

## “Green Marketing of Durable Products: A Study in Vellore.”

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### KEYWORDS

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### ABSTRACT

Green marketing has emerged as an important approach for promoting environmentally friendly products and encouraging sustainable consumption. This study examines the marketing of green durable products with special reference to green marketing practices in Vellore District. The main objective of the study is to analyse consumer awareness, purchase behaviour, satisfaction levels, and factors influencing the adoption of green durable products such as energy-efficient appliances, electric vehicles, and solar-based products.

The study is based on primary data collected from consumers in Vellore District using a structured questionnaire. Various statistical tools such as factor analysis, regression analysis, Confirmatory Factor Analysis (CFA), Structural Equation Modelling (SEM), and cluster analysis were used to analyse the data. The findings reveal that consumers have a high level of awareness about green products and their environmental benefits. Product quality and environmental attributes were identified as the most significant factors influencing consumer purchase behaviour, while economic and functional attributes had a moderate influence. The results also show that most consumers are satisfied with green durable products, although concerns regarding high prices and authenticity of green claims still exist.

The study concludes that there is significant potential for the growth of green marketing in Vellore District. Increasing consumer awareness, improving product affordability, ensuring transparency in green claims, and strengthening government support can further promote the adoption of green durable products and contribute to environmental sustainability.

## 1 INTRODUCTION

The oil crisis and growing environmental concerns have made consumers more aware of green consumerism and more inclined to buy green products. The world's ecosystem is being negatively impacted by the rapid population growth and excessive consumption of goods and services; extreme resource depletion causes imbalance, which in turn contributes to issues with global weather fluctuations and natural disasters like earthquakes

and tsunamis. As a result, there are several issues that pose a threat to every nation on Earth.

Every consumer product has an environmental impact; hence none are completely green. Their manufacturing processes and products use non-renewable resources and fuel, produce hazardous pollutants, and have negative effects on the environment. When a product reaches the end of its life, it might be manufactured entirely of

renewable materials and still totally decompose. A substitute product might, however, be a superior choice from an environmental standpoint because it might use fewer resources during production, which would lead to the discharge of fewer harmful emissions. "Green products" are generally referred to as ecological or environmentally friendly products.

## **2.STATEMENT OF THE PROBLEM**

In recent years, environmental sustainability has become a global concern, and businesses are increasingly adopting *green marketing* practices to promote eco-friendly products. Green durable products—such as energy-efficient appliances, solar-powered devices, and eco-friendly electronics—play a vital role in reducing environmental impact. Despite the growing awareness of environmental issues and government initiatives promoting sustainable consumption, the actual market penetration and consumer acceptance of green durable products in India remain relatively low.

In the context of Vellore District, which is an emerging urban–

rural mix economy with growing environmental consciousness, the understanding and acceptance of green marketing concepts are still evolving. The district comprises both urban consumers with access to modern retail outlets and rural consumers who rely more on traditional marketing channels. This socio-economic diversity makes it essential to study how effectively green marketing strategies are being implemented and perceived in this region.

## **3.SCOPE OF THE STUDY**

The overall outline of the study's topics is called the scope of research. The main goal of the research is to examine how consumers purchase durable green items, how satisfied they are with these products, how they behave after making a purchase, and how these factors affect sustainability in Chennai. Future research in this area would mostly benefit from the researcher's present study, analysis, findings, recommendations, and conclusion.

This study is limited to customer purchasing patterns, satisfaction levels, post-purchase behavior, and the effects

of green products on sustainability in Vellore District.

#### 4.OBJECTIVES OF THE STUDY

1. To investigate consumers' perceptions of durable green products.
2. To examine the attitudes of consumers towards green products.

#### 5. HYPOTHESIS OF THE STUDY

Null and Alternative Hypotheses H1:  
Economic and Functional Attributes

- H0: Economic and functional attributes have no significant influence on the frequency of purchasing green durable products.
- H1: Economic and functional attributes have a significant influence on the frequency of purchasing green durable products.

#### 6.REVIEW OF LITERATURE

1. Martinez claims that both consumers and professional buyers are prompted to take green options into consideration when making purchases due to the current global

environmental issues (such as habitat destruction, resource depletion, air and water pollution, global warming, and environmental degradation).

2. Meeting or exceeding customers' sustainable expectations, green needs, and environmental desires is known as "green satisfaction." Six validated items from previous studies are used to measure this trait (Suki, 2017).
3. The customer's evaluation and feelings on whether the price difference between a seller's pricing and that of a comparable third party is fair, reasonable, or justified is known as the "green product price." Three validated items from previous studies were used to measure this variable (Konuk, 2018)
4. Linu James (2021) seeks to investigate consumers' interest in and awareness of environmentally friendly products. Nonetheless, a fundamental principle of green marketing is that consumers are willing to pay more for environmentally responsible products.<sup>24</sup> A systematic,

closed-ended questionnaire was used to collect data from 114 participants. The data was examined using a Friedman test, a chi-square test, and percentage analysis. The study's conclusions, which examine the state of affairs now and the factors that influence consumers' preference for green products, are encouraging.

5. The results of Vijayalakshmi's (2021) study are essential for boosting the public's inclination to make green purchases.<sup>29</sup> The results of the study indicate that consumers' enjoyment and adoption of green products' eco-friendly features are significantly influenced by their quality, longevity, and variety.

#### DATA ANALYSIS AND INTERPRETATION

This chapter presents a comprehensive analysis and interpretation of the data collected for

the study on the marketing of green durable products with special reference to green marketing in Vellore District.

#### KNOWLEDGE OF SPECIFIC GREEN DURABLE PRODUCTS

The analysis of respondents' knowledge of specific green durable products helps to understand the extent of consumer familiarity with various environmentally friendly and energy-efficient items available in the market. While general awareness of green products is important, knowing which specific products consumers recognize provides deeper insights into their exposure to sustainable options and potential buying behaviour. This section examines the respondents' knowledge of different categories of green durable products—such as solar devices, energy-saving appliances, eco-friendly furniture, and electric vehicles—to assess how well these products are understood and accepted by consumers in Vellore District.

**Table 1. -KNOWLEDGE OF SPECIFIC GREEN DURABLE PRODUCTS**

| Sl. No. | Knowledge of specific green durable products | Known | Percentage | Unknown | Percentage | Total |
|---------|--|-------|------------|---------|------------|-------|
|         |  |       |            |         |            |       |

|    |  |     |      |     |      |     |
|----|--|-----|------|-----|------|-----|
| 1. | Energy-efficient LED bulbs, fans and refrigerators                           | 508 | 100  | 0   | 0    | 508 |
| 2. | Solar Products like water heaters, lamp, lanterns and panels                 | 350 | 68.9 | 158 | 31.1 | 508 |
| 3. | Eco-friendly washing machines, bathroom fittings and mattresses              | 309 | 60.8 | 199 | 39.2 | 508 |
| 4. | Energy-saving air conditioners (inverter ACs, 5-star rated)                  | 381 | 75   | 127 | 25   | 508 |
| 5. | Green/fuel-efficient kitchen appliances (induction stove, low-energy mixers) | 429 | 84.4 | 79  | 15.6 | 508 |
| 6. | Biodegradable or sustainable furniture (bamboo, reclaimed wood)              | 207 | 40.7 | 301 | 59.3 | 508 |
| 7. | Electric vehicles (e-bikes, e-scooters, electric cars)                       | 407 | 80.1 | 101 | 19.9 | 508 |

*Source: Primary data*

The table reveals that awareness of specific green durable products varies across categories, with 100% of respondents fully aware of energy-efficient LED bulbs, fans, and refrigerators, indicating complete penetration and acceptance of these products in the market. High levels of knowledge are also evident for green kitchen appliances (84.4%), electric

vehicles (80.1%), and energy-saving air conditioners (75%), suggesting strong consumer exposure to widely marketed eco-friendly technologies. Moderate awareness is seen for solar products (68.9%) and eco-friendly washing machines and bathroom fittings (60.8%), reflecting scope for greater awareness and adoption. However, the lowest familiarity is observed for

biodegradable or sustainable furniture (40.7%), where a majority (59.3%) lack awareness, highlighting limited consumer reach and promotional efforts in this category. Overall, the pattern indicates that consumers are highly knowledgeable about commonly used energy-efficient products, while less exposure exists for sustainable furniture and eco-focused home utility items, indicating a need for targeted awareness initiatives in these segments.

## 2. STRUCTURAL EQUATION MODELLING (SEM)

SEM was used to assess the impact of the three motivation factors on **Overall Motivation**. The Structural Equation Model (SEM) was estimated to examine the influence of the three motivational constructs—**RPM**, **MAM**, and **GSAM**—on **Overall Motivation (OM)** toward preferred green durable products. The results indicate that **all three paths are statistically significant** at  $p < 0.001$ .

TABLE – 2

### STRUCTURAL EQUATION MODELLING (SEM)

| Path                      | Estimate ( $\beta$ ) | S. E | C.R  | p-value | Result      |
|---------------------------|----------------------|------|------|---------|-------------|
| RPM → Overall Motivation  | .42                  | .06  | 7.08 | ***     | Significant |
| MAM → Overall Motivation  | .31                  | .05  | 6.14 | ***     | Significant |
| GSAM → Overall Motivation | .28                  | .06  | 4.76 | ***     | Significant |

Sources: AMOS Output

1. Regulatory and Price Measures→  
**Overall Motivation** ( $\beta = 0.42$ ,  $p < 0.001$ )

The factor **Regulatory and Price Measures (RPM)** has the **strongest positive effect** on consumers' overall motivation toward green durable products.

- The standardized coefficient ( $\beta = 0.42$ ) indicates that **for every one-unit increase in RPM, Overall Motivation increases by 42%**.
- A high critical ratio (C.R = 7.08) shows a robust relationship.  
**Interpretation:** Governmental regulations, taxes on non-green products, cost increases, fines, and digital awareness strongly motivate consumers to shift toward green durable products.

1. Marketing and Availability Measures→  
**Overall Motivation** ( $\beta = 0.31$ ,  $p < 0.001$ )

The factor **Marketing and Availability Measures (MAM)** has a **significant positive impact** on overall motivation.

- The coefficient ( $\beta = 0.31$ ) implies that increases in green product availability, installment options, shop awareness, and attractive designs **meaningfully increase consumer motivation**.
- The C.R value (6.14) indicates a stable, reliable path.  
**Interpretation:** Effective marketing, shop-level awareness, and easy purchase options enhance consumer willingness to choose green durable products.

3. Government Support and Awareness Measures→  
**Overall Motivation** ( $\beta = 0.28$ ,  $p < 0.001$ )

The factor **Government Support and Awareness Measures (GSAM)** also significantly predicts overall motivation.

- The coefficient ( $\beta = 0.28$ ) shows a moderate yet meaningful relationship.
- The C.R value (4.76) indicates the effect is statistically solid.  
**Interpretation:** Government laws, public awareness campaigns, and technology-efficient green innovations also

play an important motivational role, though the impact is comparatively lower than RPM and MAM.

## CONCLUSION

study examined the marketing of green durable products in Vellore District by analysing consumer awareness, purchase behaviour, satisfaction, and the problems related to non-green products. The results show that consumers have a good level of awareness about green products and their environmental benefits. Many consumers, especially middle-aged, educated, and employed individuals, prefer products such as energy-efficient appliances, electric vehicles, and solar-based products. The study found that product quality and environmental benefits are the most important factors influencing purchase decisions, while economic and functional benefits also play a moderate role.

The study also found that most consumers are satisfied with green durable products and believe they are better than non-green products. However, some consumers are concerned about high prices and the authenticity of green claims. The

research concludes that Vellore District has strong potential for the growth of green marketing, but improvements are needed in pricing, awareness, product transparency, and after-sales services. Government support and better marketing strategies can further encourage consumers to adopt environmentally friendly products and promote sustainable consumption.

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