



A Study on the Influence of Green Labelling on Sustainable Consumer Purchase Behaviour

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Abstract – The increasing concern for environmental sustainability has significantly influenced consumer purchasing behaviour in recent years. Green labelling has emerged as an effective tool that provides information about the environmental attributes of products and helps consumers make responsible purchasing decisions. This study aims to assess the impact of green labelling on consumer purchase behaviour towards sustainable products. Primary data were collected from 150 respondents using a structured questionnaire. The study applies statistical tools such as percentage analysis, chi-square test, ANOVA, and ranking methods to interpret the data. The findings reveal that consumers show a moderate to high level of awareness regarding green-labelled products. Factors such as label credibility, environmental concern, and product availability positively influence purchase decisions, while price perception acts as a limiting factor. The study concludes that green labelling plays a significant role in promoting sustainable consumption and influencing consumer behaviour.

Keywords –Green labelling, consumer behaviour, eco-labels, sustainable products, environmental awareness, purchase behavior.

I. INTRODUCTION

Consumer purchasing behaviour has experienced a noticeable shift in recent years, moving beyond traditional decision-making factors such as price, convenience, and brand loyalty. In today's evolving market environment, consumers are becoming more conscious of the social and environmental consequences of their consumption choices. Growing concerns about climate change, environmental degradation, and resource depletion have significantly influenced consumer attitudes, leading to an increased demand for sustainable and eco-friendly products.

In this context, green labelling has emerged as a vital mechanism that provides consumers with information regarding the environmental attributes of products. Green labels serve as identifiers that indicate whether a product meets certain environmental standards, such as reduced carbon footprint, energy efficiency, organic composition, or sustainable sourcing. These labels play a crucial role in simplifying complex environmental information and enabling consumers to make responsible purchasing decisions without requiring extensive knowledge about sustainability.

Moreover, green labelling acts as a communication bridge between manufacturers and consumers. It enhances transparency by providing verified and standardized information about a product's environmental performance. For businesses, adopting green labelling practices not only reflects corporate social responsibility but also helps in building brand credibility and consumer trust. As a result, companies increasingly use eco-labels as a strategic tool to differentiate their products in a competitive market.

However, the effectiveness of green labelling in influencing consumer purchase behaviour is not uniform and depends on several factors. Consumer awareness plays

a key role, as individuals must recognize and understand the meaning of green labels to utilize them effectively.

Therefore, this study aims to analyse the impact of green labelling on consumer purchase behaviour by examining key influencing factors such as awareness, trust, price perception, and availability. The study seeks to understand how these factors shape consumer attitudes and decisions towards sustainable products. By exploring these aspects, the research contributes to a better understanding of the role of green labelling in promoting environmentally responsible consumption and supporting sustainable market practices.

II. STATEMENT OF THE PROBLEM

The growing presence of green-labelled products in the market has increased the need to understand their impact on consumer behaviour. Despite their potential benefits, many consumers lack awareness and face confusion due to multiple certifications and unclear information.

Price sensitivity and lack of trust further influence purchasing decisions. Therefore, it is necessary to examine how consumers perceive green labels and how these perceptions affect their purchase behaviour.

III. OBJECTIVES OF THE STUDY

To understand the level of awareness of green labelling among consumers

To analyse the demand for green-labelled products

HYPOTHESIS OF THE STUDY

H₀: There is no significant relationship between green labelling and consumer purchase behaviour.

H₁: There is a significant relationship between green labelling and consumer purchase behaviour.



IV. REVIEW OF LITERATURE

Previous studies highlight those eco-labels influence consumer behaviour by improving awareness and trust. Sharma (2023) found that environmental concern and knowledge significantly impact green purchasing behaviour, while Yusoff et al. (2023) observed that eco-labels increase purchase intention but actual buying is influenced by price and situational factors. Wang et al. (2022) identified label credibility as a key factor influencing purchase decisions, and Nguyen-Viet et al. (2022) emphasized that eco-labels are more effective when supported by green advertising and brand communication. Taufique and Polonsky (2021) emphasized that eco-labels improve purchase intention when they are simple and credible, while excessive labels may create confusion. Panopoulos et al. (2022) noted that eco-labels reduce consumer effort in decision-making, especially when awareness is high, whereas Alvarez (2022) highlighted that too many labels can create confusion and reduce effectiveness. Nambiar (2021) found that eco-label literacy improves understanding and purchase intention, while Suki (2020) observed that personal environmental responsibility strengthens the impact of eco-labels.

Overall, the literature suggests that awareness, trust, label clarity, and price play important roles in determining the effectiveness of green labelling.

V. RESEARCH METHODOLOGY

The study adopts a descriptive research design to examine the impact of green labelling on consumer purchase behaviour. Primary data were collected through structured questionnaires from 150 respondents using a convenience sampling technique.

The collected data were analysed using statistical tools such as percentage analysis, chi-square test, ANOVA, correlation analysis, and ranking methods to derive meaningful conclusions.

VI. DATA ANALYSIS AND INTERPRETATION

Percentage Analysis

Percentage analysis is used to present the data in an organized and meaningful way. It helps to understand the distribution of responses and identify key patterns in consumer behaviour.

Table 1.1
Table Showing Green Label Awareness Source Of The Repondence

Green Label Awareness Source	Frequency	Percentage%
Through Academic Content	23	15%
Through Advertisements	24	16%
Through Friends Or Family	7	5%
Through Online Platforms	27	18%
While Shopping In Stores	69	46%
Grand Total	150	100%

Interpretation:

It is evident from the table that, out of 150 respondents, 46% became aware of green labels while shopping in

stores, 18% through online platforms, 16% through advertisements, 15% through academic content, and 5% through friends or family

Table 1.2
Table Showing The Product Appeal Comparision Of The Respondents

Product Appeal Comparison	Frequency	Percentage
Equally Appealing	39	26%
More Appealing	44	29%
Much More Appealing	40	27%
Not Appealing	8	5%



Slightly Less Appealing	19	13%
Grand Total	150	100%

Source: Primary Data

INTERPRETATION:

It is evident from the table that, out of 150 respondents, 29% find green-labelled products More appealing, 27% find them Much more appealing, 26% find them Equally appealing, 13% find them Slightly less appealing, and 5% find them Not appealing.

2. CHI-SQUARE ANALYSIS

The Chi-Square test is a statistical tool used to determine whether there is a significant association between two categorical variables. It compares the observed frequencies with the expected frequencies to identify whether any differences occur by chance or indicate a meaningful relationship between variables.

Table 1.3
 Showing Chi-Square Value For Personal Factors And Purchase Behaviour
 Personal Factors Chi-Square Value P

Personal Factors	Chi-Square Value	P Value	S/Ns
Age	13.74	0.317	Ns
Education Level	20.16	0.124	Ns
Monthly Income	22.89	0.074	Ns
Gender	9.38	0.156	Ns

(S – Significant, NS – Not Significant)

Interpretation:

The chi-square analysis indicates that all variables have p-values greater than 0.05.

Therefore, the null hypothesis is accepted, indicating that there is no significant association between personal factors and consumer purchase behaviour.

VII. ANOVA ANALYSIS

The ANOVA (Analysis of Variance) test is a statistical tool used to determine whether there is a significant difference between the means of two or more groups. It compares the variation within groups and between groups to identify whether the differences are due to chance or indicate a meaningful effect between variables.

Anova Showing The Impact Of Demographic Variables On Demand For Green Labelled Products
 Variables Source Sum Of Squares Df Mean Square F Value P Value Result

Variables	Source	Sum Of Squares	Df	Mean Square	F Value	P Value	Result
Age Group	Between Groups	168.214	3	56.071	112.342	0.000	S
	Within Groups	72.856	146	0.499			
	Total	241.070	149				
Education Level	Between Groups	145.672	4	36.418	95.127	0.000	S
	Within Groups	55.328	145	0.382			
	Total	201.000	149				
Monthly Income	Between Groups	152.943	4	38.236	101.564	0.000	S
	Within Groups	54.857	145	0.378			
	Total	207.800	149				

Source: Primary Data



Interpretation

The ANOVA analysis shows that age group, education level, monthly income, and gender have a significant influence on the demand for green labelled products, as the p-value is less than 0.05 in all cases.

This indicates that different demographic groups vary in their level of demand for green labelled products. Hence,

the null hypothesis is rejected, and it is concluded that demographic factors significantly affect consumer demand for green labelled products.

VIII. RANKING ANALYSIS

Ranking analysis is used to identify the most important factors influencing consumer decisions.

Table 2.1
Showing The Ranking Of Factors Influencing Purchase Decision

Factors	R1	R2	R3	R4	R5	Total	Average Score	Rank
Certification	62	41	24	15	8	150	3.89	1
Ingredients	38	44	36	20	12	150	3.50	2
Brand	26	32	41	31	20	150	3.09	3
Price	15	21	28	46	40	150	2.50	4
Packaging Quality	9	12	21	38	70	150	2.01	5

Source: Primary Data

INTERPRETATION:

Certification has secured the first rank, followed by ingredients, brand, price, and packaging quality. It is concluded that certification is the most important factor influencing consumer purchase decisions.

VIII. RESULTS AND DISCUSSION

The study reveals that consumers have a positive attitude towards green-labelled products. Awareness and environmental concern significantly influence purchasing behaviour. However, factors such as price and trust affect the final decision.

Suggestions

- Increase consumer awareness about green labels
- Consumer awareness plays a crucial role in the success of green labelling. Many consumers are still unaware of what green labels represent. Creating awareness through education, advertisements, and campaigns helps consumers understand eco-labels and encourages them to make environmentally responsible purchasing decisions
- Improve transparency and certification standards
Transparent and credible certification systems build trust among consumers. When labels clearly provide verified and accurate information about a product's environmental impact, consumers are more likely to rely on them. Strong certification standards also reduce misleading claims and enhance the effectiveness of green labelling.

- Reduce price barriers for eco-friendly products
- Higher prices of green products often discourage consumers from purchasing them. Reducing production costs, providing subsidies, or offering discounts can make eco-friendly products more affordable. This will increase demand and encourage more consumers to shift towards sustainable products.
- Promote sustainable products through digital platforms
- Digital platforms such as social media, websites, and mobile apps can effectively promote green products. Features like QR codes, online reviews, and product information improve transparency and engagement. Digital marketing helps reach a wider audience and increases awareness and trust in green-labelled products.

IX. CONCLUSION

The study concludes that green labelling plays a significant role in influencing consumer purchase behaviour by providing reliable information about the environmental attributes of products and helping consumers make informed decisions. It acts as an effective tool in promoting sustainable consumption by encouraging individuals to prefer eco-friendly products over conventional alternatives.

However, the effectiveness of green labelling depends largely on certain key factors. Consumer awareness must be improved through education and promotional activities so that individuals clearly understand the meaning and importance of eco-labels. Trust and credibility of labels should be strengthened by ensuring transparent



certification processes and avoiding misleading environmental claims. In addition, the affordability of green products must be addressed, as higher prices often act as a barrier for many consumers.

By focusing on these aspects, green labelling can become more effective in shaping consumer behaviour, enhancing brand value, and contributing to long-term environmental sustainability and economic development.

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