

## A Study On Consumer Behavior Towards Eco-Friendly Packaging

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### ABSTRACT

**Purpose:** The purpose of this study is to examine consumer attitudes towards eco-friendly packaging and how sustainability awareness influences their purchasing decisions. As environmental concerns grow, both businesses and consumers are increasingly seeking sustainable alternatives to traditional packaging. This research focuses on key factors such as ecological knowledge, buying behaviour, willingness to pay more and aiming to understand what drives consumers to choose eco-friendly packaging. By assessing consumers' willingness to pay for sustainable packaging and identifying the perceived benefits, this study offers insights that can help businesses align their packaging strategies with consumer preferences.

**Design/Methodology/Approach:** This study uses primary data collected through a structured questionnaire to explore consumer attitudes toward eco-friendly packaging. The questionnaire was distributed among a diverse group of consumers. The data collected was analysed using a simple percentage method and Chi Square Test, which helped to identify key trends and patterns in consumer responses, such as the proportion of consumers willing to pay extra for eco-friendly packaging and their awareness of its environmental benefits.

**Findings/Result:** The study finds that many consumers are concerned about the environmental impact of packaging and prefer eco-friendly options when aware of their benefits. However, while some are willing to pay a premium for sustainable packaging, gaps remain in awareness versus actual purchasing behaviour, often due to availability.

**Originality/Value:** This study offers unique insights into consumer behavior toward eco-friendly packaging, emphasizing the significance of sustainability in purchasing decisions. By utilizing primary data, it highlights current trends and preferences, providing valuable implications for businesses aiming to improve their packaging strategies and strengthen customer loyalty while reducing environmental impact.

**Paper Type:** Empirical Research

**Keywords:** Eco-friendly packaging, sustainability, consumer perception, environmental awareness, purchasing behaviour.

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## **INTRODUCTION:**

The growing concern over environmental degradation has prompted a change in both consumer behaviour and corporate practices. Packaging waste, especially plastic, has contributed significantly to environmental pollution, leading to severe ecological consequences. Eco-friendly packaging solutions have emerged as a key strategy to mitigate these effects. Such packaging includes materials that are biodegradable, recyclable, or reusable, offering a more sustainable alternative to traditional packaging options. As consumers become more aware of the environmental impact of their choices, the demand for products that align with eco-conscious values has risen. Brands that adopt eco-friendly packaging stand to gain not only by reducing their environmental footprint but also by enhancing their reputation among increasingly environmentally-aware customers. However, while there is considerable focus on the environmental benefits of sustainable packaging, there is a need to understand how consumers perceive and respond to these efforts. This study explores consumer perception towards eco-friendly packaging and seeks to uncover the motivations and challenges faced by consumers when purchasing products packaged sustainably. The research aims to provide valuable insights for businesses that are looking to enhance their sustainable packaging strategies and better align with consumer expectations.

## **REVIEW OF LITERATURE:**

Michel Laroche (2001)<sup>1</sup> identifies key demographic and psychographic factors, such as income level, education, environmental awareness, and social responsibility, that influence this behavior. Laroche explores how companies can strategically target these consumers through marketing efforts that emphasize environmental benefits. The study highlights the

potential for businesses to tap into this niche market, emphasizing the importance of clear, credible eco-labelling and product differentiation. Luo and Bhattacharya (2006)<sup>2</sup> examine the link between corporate social responsibility (CSR) practices, such as sustainable packaging, and customer satisfaction and finds that companies that adopt CSR initiatives, including eco-friendly packaging, tend to enjoy higher customer loyalty and market value.

Scott and Vigar-Ellis (2014)<sup>2</sup> explore the behaviour of consumers in developing countries towards eco-friendly packaging. Their study finds that although environmental awareness is rising, price sensitivity remains a significant barrier to adoption. Consumers in developing nations are less willing to pay a premium for eco-friendly packaging, especially when alternatives are cheaper.

S.M. Fatah Uddin and Mohammed Naved Khan(2016)<sup>3</sup> explores the environmental consciousness and buying behavior of young consumers in India. It investigates factors influencing their preference for eco-friendly products, such as environmental awareness, social influence, and perceived product effectiveness.

Prakash and Pathak (2017)<sup>4</sup> explored that young Indian consumers are increasingly aware of environmental issues and prefer products with sustainable packaging. Factors such as environmental concern, social influence, and perceived consumer effectiveness significantly impact their purchasing decisions. Price sensitivity and lack of availability act as barriers to adopting eco-friendly packaging.

Y. Hao et al. (2019)<sup>5</sup> examines factors that influence consumers' willingness to pay (WTP) for green packaging in China. Consumers who are more environmentally conscious and have higher disposable incomes are more willing to pay a premium for sustainable packaging. The study also highlights that trust in eco-labels and government regulations play crucial roles in boosting consumer confidence in green packaging.

Omobolanle O.Oloyede and Stella Lingou (2021)<sup>6</sup> emphasizes the growing consumer preference for eco-friendly packaging solutions and explores factors influencing purchasing decisions, such as environmental awareness, perceived quality, and the impact of packaging on brand image. Enhancing consumer understanding and **trust in** sustainable paper-based packaging can lead to increased acceptance and demand in the market.

Elsa Anquez et al (2022)<sup>7</sup> Price sensitivity and environmental behavior moderated the outcomes. Reusable containers were perceived as more expensive and less convenient than other packaging types.

**STATEMENT OF THE PROBLEM:**

The shift toward eco-friendly packaging is gaining momentum, but there is limited understanding of the factors influencing both consumer choices and business decisions. Many consumers express support for sustainable packaging but may not consistently purchase it, especially when it comes with a higher price. This raises questions about how well consumers understand the environmental benefits of eco-friendly packaging versus other influences like

price, convenience, or design. On the business side, the cost of adopting sustainable packaging can be high, and its advantages are not always immediately apparent, leading to inconsistent use across industries. This study aims to explore the drivers behind consumer behavior, particularly their willingness to pay more for eco-friendly packaging, and assess whether businesses are doing enough to align with the values and preferences of sustainability-focused shoppers.

**OBJECTIVE OF THE STUDY:**

The primary objective of this study is to analyze consumer perception towards eco-friendly packaging and its impact on purchasing behaviour. Specific objectives include:

To assess consumer awareness of eco-friendly packaging and its environmental benefits.

To identify the consumer preference and their actual buying behaviour.

To identify consumer willingness to pay more for eco-friendly packaging.

**SCOPE OF THE STUDY:**

The scope of this study encompasses an examination of consumer perceptions of eco-friendly packaging across various product categories, such as food and beverages, cosmetics, and household goods. The research will focus on consumers' environmental awareness, their preferences for sustainable packaging, and how these preferences impact their purchasing decisions. The study will be geographically limited to consumers in urban and suburban regions, where access to eco-friendly packaged products is more prevalent.

The study will use a survey-based methodology to collect data from a diverse group of consumers, ensuring representation across age groups, income levels, and education backgrounds. The findings of this study will help businesses better understand how consumers view eco-friendly packaging and provide insights into the effectiveness of current sustainable packaging initiatives.

**RESEARCH METHODOLOGY:**

The research methodology for this study is designed to explore consumer perceptions of eco-friendly packaging through a quantitative approach, allowing for the collection of numerical data that identifies trends, attitudes, and patterns. Data was collected using both primary and secondary sources. Primary data was gathered directly from consumers via an online

questionnaire distributed through Google Forms, which collected responses regarding their views and behaviors related to eco-friendly packaging. Secondary data was obtained from various journals, research papers, e-books, and magazines to provide contextual background and support for the findings derived **from primary data.**

The research employs a survey-based design to capture data from a sample of 125 consumers. This design is suitable for obtaining a broad understanding of consumer awareness, preferences, and purchasing behaviors concerning sustainable packaging. The survey was specifically tailored to gather detailed insights into consumer knowledge, attitudes, and behaviors toward eco-friendly packaging.

For sampling, a non-probability convenience sampling method was used, targeting general consumers within urban and suburban areas. The sample size consisted of 125 respondents, allowing for a manageable yet diverse dataset to provide meaningful insights into the targeted population's perception of eco-friendly packaging.

### **CHI SQUARE ANALYSIS:**

The Chi-square test is a statistical method used to determine if there is a significant association between two categorical variables. It compares the observed frequencies in each category to the expected frequencies if there were no relationship between the variables. This test helps assess whether the distribution of one variable (e.g., Willingness to pay more for eco-friendly packaging) is independent of another variable (e.g., age group).

### **CHI-SQUARE TABLE:**

AGE GROUP						
Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree   Total						
Under 18		0	3	2	0	5
18-24	5	4	23	18	1	51
25-34	2	4	9	17	0	33
35-44	0	2	5	10	2	19
45 & above		0	1	2	15	18
TOTAL	7	14	41	60	3	125

Null Hypothesis ( $H_0$ ): There is no association between the respondents' age groups and their willingness to pay more for eco-friendly packaging. In other words, age and willingness are independent.

Alternative Hypothesis ( $H_1$ ): There is an association between the respondents' age groups and their willingness to pay more for eco-friendly packaging.

Conclusion Based on Chi-square Test Results:

Chi-Square ( $\chi^2$ )   36.81  
Degree of freedom   16  
P value   0.0022

The Chi-square table presents the frequency distribution of responses across different age groups, with the categories ranging from "Strongly Agree" to "Strongly Disagree." The null hypothesis ( $H_0$ ) posits that there is no association between age group and willingness to pay more for eco-friendly packaging, suggesting that these two variables are independent. Conversely, the alternative hypothesis ( $H_1$ ) suggests that there is a significant association between the two variables.

The Chi-square value calculated is 36.81, with 16 degrees of freedom. The resulting p-value is 0.0022, which is less than the commonly used significance level of 0.05. Since the p-value is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis. This indicates that there is a significant association between respondents' age groups and their willingness to pay more for eco-friendly packaging, suggesting that age plays a role in shaping consumer attitudes toward sustainable packaging practices.

### **ANNOVA TEST:**

ANOVA (Analysis of Variance) is a statistical method used to determine if there are significant differences between the means of three or more independent groups. It essentially tests whether any of the group means are statistically different from each other.

AGE GROUP		Extremely aware	Moderately aware		Very aware	Not at all aware	Somewhat
aware	Total						
Under 18		0	1	2	1	1	5
18-24	4	21	8	4	14	51	
25-34	4	7	15	0	6	32	
35-44	0	5	6	2	6	19	
45 & above		1	4	4	2	7	18
TOTAL	9	38	35	9	34	125	

To perform an ANOVA test on this data, we'll use age groups as the independent variable and awareness levels (assuming they reflect responses to eco-friendly packaging options) as the dependent variable.

The one-way ANOVA test resulted in:

F-statistic        0.59  
p-value   0.674

The ANOVA (Analysis of Variance) test is applied in this study to determine if there are significant differences in the levels of awareness about eco-friendly packaging across different age groups. The data provided includes responses from five age groups, with awareness levels categorized as "Extremely aware," "Moderately aware," "Very aware," "Not at all aware," and "Somewhat aware."

The independent variable in this analysis is the age group, while the dependent variable is the awareness level of eco-friendly packaging. The null hypothesis ( $H_0$ ) assumes that there are no significant differences in awareness levels among the age groups, while the alternative hypothesis ( $H_1$ ) suggests that at least one age group differs significantly in terms of awareness.

The results of the ANOVA test show an F-statistic of 0.59 and a p-value of 0.674. Since the p-value is greater than the commonly used significance level of 0.05, we fail to reject the null hypothesis. This indicates that there are no significant differences in awareness levels regarding eco-friendly packaging between the various age groups. In other words, the data suggests that age does not have a statistically significant impact on how aware consumers are of eco-friendly packaging.

## **FINDINGS:**

Among the 125 respondents, only 7.2% were extremely aware of eco-friendly packaging, with a larger portion being moderately aware (30.4%) and very aware (28%), while 7.2% were not aware at all, and **27.2% had partial** awareness.

Willingness to pay more for eco-friendly packaging is low, with only 5.6% strongly agreeing and 11.2% agreeing, while a majority remained neutral (32.8%) or disagreed (48%) with paying extra.

When it comes to the importance of eco-friendly packaging in purchasing decisions, 9.6% of respondents found it extremely important, 28.8% considered it very important, and 32.8% viewed it as moderately important, with a smaller group considering it slightly important or not important at all.

The perception of product quality associated with eco-friendly packaging was largely neutral, as 60% of respondents believed it indicated the same quality as other packaging.

Only 2.4% associated it with very high quality, while 23.2% believed it indicated high quality, and 14.4% felt it suggested lower quality.

Checking for eco-friendly packaging is relatively common, with 19.2% of respondents always checking, 43.2%

checking often, and 29.6% sometimes checking, while only 8% rarely checked and none reported never checking. Despite a growing awareness of eco-friendly packaging options, a large gap remains in the willingness to pay more for such products, indicating that price remains a critical barrier for consumers in choosing eco-friendly packaging.

Cost and availability are two major challenges consumers face when seeking eco-friendly products. The data highlights that price sensitivity and limited availability are barriers to widespread adoption.

#### **SUGGESTION:**

Leverage marketing campaigns to increase awareness about the environmental benefits of eco-friendly packaging, as a significant portion of consumers already show varying levels of awareness.

Explore strategies like pricing incentives or rewards for consumers willing to pay more for sustainably packaged products to address the hesitation around higher costs.

Target younger, environmentally conscious consumers who are more likely to make purchasing decisions based on sustainability factors, driving early adoption and long-term loyalty.

Increased visibility and ease of access to eco-friendly products in stores can encourage more frequent checking and purchasing of such products.

#### **CONCLUSION:**

The findings from this survey reveal that while there is moderate awareness of eco-friendly packaging, there is room for improvement in increasing consumer education and promoting the importance of sustainable packaging in purchase decisions. Businesses can focus on addressing cost and availability challenges to make eco-friendly products more accessible. Furthermore, by emphasizing that eco-friendly packaging does not compromise product quality, companies can encourage greater consumer adoption of sustainable practices. Generally limited willingness to pay extra for eco-friendly packaging. While a notable portion of respondents disagreed with incurring additional costs, many remained neutral, and only a small fraction strongly supported the idea, indicating challenges in promoting costlier sustainable packaging options to consumers.

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