly purchases can further encourage sustainable consumer behavior. By addressing these recommendations, future studies can provide a more comprehensive understanding and actionable insights into promoting sustainable practices.

Conclusion

This study sheds light on the significant role that eco-friendly product labels play in influencing the purchasing decisions of an international university students. The findings underscore that while awareness of eco-labels is moderately high, this does not always translate into consistent purchasing behavior. Among the examined factors, perceived value emerged as the most influential driver, followed by the visibility of eco-labels in advertisements and environmental concerns. This highlights the need for marketing strategies that emphasize the tangible benefits and credibility of eco-labels, along with improving their accessibility and affordability.

Despite its contributions, the research faced limitations, including its focus on a single institution and reliance on self-reported data, which may limit the generalizability of the findings. Future studies should aim to address these gaps by adopting longitudinal methods, expanding sample diversity, and exploring cultural and regional variations.

Ultimately, the insights from this research are valuable for both marketers and policymakers aiming to bridge the gap between eco-label awareness and sustainable consumer behavior. By addressing the identified barriers and leveraging strategic eco-label designs, it is possible to foster a more environmentally conscious generation of consumers.

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