



# Consumer Response to Eco-Friendly Product Advertising and Pricing Strategies in The E-Commerce Retail Industry

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## Abstract

This paper examines consumer behavior with respect to advertising and pricing approaches for eco-friendly products in the e-commerce industry, based on economic theories of willingness-to-pay (WTP) and behavioral models, specifically the Theory of Planned Behavior (TPB). The results from a survey of 90 consumers in Bengaluru show a high familiarity rate with eco-friendly products (95%) and a moderate purchase rate. The analysis of income and WTP correlation shows no significant relationship ( $r = -0.162$ ,  $p = 0.283$ ). However, pricing has a significant effect on the purchase rate, as shown by the ANOVA test ( $F = 5.637$ ,  $p = 0.007$ ).

**Keywords:** Eco-Friendly Products; Pricing Strategies; Advertising Effectiveness; Willingness-To-Pay; Theory Of Planned Behavior; E-Commerce.

## 1. Introduction

With the increasing levels of environmental concerns such as climate change and resource depletion, consumer preferences have shifted towards sustainable products that have minimal lifecycle effects. Green products succeed in the market through marketing and pricing strategies that are consistent with economic value perception models, whereby consumers assess the cost of premium products against their benefits. In the online market, advertising is used to create trust, while pricing signals create perceptions of quality or affordability barriers. This paper will explore the phenomenon in Bengaluru and will attempt to fill the gaps in the economic perspective of green consumption. The eco-friendly products are distinguished by their ability to minimize environmental effects, which is done by creating an appeal among environmentally conscious consumers. Products that are marketed as justified substitutes for other products may also have other characteristics, such as biodegradable materials and energy efficiency. Consumers who purchase these products take into consideration key factors, which include marketing and pricing considerations.

Despite the increasing demand for eco-friendly products, there are still many challenges in the process of changing consumers into regular buyers. Pricing strategies and marketing are very important in influencing consumer attitudes towards these products by considering both positive and negative factors. By using effective marketing, eco-friendly products can capture the attention of consumers, increase awareness, and build trust. A properly designed pricing strategy helps consumers determine the affordability and value perception of these products, thus helping in the increased acceptance of eco-friendly products in the market.

The combination of consumer psychology, marketing information, and different pricing dynamics provides insights that are uncovered through empirical analysis. By understanding consumer reactions, the market performance of these products, and their impact on sustainability efforts, companies can improve their performance on a global platform.

Statement of the problem:

Consumers are interested in sustainable practices but face barriers like high prices, lack of trust in products, low awareness, and decision distortions at the point of purchase. Awareness about the environment is related to the use of eco-friendly products. Pricing factors and advertising are key considerations in the decision-making process of consumers in the purchase of eco-friendly products. Consumers are interested in the effectiveness of strategies that are well understood. Some advertisements are successful in engaging consumers on an emotional level, while others are not. Premium pricing of eco-friendly products may create a sense of exclusivity, and this can increase cost sensitivity among consumers.

There are some challenges to be addressed.

- 1) How do advertising strategies influence purchase intent?
- 2) Does pricing affect WTP across demographics?
- 3) What optimizes strategies for economic viability?

After a thorough review of the questions, the research is having an aim to provide insights for the business to nurture the great adoption of eco-friendly products, by improving their techniques of marketing, fixing the prices with an intention of contributing to the goals of the business.

The various environmental issues, such as deforestation, pollution, climatic change which brought long lasting decisions. To address these issues by offering an opportunity to consumers to reduce their ecological footprints. Though there are many awareness programs and easy availability of eco-friendly products, the consumers have adopted them in a limited way. This limited way of consumers is disconnecting the awareness and highlight action which are significant challenges that need to be addressed. The disconnecting factors are

- 1) The consumers have limited awareness and trust towards the eco-friendly products. Through misleading advertisements, many consumers are questioning the authenticity of environmental issues, which leads them to hesitate in buying the products.
- 2) Perception towards pricing and affordability matters to the low- and middle-income group people as they prioritize the concept of affordability. There is a lack of awareness about the value of eco-friendly products, which brings in long-term advantages of eco-friendly products aggravate the problem. This is one of the reasons why consumers are skeptical about the validity of the higher costs.
- 3) There are some other issues, like a lack of advertising strategies, understanding the relevance of the products, and the gap between the strategies in business and consumer expectations, which are major drawbacks.

Eco-friendly products are not limited only to niche uses such as picnic baskets; they promote a long-lasting and sustainable lifestyle. However, several challenges restrict the ability of businesses to expand these products into wider market sectors. Bridging the gap between consumer awareness and actual purchasing behavior requires a deep understanding of how advertising and pricing factors influence consumer purchase decisions. By identifying these challenges, businesses can better align their efforts with consumer expectations, thereby encouraging the adoption of eco-friendly products and enhancing their contribution to environmental sustainability. This research is designed to analyze these issues and provide insights into how advertising and pricing strategies can be optimized to overcome existing disadvantages, build consumer trust, and promote the adoption of eco-friendly products.

## 2. Literature Review

Green advertising and perceived value can shape consumer attitudes toward eco-friendly products (Chen & Chuang, 2009). CSR and green marketing influence consumer purchase intentions and trust (Du, Bhattacharya, & Sen, 2011). Eco-friendly product messaging can evoke emotional engagement and sway online purchasing decisions (Pradeep Reddy et al., 2023). Factors such as well-being, openness, product nature, and convenience drive consumer perceptions of environmentally friendly products (Goyal & Bansal, 2018). Comprehensive guidance on effective green branding and messaging (Ottman, 2011). Online green claims and credibility signals influence consumer trust (Chen, Chang, & Lin, 2014). Perceived value mediates the impact of green advertising on attitudes and purchase intentions (Chen, Lin, & Chang, 2009). Price perceptions and consumer shopping behavior provide a foundational lens for assessing online pricing (Lichtenstein, Ridgway, & Netemeyer, 1993). Pricing models for eco-friendly items in e-commerce show dynamics between sustainability and profitability (Kamen, 2020). Brand reputation, quality, value expectancy, and usefulness drive eco-friendly product purchases (Kumar & Nandhini, 2018). Brand reputation, quality, value, and usefulness as drivers of eco-friendly product purchases (Nivetha, Samsai, & Malarkodi, 2018). Consumer adoption of green products online is segmented by eco-conscious behavior (Vermeulen & Seuren, 2017). Online reviews and eco-labels shape eco-product adoption in e-commerce (Hossain & Islam, 2021). Policy incentives and green marketing strategies influence eco-friendly product availability (Shah, 2017).

In their research, the authors discuss the perceptions of consumers in relation to green marketing and eco-friendly products. The authors focus on the consumer perspective and preferences for different marketing approaches. The study ends with strategies that match the strong values of the environment and offer insights into the products of green marketers, focusing on the persistence and emphasis on key aspects necessary for the development of effective marketing communication to market eco-friendly products. The authors conclude that marketing eco-friendly products is likely to create an emotional response among consumers, thus affecting their purchasing decisions. Organizations should take responsibility for manufacturing long-lasting products in the context of marketing.

There are many studies conducted on eco-friendly products, consumer awareness about these products, and decision-making of consumers affected by various factors such as price, climate change, and advertisements, among others. It is clear that many researchers have concentrated on consumer awareness, satisfaction, and similar factors. There are not many studies conducted on the reaction of consumers towards eco-friendly products in relation to advertising methods and pricing strategies. The current study will attempt to answer the following questions.

- 1) To what level or extent is the customer willing to pay more to purchase eco-friendly products?
- 2) Is the demographic profile of consumers influenced by awareness towards eco-friendly products?
- 3) What are the factors affecting the purchasing of eco-friendly products?

## 3. Objectives

The objectives are observed after a thorough study of the research gap and framed accordingly

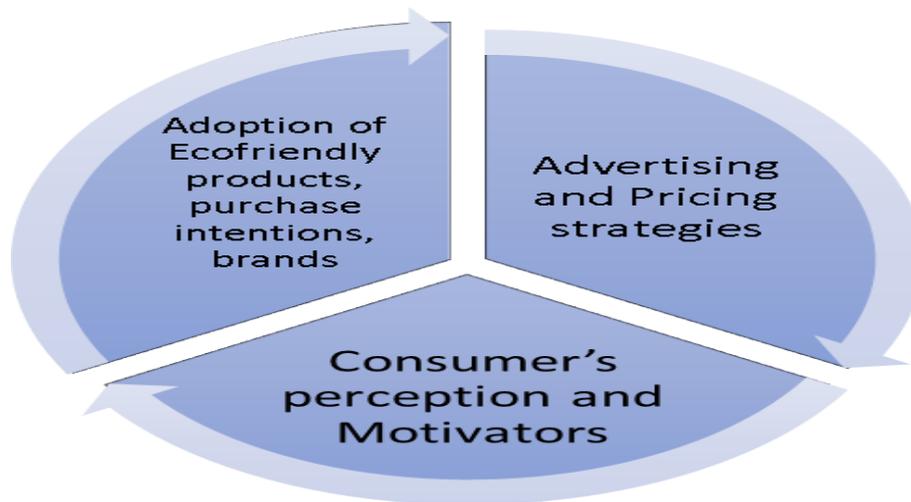
- 1) To assess demographic influences on eco-product attitudes.
- 2) To evaluate advertising strategy effectiveness.
- 3) To examine WTP for premium pricing.
- 4) To analyze pricing-purchase behavior links.

## 4. Research Methodology

The study is confined to Bangalore city. The study is basically descriptive research, and it is designed questionnaire method. The study mainly concentrates on "consumers' response towards Eco-friendly product advertising and pricing strategies". The study consists of both primary and secondary data. The data collected through a structured questionnaire were taken from previous studies. For the study, it is

being decided that the collected data was from the 90 respondents through online Google forms. Descriptive study in Bengaluru using convenience sampling (online Google Forms, n=90; analysis n=46 complete responses). Primary data via an adapted questionnaire; secondary from journals. Analyzed with SPSS 27: descriptives, ANOVA, correlation, and Kruskal-Wallis. Limitations: Small sample limits generalizability; future work needs Cronbach's alpha for reliability.

### 5. Research Framework



### 6. Analysis

#### 6.1. Descriptive analysis

- The majority of the respondents (34%) belong to the age group of 35–44 years.
- The majority of respondents are male (57%).
- The majority of respondents (36%) have an income of less than ₹20,000.
- 95% of the respondents are familiar with the concept of eco-friendly products.
- The majority of respondents (42%) purchase eco-friendly products sometimes.
- 64% of the respondents obtain information about eco-friendly products from social media.
- The majority of respondents (40%) strongly agree that eco-friendly products contribute to environmental sustainability.
- 34% of the respondents agree that eco-friendly products are superior to other products.
- 62% of the respondents identify eco-friendly products as genuine.
- Nearly 30% of the respondents prefer visual advertising campaigns.
- About 47% of the respondents are influenced by effective advertisements.
- Nearly 40% of the respondents give importance to the price of eco-friendly products.
- 37% of the respondents agree that the higher price of eco-friendly products is justified by their benefits.

#### 6.2. Hypothesis

Here is the corrected version with proper word spacing, grammar, and standard research format:

H<sub>0</sub>: There is no significant relationship between buying eco-friendly products and advertising.

H<sub>1</sub>: There is a significant relationship between buying eco-friendly products and advertising.

**Table 1:** Income Level of Respondents and Willingness of Respondents to Pay a Premium Price – Correlation Analysis

Descriptive Statistics			
	Mean	Std. Deviation	N
Your Monthly Income range	2.30	1.190	46
Are you willing to pay a higher price for eco-friendly products?	2.20	.778	46
Correlation			
		Your Monthly Income range	Are you willing to pay a higher price for eco-friendly products?
YourMonthlyIncomerange	Pearson Correlation	1	-.162
	Sig.(2-tailed)		.283
	N	46	46
Are you willing to pay more priceforecofriendly-products?	Pearson Correlation	-.162	1
	Sig.(2-tailed)	.283	
	N	46	46

TableNo.1: Explain the statistical values that are determined through SPSS 27version. The Income level of respondents is necessary for buying any products. At the same time, the consumer should have the willingness to buythe products even if it is in high price.

The analysis was done with the descriptive summary of variables. In the meantime, the monthly income level was found to be 2.30 along with a standard deviation of 1.190, which is based on 46 respondents who have taken for survey. At the same time, the mean value and

standard deviation of respondents are 2.20 and 0.778. It clearly depicts respondents are in a moderate level of willingness to purchase, in relative with low variability.

The correlationstat between the income level and willingness is (-0.162). This clearly indicates that when the income level of respondents increases, they are willing to purchase the premium price of eco-friendly products. At the same time, the p-value of Correlation is 0.283 (which is greater than the significance level - 0.05), it clearly depicts to us that the income level and willingness to purchase are not related and likely due to chance rather than an underlying effect. The above analysis reveals that there is no significant relationship between the monthly income level of respondents and willingness to pay for premium price for eco-friendly products ( $r = -0.162$ ,  $p=0.283$ ). Hence Null hypothesis is accepted, Alternate hypothesis is rejected. This clearly indicates the respondents are willing to pay a premium price because of eco-friendly products.

### 6.3. Hypothesis 2

H0: There is no significant relationship between the purchasing of eco-friendly products and their pricing factors

H2: There is a significant relationship between the purchasing of eco-friendly products and their pricing factors

**Table 2:** The Purchasing of Eco-Friendly Products and Willingness to Pay Premium Price – One-Way Anova

Descriptives									
How often do you purchase eco-friendly products?									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
YES	10	3.90	.876	.277	3.27	4.53	3	5	
NO	17	2.76	.903	.219	2.30	3.23	1	4	
NOTSURE	19	3.37	.831	.191	2.97	3.77	2	5	
Total	46	3.26	.953	.141	2.98	3.54	1	5	
Model	Fixed Effects		.868	.128	3.00	3.52			
	Random Effects			.316	1.90	4.62			.235

#### Tests of Homogeneity of Variances

How often do you purchase eco-friendly products?		Based on Mean	Levene Statistic	df1	df2	Sig.
		Based on Median and with adjusted df	.230	2	43	.796
		Based on the trimmed mean	.230	2	40.431	.796
			.108	2	43	.898

#### ANOVA

How often do you purchase eco-friendly products?							
			Sum of Squares	df	Mean Square	F	Sig.
	Linear Term	Weighted	.694	1	.694	.922	.342
		Deviation	7.796	1	7.796	10.353	.002
Within Groups			32.380	43	.753		
Total			40.870	45			

Table No.2 explains the relationship between the frequency of purchase and willingness to pay a premium price for the eco-friendly products. The mean value across the three response groups – ‘YES’, ‘NO’, or ‘NOT SURE’, is 3.90, 2.76, or 3.37, respectively. Further to the test of homogeneity of variances, the p-value is 0.895, which indicates the variances among the three groups are approximately equal, which satisfies the assumption for conducting ANOVA.

The one-way anova was conducted to analyse the mean frequency of purchasing eco-friendly products that differ significantly across the three groups. The F-statistic shows the value of 5.637, where the p-value is 0.007. Since the p-value is less than the standard value of 0.05, it clearly depicts that there is a significant difference between the mean frequency of purchasing eco-friendly products across the groups statistically. Hence, the null hypothesis is rejected, Alternate Hypothesis accepted. There is sufficient evidence that shows that there is a significant relationship between the purchasing of eco-friendly products and their pricing factors.

### 6.4. Hypothesis 3

H0: There is a mid-level of attention to eco friendly an advertisement is the same across all the age groups.

H3: At least one of the groups is having mid-level of attention to eco-friendly advertisements.

Table No.3 – Age of the respondents and Attention to ecofriendly Advertisements

### 6.5. Kruskal-Wallis test

Ranks			
Your Age group	Do you think eco-friendly advertisements are effective in influencing your purchase decisions?	N	Mean Rank
	Disagree	5	24.90
	Neutral	10	18.00
	Agree	21	25.36
	Strongly Agree	9	24.61
	Total	46	

Test Statistics <sup>a,b</sup>	
(Grouping Variable: Do you think eco-friendly advertisements are effective in influencing your purchase decisions?)	
	YourAge group
Kruskal-WallisH	2.416
df	4
Asymp.Sig.	.660

Table No.3: Explain the mean rank of the variable “Do you think eco-friendly advertisements are effective in influencing your purchase decisions?” across the groups with various scales. The mean explains the relative position of respondents’ responses as per the different age groups.

Further statistics,  $H = 2.416$  depicts that there are significant differences in the ranks between age groups. The significance ‘p’ value, which is 0.660, explains whether the difference observed in the ranks is statistically significant. Since the p-value is 0.660, which is greater than the standard significance level of 0.05, we reject the alternative hypothesis and accept the null hypothesis. This implies that there is a mid-level of attention to eco-friendly advertisements that is the same across all the age groups.

The results of the Kruskal-Wallis test show that irrespective of the age groups of the respondents, they are influenced through the eco-friendly advertisement strategies and felt that they are having significant effect on the awareness of the same. In simple terms, all the age groups of people are influenced by the various advertising strategies.

## 7. Suggestions

The various analysis has done with the help of SPSS software from the data collected from the respondents. Findings align with TPB: Attitudes (ad effectiveness) and perceived control (pricing) drive intent, but norms (affordability) barrier adoption. Economically, a weak income-WTP link suggests premium pricing is viable via perceived value, not subsidies. Unique contribution: E-commerce context reveals social media's role (64%). The following are the suggestions given by the researcher.

- 1) The awareness campaign shall be arranged towards the eco-friendly products, especially to the younger generations. As they are the pillars of our nation, explains them the benefits and utilization of eco-friendly products in an effective way.
- 2) The advertisement shall be more transparent by focusing on the emotional wellness of the people, which is measurable to an extent.
- 3) The offers and discounts on newly introduced eco-friendly products will attract more consumers.
- 4) Retailers are one of the best sources for establishing eco-friendly products for end-users. It boosts the product trust and availability. With clearly label certifications and a verification process may build trust among the consumers.
- 5) With the help of the NGOs, the initiative shall be taken to improve the sale of eco-friendly products.

## 8. Conclusion

The concept of eco-friendly products is rooted in the idea of consumption to an extent. The demand is still growing, but the challenges persist in converting them into consistent purchasing. Pricing strategies and advertising are important in shaping the consumer attitudes and overcoming the barriers. Through various advertisement strategies, which are awareness, create interests, and trust in eco-friendly products, that are crafted with pricing, the perception of affordability, and the worth is well addressed. The study examines the relationship between consumer psychology, marketing communication, and pricing dynamics. In recent years, the global focus on sustainability and environmental conservation has prompted a significant shift in consumer behavior. The increasing awareness of ecological issues such as climate change, resource depletion, and pollution has led to the rise of eco-friendly products. These products are intended to curtail environmental influence throughout their lifespan, from manufacture and packaging to consumption and disposal. However, the success of these products depends not only on their inherent benefits but also on how effectively they are marketed and priced. Eco-friendly advertisements are influencing consumer behavior most effectively that combines emotional appeal, transparency and visual campaigns. Apart from the above, pricing plays a key role in the decisions of consumers. Though many consumers are willing to pay a premium price for the eco-friendly products, the increasing price of the products may lead to checking for cheaper alternatives.

Advertising fosters awareness/trust; pricing moderate frequency. Businesses should optimize via TPB-informed strategies for economic sustainability. Future research: Larger samples, experiments.

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