

# Influence of Sustainability Concern in the Purchase Decisions of Customers: A Study on Electronic Goods

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**Abstract:** *Understanding how sustainability issues influence customer choices has become critical for sectors like electronics that have a significant environmental impact. This study looks at how customer choices in the electronic goods market are impacted by sustainability condition such energy efficiency, recyclability, product lifespan, and corporate social responsibility (CSR). This study investigates which sustainability features customers value most and how they react to sustainable product offerings utilizing a questionnaire. The results emphasise how critical environmentally friendly practices are in consumer electronics and provide producers data on how to match their goods to the growing demand from consumers for viable solutions*

**Keywords:** Sustainability, Recyclability, Environmental Impact, CSR, Purchase Decision etc..

## I. INTRODUCTION

### Background and Rationale

Sustainability is now a top subject in many consumer industries, particularly in the electronics business, owing to growing concerns issues about climate change, resource depletion, and electronic waste. Because of their components, electronic products—from laptops and smartphones to home appliances—are linked to significant raw material use, high energy consumption, and difficult waste management issues. Customers are looking for items that take ethical and environmental factors into consideration more and more as understanding of these issues rises.

### Problem Statement

Although consumer knowledge has increased, little is known about how sustainability considerations affect customer choices, particularly in the electronics industry. By investigating how much sustainability affects consumer behaviour, determining the most coveted sustainable attributes.

### Research Objectives

This study seeks to:

- Investigate the impact of sustainability concerns on the purchase decisions of electronic goods.
- Identify specific sustainable attributes that are prioritized by consumers, such as energy efficiency, recyclability, and corporate social responsibility.
- Provide recommendations for manufacturers to develop sustainable strategies that align with consumer preferences.

### Hypothesis

- H01: There is no significant relationship between the Sustainability Attributes and Purchase decision of customers of electronic goods.
- H02: There is significant relationship between the Sustainability Attributes and Purchase decision of customers of electronic goods.

**II. LITERATURE REVIEW**

**Kumar, V., & Polonsky, M. J. (2019).** This study discusses how consumers are increasingly factoring sustainability into their purchase decisions due to greater awareness of environmental and social impacts. The authors suggest that consumer behavior is shifting as more individuals seek products that align with their values around sustainability. Younger consumers, especially millennials and Gen Z, tend to prioritize sustainable attributes more than previous generations.

**Goh, S. K., & Balaji, M. S. (2016).** In their work, Goh and Balaji emphasize that consumer segments vary in their sustainability concerns, with socioeconomic and cultural factors playing a role. Their study found that consumer awareness is rising globally, but the extent of its influence on purchase decisions can differ based on factors like income, educational background, and geographic location.

**Taufique, K. M. R., Vocino, A., & Polonsky, M. J. (2017).** This paper reviews the effectiveness of eco-labels and certifications in shaping consumer purchase decisions. The study finds that eco-labels, such as Fair Trade, USDA Organic, and Energy Star, act as credible indicators of a product's sustainability attributes, helping consumers make informed choices.

The authors conclude that eco-labels increase consumer trust and reduce uncertainty, encouraging purchases of sustainable products.

**Grunert, K. G., Hieke, S., & Wills, J. M. (2014).** Grunert and colleagues examine the impact of food sustainability labels on European consumers. Their research found that labels like "organic" and "non-GMO" positively influence purchase decisions, especially among consumers who are health-conscious and environmentally aware. However, they note that the effectiveness of these labels depends on consumer understanding and trust in the certification process.

**III. RESEARCH METHODOLOGY**

The study is descriptive and analytical in nature and has adopted the following methodology.

- **Sample design:** The population of the study consisted of the customers of electronic products like laptops, Mobile Phones, and home appliances 50 respondents were identified as the sample size. Convenience Sampling was used as a sampling technique. Secondary data is collected from published reports, books, journals, and websites.
- **Source of Data:** The data required for the study were collected from both primary and secondary sources. Primary data is collected by using structured questionnaire from those customers who are purchasing electronic goods. The study also covers secondary data, which was collected from various publications, books, published research articles, etc.
- **Tools for data collection and analysis:** The tools used for collecting primary data were structured questionnaires for respondents All data collected were tabulated to facilitate interpretation. Tools used for analysis were Mean, Standard Deviation, and Correlation Analysis.

**IV. DATA ANALYSIS AND INTERPRETATION**

**Sustainability Attributes and Purchase Decision**

They sought to establish how sustainability attributes affected purchase decisions of electronic goods customers. Respondents were asked to provide data on different aspects of sustainable attributes which induces them to purchase the electronic goods. Table 4.1.1 shows the results

Table 4.1.1: Sustainability Attributes and Purchase Decision

Sl. No.	Particulars	Item Acronym	Mean ( $\mu$ )	SD
1	Energy Efficiency	SA 1	3.6933	1.0199
2	Recyclable Materials	SA 2	3.4480	0.94523
3	Minimal Environmental Impact during Manufacturing	SA 3	3.3491	0.73290
4	Company's commitment to sustainability	SA 4	3.2166	1.0153
5	Carbon Footprint Reduction	SA 5	3.3381	0.72280
6	CSR activities of the company	SA 6	3.1643	1.0528

Source: Primary Data

$\mu$  is the highest for SA 1 and lowest for SA 6.  $\sigma$  is the highest for SA 6 and the lowest for SA. Hence it is concluded that the sustainability attribute energy efficiency has a crucial role in the purchase decision of electronic goods.

Pearson Correlation on Influence of Sustainability concern and purchase behaviour

Pearson Correlation was computed to establish the relationship between the Influence of Sustainability concern and purchase behaviour.

Table 4.1.2 summarizes the results.

Table 4.1.2: Correlation Analysis

		Influence of Sustainability Concern	Increase in purchase behaviour
Pearson	Influence of Sustainability Concern	1	0.580
Sig 2 Tailed	Increase in purchase behaviour	0.580	1
N		50	50

According to Table 4.1.2, there is a strong positive correlation (0.580) between the on Influence of Sustainability concern and purchase behaviour. From this, we can conclude that, if the sustainability attributes are added more in the products, then the purchase behaviour will be highly positive. Because now a days customers are highly focusing on sustainable products which has less environmental social impact. Moreover, the sustainability attributes of electronic products play a pivotal role in their purchase decision.

## V. FINDINGS

- From the study, we found out that the sustainability attributes of electronic products play a significant role in the purchase decisions of customers.
- There is a strong positive correlation (0.580) between influence of sustainability concern and purchase behaviour.
- The study proved that the customers are giving more importance to energy efficiency of an electronic product. Respondents cited energy efficiency as both environmentally and economically beneficial, highlighting its role in reducing long-term costs.

## VI. DISCUSSION

### Interpretation of Results

The findings suggest that sustainability is a significant factor in purchasing decisions. The prioritization of energy efficiency and recyclability reflects a broader consumer desire to reduce environmental impact through product choices. Additionally, Minimal environmental impact, Reduced carbon footprints and CSR efforts play a key role in shaping consumer loyalty, particularly in a competitive market.

### Implications for Manufacturers

Manufacturers in the electronics sector can enhance brand loyalty and market share by emphasizing energy efficiency, offering recyclable options, Minimal environmental impact, Reduced carbon footprints and engaging in visible CSR activities. By meeting consumer demands for sustainable features, companies can both improve their market positioning and contribute to global environmental goals.

## VII. CONCLUSION AND RECOMMENDATIONS

### Conclusion

This study underscores the significance of sustainability in consumer purchasing decisions within the electronics market. As consumer understanding of environmental impact grows, companies must adapt to meet this demand by integrating eco-friendly features and ethical practices. While sustainability is a priority, there remains a requirement for cost-effective solutions that appeal to price-sensitive consumers.

**Recommendations**

1. Increase Product Transparency: Clearly label and promote viable features, such as energy efficacy and recyclable materials.
2. Focus on Energy Efficiency: Highlight energy-saving advantages in both product design and marketing strategies.
3. Enhance CSR Visibility: Engage in CSR initiatives that resonate with consumers, such as reducing e-waste and supporting ethical sourcing.
4. Provide Affordable Sustainable Options: Develop products that balance sustainability with affordability, appealing to a broader consumer base.

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