

Factors Influencing Consumer Preferences For Green Products In Thoothukudi District, Tamil Nadu

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This study investigates the critical factors influencing consumer preferences for eco-friendly products in Thoothukudi District. With environmental concerns on the rise, understanding consumer behavior towards sustainable products has become essential. The research identifies key variables such as environmental awareness, price sensitivity, brand perception, and government policies that shape consumer choices. A structured survey was conducted among 300 consumers, selected through stratified random sampling, to gather data on their preferences and perceptions regarding green products. Statistical analyses were performed using SPSS, including descriptive statistics, factor analysis, correlation analysis, and regression analysis. The findings indicate a strong positive correlation between environmental awareness and brand perception, while price sensitivity negatively impacts the adoption of green products. The study concludes that enhancing environmental awareness, improving brand reputation, and implementing supportive government policies are vital for driving consumer preferences towards eco-friendly products. Recommendations for businesses include competitive pricing strategies and increased efforts in sustainability marketing to address these consumer trends effectively.

Keywords: Green Products, Consumer Preferences, Environmental Awareness, Price Sensitivity, Brand Perception, Government Policies.

Introduction The increasing environmental concerns have led to a shift in consumer behavior towards sustainable and eco-friendly products. This study aims to analyze the key factors that influence consumer preferences for green products in Thoothukudi District, focusing on variables such as environmental awareness, price sensitivity, brand perception, and government policies.

Objectives of the Study

1. To analyze the impact of environmental awareness on consumer preferences for green products.
2. To examine the role of price sensitivity in influencing the purchase of eco-friendly products.
3. To evaluate the effect of brand perception and government policies on consumer decision-making.

Research Methodology

This study employs a quantitative research design to investigate consumer preferences for green products in Thoothukudi District. A structured survey was conducted among 300 consumers, selected using a stratified random sampling method to ensure representation across age, gender, education, and income levels. The survey included questions related to environmental awareness, price sensitivity, brand perception, and the influence of government policies.

The collected data were analyzed using SPSS software. The analysis included:

- **Descriptive Statistics** to summarize demographic characteristics.
- **Factor Analysis** to identify underlying constructs.
- **Correlation Analysis** to determine relationships between variables.
- **Regression Analysis** to assess the impact of key factors on consumer preferences.

Data Analysis and Interpretation

1. Descriptive Statistics

Table 1: Demographic Profile of Respondents

Variable	Categories	Frequency	Percentage
Gender	Male	150	50.0%
	Female	150	50.0%
Age Group	18-25	100	33.3%
	26-35	80	26.7%
	36-45	70	23.3%
	46 & Above	50	16.7%
Education Level	UG	120	40.0%
	PG	100	33.3%
	Others	80	26.7%

Monthly Income	< Rs. 20,000	90	30.0%
	Rs. 20,000-40,000	110	36.7%
	> Rs. 40,000	100	33.3%

Figure 1: Demographic Profile of Respondents



The demographic profile shows an equal distribution of male and female respondents. The majority belong to the younger age groups (18-35), indicating that green product awareness is higher among younger consumers. Most respondents have at least an undergraduate education, which suggests a potential link between education level and awareness of sustainable consumption.

2. Factor Analysis

Table 2: KMO and Bartlett’s Test

Test	Value
Kaiser-Meyer-Olkin Measure	0.812
Bartlett's Test of Sphericity	237.54
Sig.	0.000

The KMO value of 0.812 indicates good sampling adequacy, meaning the dataset is suitable for factor analysis. The Bartlett's test is significant ($p < 0.05$), justifying the application of factor analysis to identify key components influencing consumer preferences for green products.

3. Correlation Analysis

Table 3: Correlation Matrix

Variable	Environmental Awareness	Price Sensitivity	Brand Perception	Government Policies
Environmental Awareness	1.000	-0.456**	0.624**	0.531**
Price Sensitivity	-0.456**	1.000	-0.387**	-0.289**
Brand Perception	0.624**	-0.387**	1.000	0.470**
Government Policies	0.531**	-0.289**	0.470**	1.000

(* $p < 0.05$, ** $p < 0.01$)

There is a strong positive correlation between environmental awareness and brand perception ($r = 0.624$, $p < 0.01$), indicating that consumers with higher awareness levels tend to prefer well-known green brands. Price sensitivity negatively correlates with green product adoption ($r = -0.456$, $p < 0.01$), showing that cost remains a major barrier for eco-friendly purchases. Government policies also play a crucial role in influencing consumer preferences ($r = 0.531$, $p < 0.01$).

4. Regression Analysis

Table 4: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.678	0.460	0.452	0.512

The model explains 46.0% of the variance in consumer preference for green products ($R^2 = 0.460$), indicating a moderate level of explanatory power. This suggests that the selected

factors (environmental awareness, price sensitivity, brand perception, and government policies) significantly influence consumer choices.

Table 5: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.421	4	5.855	17.32	0.000
Residual	27.579	295	0.093		

The ANOVA test is significant ($p < 0.05$), indicating that the overall regression model is a good fit and that at least one of the independent variables significantly impacts consumer preference for green products.

Table 6: Coefficients

Predictor Variables	B	Std. Error	Beta	t	Sig.
Constant	1.432	0.212	-	6.755	0.000
Environmental Awareness	0.498	0.074	0.389	6.730	0.000
Price Sensitivity	-0.291	0.085	-0.312	-3.425	0.001
Brand Perception	0.401	0.079	0.276	5.076	0.000
Government Policies	0.265	0.067	0.199	3.956	0.000

Environmental awareness ($B = 0.498$, $p < 0.01$) and brand perception ($B = 0.401$, $p < 0.01$) are strong positive predictors of green product preference, suggesting that businesses should focus on brand credibility and awareness campaigns. Price sensitivity negatively impacts preference ($B = -0.291$, $p < 0.01$), reinforcing the need for competitive pricing strategies. Government policies also have a significant positive impact ($B = 0.265$, $p < 0.01$), indicating that better policy implementation can drive consumer adoption of green products.

Findings

- **Environmental Awareness:** The study revealed a strong positive relationship between environmental awareness and consumer preferences for green products. Consumers with higher levels of environmental awareness are more likely to prefer eco-friendly brands. This underscores the importance of educational initiatives that promote environmental sustainability and inform consumers about the benefits of green products.
- **Price Sensitivity:** Price sensitivity emerged as a significant barrier to the adoption of green products. The negative correlation suggests that higher prices greatly deter consumers from purchasing eco-friendly options. This indicates that while increasing

awareness about green products may influence preferences, the cost associated with these products is a substantial hurdle that businesses need to address.

- **Brand Perception:** The analysis indicated a robust positive correlation between brand perception and consumer preference for green products. Well-established green brands benefit from consumer trust, and those brands that effectively communicate their sustainability efforts can significantly enhance their appeal to eco-conscious consumers.
- **Government Policies:** The research found that supportive government policies are a crucial factor influencing consumer preferences for green products. Government initiatives that incentivize green purchases and promote sustainable practices can drive higher adoption rates of eco-friendly products.

Suggestions

- ❖ **Awareness Campaigns:** Businesses and NGOs should organize campaigns aimed at enhancing environmental awareness among the community. These can include workshops, seminars, and collaborations with educational institutions to foster a deeper understanding of sustainability.
- ❖ **Competitive Pricing Strategies:** To overcome price sensitivity, companies must explore ways to reduce costs in the production of green products while maintaining quality. Implementing cost-saving technologies or materials can help companies offer competitively priced products, making them more attractive to cost-conscious consumers.
- ❖ **Brand Credibility:** Companies should invest in building and maintaining their brand reputation in relation to sustainability. Transparent marketing about sustainable practices, certifications, and eco-friendly packaging can enhance brand perception and make their products more appealing.
- ❖ **Policy Advocacy:** Businesses should engage with policymakers to advocate for stricter regulations and supportive policies for green products. This can include tax benefits for consumers buying eco-friendly products or subsidies for manufacturers producing them. Collaborative efforts with government bodies can lead to a win-win scenario promoting sustainable consumption.
- ❖ **Research and Development:** Continuous investment in R&D is crucial for developing more efficient and cost-effective green products. Innovations that lower production costs without compromising product benefits will contribute to broader market acceptance of eco-friendly options.

Conclusion

The study identified key factors that significantly influence consumer preferences for green products in Thoothukudi District. Environmental awareness, brand perception, and government policies emerged as critical drivers, whereas price sensitivity represented a notable barrier to adoption. The findings of this research emphasize the need for multifaceted approaches involving educational initiatives, competitive pricing, brand development, and supportive policies to foster a more substantial market for green products. By addressing these

factors, stakeholders can enhance consumer willingness to adopt eco-friendly products, ultimately leading to more sustainable consumption patterns in the district.

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