

## A STUDY ON CONSUMERS' PERCEPTION OF GREEN PRODUCTS IN ERODE DISTRICT

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### ABSTRACT

Green consumers are concerned about the environmental impact of their purchases and continually strive to minimize it. In green marketing, customers' interest in the product's backstory and advantages are the most important variables influencing the demand for green products and putting pressure on corporations to improve their environmental performance. The study investigated the consumers' perception of green products in Erode District. As corporations produce more green electronic products and the Indian green electronic market grows, consumers aren't purchasing them how they'd like. As a result, it's essential to learn about people's opinions on these products and their motivations for purchasing them. An organized questionnaire that has undergone numerous revisions was created to gather data on the two most important areas of the investigation. The primary and secondary data was employed in this investigation. Using a self-structured questionnaire, primary data were gathered from Erode District residents using convenience sampling. Erode District was chosen for the study because of its international character, allowing for further generalization of the findings. Secondary data has been gathered from different publications, research papers, websites, company records, and the results of several worldwide surveys. Because global warming has become a severe issue for everyone, corporations are being pushed to release various green electronic items using cutting-edge technology to reduce environmental destruction.

**Keywords:** Consumer Perception, Eco-labels, Green Consumers, Green Marketing, Green Products.

### INTRODUCTION OF THE STUDY

When it comes to green marketing, you're thinking about all aspects of a product's lifecycle, from its conception to its final disposal, to ensure that you have the lowest possible environmental impact possible. According to various authors, green marketing is defined in multiple ways. A green marketing strategy aims to develop and enable transactions that satisfy human needs or desires, so long as these needs or wants are met with a minimal environmental impact. Environmental Marketing, or Green Marketing, is the practice of generating and facilitating exchanges that meet human needs or desires while minimizing ecological impact. It is a term that describes an organization's efforts to design, promote, price, and distribute products that do not hurt the environment. As defined by the American Marketing Association, "green marketing" encompasses a wide range of actions that include product modification, improvements to the production process, sustainable packaging, and advertising.

### **GREEN CONSUMERS:**

Green consumers are concerned about the environmental impact of their purchases and continually strive to minimize it. In green marketing, customers' interest in the product's backstory and advantages are the most important variables influencing the demand for green products and putting pressure on corporations to improve their environmental performance. The term "green consumer" refers to someone who is ecologically conscious and favors eco-friendly items over conventional ones. Consumers that identify as "green" have a more positive view of the environment and are more likely to buy environmentally friendly goods.

It is a green consumer's goal to avoid purchasing products that pose a health risk to themselves or others; cause significant harm to the environment while in use and disposal; use materials derived from threatened species or habitats; cause unnecessary waste; use materials derived from animals, and negatively impact other countries.

### **GREEN PRODUCT:**

Eco-friendly products positively impact society and the environment throughout their life cycle, from the extraction of raw materials to disposal. Green products are those created using environmentally friendly methods and don't harm the environment in any way.

Green products are not un to be long-lasting, free of harmful chemicals, recyclable or packaged as little as possible. Of course, no effect can claim to be 100 percent eco-friendly. During production, transportation to warehouses and stores, storage, consumption, and final disposal, these products utilize energy and resources and produce by-products and emissions. Being "green" refers to something that has less influence on the environment than an alternative.

### **REVIEW OF LITERATURE**

Kuan Siew Khor et al. (2013) studied Malaysia's green product design and resource commitment. Regarding green supply chain management, strategies like reverse logistics and environmentally friendly product design stand out. Resolving energy and materials invested in manufacturing electronic waste is possible by repurposing that waste. Reverse logistics product disposition options are based on the product's residual value and the availability of reusable content for re-entry into the supply chain in the forward direction.

The impact of environmental awareness on people's retail purchases of eco-friendly goods was studied by Sergio Silva Braga Junior et al. (2015) in their study. Customers' awareness and declaration of their purchases of green items were the study's goal. Customers will likely overlook the significance of altering their consumption habits since they are more ingrained in their daily routine of shopping for and using products because of your attitude toward them.

According to Matteo De Angelis and coworkers, premium fashion products could incorporate environmental sustainability methods to attract consumers' attention to ecologically sustainable versions of their items. When bringing new green products to the luxury fashion market, this study looked at the effectiveness of two distinct techniques that companies could

use: green products may look identical to non-green products made by the same luxury firm in the past. It is also possible that the fresh green product is like models produced by non-luxury enterprises specializing in green manufacturing. Specifically for brand-savvy customers and long-lasting items rather than disposable, three studies reveal that making the new green luxury product comparable to the luxury company's past models rather than models manufactured by green companies is the preferred method. Extant research is enriched by this study's investigation of an underappreciated driver of new green product acceptability and design, as well as the variables that lead to the successful introduction of new luxury green products.

Tobias Stucki et al. (2018) investigated the impact of various energy-related rules, taxes, voluntary agreements, and subsidies on developing green energy products. They discussed how channel policy influences green product innovation and which factors explain the observed results. The procedure may impact green product innovation by either encouraging the supply of green products and services directly or indirectly. Our data collection allows us to discriminate between the two channels, which helps us understand policies frequently found to have positive net effects. Regarding green product development, taxes and restrictions hurt supply-side factors. In other words, taxes and regulations reduce innovation because they don't generate more of a market for new products or services. Firms with high technological and financial sophistication are less affected by these consequences. Innovation in green products is aided by government subsidies and (at least in part) voluntary agreements with industry.

According to Jingzhe Gao et al. (2020), eco-labeling policy significantly impacts a wide range of products. Using game theory and mathematical programming methodologies, we arrive at the best prices in both channels and the best green standard and subsidy. Analysis of results shows that the environmental advantages of development-intensive green products can be increased by a green bar that grows. Raising environmental requirements for marginally expensive green products may not be in everyone's best interest. As a result, the two sorts of products' abilities are distinct. As a result of these discoveries, the producer and merchant can develop new product strategies that work well for them. The government can also use these data to help build an eco-label program.

Maher A.N. Agi et al. (2020) looked at how the product line could be expanded using a green variant of an existing conventional brown product. One retailer or one manufacturer can be the supply chain's leader. Thus, we investigate this possibility using a game-theoretic technique. Assuming consumers are interesting to pay a premium for a product's green features, our model includes a one-time launch-cost component. According to our findings, brown and green products can be priced and positioned in four ways. Specifically, we state the conditions under which adding a green product to the conventional line is more cost-effective and the regions in which each pricing method is most effective, with each member acting as a supply chain leader in both a centralized and decentralized setup. A manufacturer-led supply chain is better equipped than a retailer-led supply chain to overcome the fixed costs, introduce green products, and reap the benefits of green consumer segment growth at an early stage of development, as shown by our results. We devise two coordinating strategies that enable the decentralized supply chain to work at its best.

There is only one producer and two competing stores in the Shu Guo et al. (2020) supply chain for the fashion industry's fashion industry. They looked at how retail competition and consumer returns influence green product development in fashion apparel. As competition increases in the market, the ideal greenness level of a fashion product drops, as does the optimal greenness level of a fashion product. These findings imply that as the market becomes more competitive, the ideal greenness of products decreases. Product greenness levels are also diminished when the return rate of consumers increases. When retailers charge a higher retail price than when they set a lower retail fee, the optimal product greenness level for the entire channel is always more significant in the extended model with joint decisions on naturalness and pricing. Fashion sector factors such as a highly competitive environment for creating green products, low retail pricing for fashion products, and high customer return rates contribute to the underdevelopment of green fashion products. As a result, fashion companies should join a co-opetition game for the green product market and concurrently improve their efficiency in managing consumer returns.

Supply chain management under the influence of the government was examined by Ali Mahmoudi et al. (2021) using an outsourcing method to a 3PL company in the transportation sector. How the issue will play out in various competition forms, decision-making processes, player counts, and public knowledge is determined. The problem is modeled using game theory, which considers alternative decision structures to arrive at equilibrium values. An evaluation of the models' applicability is completed with numerical examples solved using sensitivity analyses for each model. The findings suggest that using 3PLs in a supply chain increases public awareness of environmental issues and promotes the sustainability of the supply chain. Sustainable supply networks can benefit from tariffs imposed by the government.

According to Xiaoxi Zhu et al. (2021), the Pareto area that can boost both manufacturer's profit and consumer's surplus can be identified. Launching a new green product is also studied regarding the impact of external restrictions such as environmental taxes. The results show that introducing environmental taxes enhances the accessibility of green products and reduces the Pareto area of profit and consumer surplus. As a result of cost learning, new greener goods and environmental taxes can lower the total environmental damage caused by a manufacturer. If our models work as expected, they should give managers helpful insights into how to introduce new, eco-friendly products.

In these circumstances, Prakash Awasthy et al. (2022) looked at a company's pricing and greening strategies compared to the market and looked at specific instances where the firm may not invest in greening. As a result of the competition's green initiatives, a focal company boosts its greening efforts and prices. The absence of green consumer sensitivity in the primary market does not stop a company from greening if spillovers are available. If the negative spillover effect is below a certain threshold, a company can continue to invest in green initiatives. An organization could lose its competitive edge if a competitor (with positive spillovers for the environment) improves its greening efforts to compete in both markets.

### **NEED FOR THE STUDY:**

We all know that while human wants and needs are limitless, natural resources are finite. As a result, resources must be used sparingly to meet these demands. We face several environmental concerns due to global economic growth, the most pressing of which is how to limit damaging human activities on Earth while conserving our finite, nonrenewable resources for the next generation. In prior studies, we looked at the state of green marketing in India, consumer attitudes toward eco-friendly products, and corporate green activities. All these topics were examined in depth.

### **THE OBJECTIVE OF THE STUDY:**

To investigate the consumer's perception of green products in Erode District.

### **RESEARCH METHODOLOGY**

As corporations produce more green electronic products and the Indian green electronic market grows, consumers aren't purchasing them how they'd like. As a result, it's essential to learn about people's opinions on these products and their motivations for purchasing them. An organized questionnaire that has undergone numerous revisions was created to gather data on the two most important areas of the investigation. The primary and secondary data was employed in this investigation. Using a self-structured questionnaire, primary data were gathered from Erode District residents using convenience sampling. Erode District was chosen for the study because of its international character, allowing for further generalization of the findings. Secondary data has been gathered from different publications, research papers, websites, company records, and the results of several worldwide surveys. Because global warming has become a severe issue for everyone, corporations are being pushed to release various green electronic items using cutting-edge technology to reduce environmental destruction. A well-designed questionnaire and a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree," were used to gather the data.

### **DATA ANALYSIS AND INTERPRETATION**

In other words, perception is the ability to recognize things or objects. As a way of thinking about what customers think or feel about products and services, it can also be linked to customer satisfaction, or what customers expect from products and services. Consumer perception is an educated approximation of the natural world since buyers continually combine information about an organization to construct a choice about the product or service.

An organization's perception uses the principle of tactile observation when promoting and presenting its product to influence a consumer's view of the product. Like how people see and interpret physical jolts with sensory perception, buyer recognition deals with how consumers make assumptions about companies and the stock they offer through their purchases.

Organizations use the notion of consumer perception to determine what customers think of a product or service and devise various marketing strategies to keep and win over new customers.

## Consumers' Perception of Green Products in Erode District

The consumers' perception of green products in Erode District are analyzed regarding "Green items, in my opinion, are often affordable, I think the price of green products is more than that of non-green ones, Green items do not entice me with lower costs, To me, my health is more important than its cost, In my opinion, the vast majority of people do not purchase green products because of their expensive nature, In general, I do not believe that green products offer better quality, Because of their superior quality, I frequently buy green products, In my opinion, there is a mismatch between the value and quality of green goods, As a result of the natural ingredients, I believe that green products have a higher level of quality than conventional ones, I'll encourage my colleagues to use green, products if they are high-quality, Green products, in my opinion, are preferable, To raise environmental awareness, I believe the government and businesses should collaborate, People, in my opinion, are less concerned about the environment, To protect the environment, I buy green products, 'Eco-labels' may have been viewed by customers as a marketing ploy, It is time to switch to green products, Only a few stores carry green products, I believe that green items are widely available in the marketplace, I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets, When shopping for green products, I do not consider where the store is, Green products, in my opinion, should be affordable to the entire public, Consumers who dare to explore high-end stores can find green products, I believe that most people are unaware of the environmental benefits of purchasing green items, Because I am concerned for the environment, I only buy green products, I believe that green products are under-promoted and under-advertised by corporations, I believe that green items backed by celebrities can be sold swiftly, If a well-known brand is affiliated with a green product, I'm more likely to buy it, I believe that green items are a rarity in the marketplace, In my opinion, customers in India aren't ready to appreciate the value of green items."

Friedman's test analysis was used to identify the variable which is more influencing consumers' perception of green products in Erode District, and the results are below.

### Hypothesis:

H<sub>0</sub>: The mean ranks of the variables of consumers' perception of green products are not significantly different in Erode District.

H<sub>1</sub>: The mean ranks of the variables of consumers' perception of green products are significantly different in Erode District.

Table 1 explains the descriptive analysis of the mean ranks of the twenty-nine variables of consumers' perception of green products in Erode District. The descriptive analysis includes the mean, standard deviation, minimum, maximum, first quartile, median, and third quartile of twenty-nine variables.

**Table 1: Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Green items, in my opinion, are often affordable.	124	3.02	1.272	1	5	2	3	4
I think the price of green products is more than that of non-green ones.	124	3.60	0.970	1	5	3	4	4
Green items do not entice me with lower costs.	124	4.11	0.798	1	5	4	4	5
To me, my health is more important than its cost.	124	4.06	0.913	1	5	4	4	5
In my opinion, the vast majority of people do not purchase green products because of their expensive nature	124	3.55	1.178	1	5	3	4	4
In general, I do not believe that green products offer better quality.	124	2.86	1.054	1	5	2	3	4
Because of their superior quality, I frequently buy green products.	124	2.84	1.077	1	5	2	3	4
In my opinion, there is a mismatch between the value and quality of green goods.	124	3.26	1.011	1	5	2	4	4
As a result of the natural ingredients, I believe that green products have a higher level of quality than conventional ones.	124	3.81	0.974	1	5	4	4	4
I'll encourage my colleagues to use green products if they are high-quality.	124	3.52	0.897	1	5	3	4	4
Green products, in my opinion, are preferable.	124	3.50	1.063	1	5	3	4	4
To raise environmental awareness, I believe the government and businesses should collaborate.	124	3.37	1.252	1	5	2	4	4
People, in my opinion, are less concerned about the environment.	124	3.95	0.731	2	5	4	4	4
To protect the environment, I buy green products.	124	3.74	0.978	1	5	4	4	4
'Eco-labels' may have been viewed by customers as a marketing ploy.	124	3.42	0.997	1	5	3	4	4
It is time to switch to green products.	124	3.75	0.889	1	5	4	4	4

Only a few stores carry green products.	124	3.65	0.971	1	5	4	4	4
I believe that green items are widely available in the marketplace.	124	3.52	1.024	1	5	2	4	4
I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets.	124	4.56	0.515	3	5	4	5	5
When shopping for green products, I do not consider where the store is.	124	3.73	1.068	1	5	3	4	5
Green products, in my opinion, should be affordable to the entire public.	124	4.30	0.686	2	5	4	4	5
Consumers who dare to explore high-end stores can find green products.	124	3.52	1.199	1	5	3	4	4
I believe that most people are unaware of the environmental benefits of purchasing green items.	124	4.04	0.769	1	5	4	4	4
Because I am concerned for the environment, I only buy green products.	124	2.48	1.233	1	5	2	2	3
I believe that green products are under-promoted and under-advertised by corporations.	124	2.88	0.959	1	5	2	3	4
I believe that green items backed by celebrities can be sold swiftly.	124	3.30	1.089	1	5	2	4	4
If a well-known brand is affiliated with a green product, I'm more likely to buy it.	124	3.53	1.158	1	5	2	4	4
I believe that green items are a rarity in the marketplace.	124	2.89	1.098	1	5	2	3	4
In my opinion, customers in India aren't ready to appreciate the value of green items.	124	3.29	1.153	1	5	2	4	4

The above table 1 results indicate that “I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets” has the highest mean score of 4.56, followed by “Green products, in my opinion, should be affordable to the entire public.” According to the consumers, “I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets” is more important. It is followed by the “Green products, in my opinion, should be affordable to the entire public” as so much influencing consumers’ perception of green products in Erode District. Other variables are less important among the consumers.

### **Variable Wise Opinion regarding the consumers' perception of green products in Erode District**

An investigation has been made to study the consumers' perception of green products in Erode District. After converting the qualitative information of the statement into a quantitative one, the average score was obtained from the respondents on various variables like "Green items, in my opinion, are often affordable, I think the price of green products is more than that of non-green ones, Green items do not entice me with lower costs, To me, my health is more important than its cost, In my opinion, the vast majority of people do not purchase green products because of their expensive nature, In general, I do not believe that green products offer better quality, Because of their superior quality, I frequently buy green products, In my opinion, there is a mismatch between the value and quality of green goods, As a result of the natural ingredients, I believe that green products have a higher level of quality than conventional ones, I'll encourage my colleagues to use green, products if they are high-quality, Green products, in my opinion, are preferable, To raise environmental awareness, I believe the government and businesses should collaborate, People, in my opinion, are less concerned about the environment, To protect the environment, I buy green products, 'Eco-labels' may have been viewed by customers as a marketing ploy, It is time to switch to green products, Only a few stores carry green products, I believe that green items are widely available in the marketplace, I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets, When shopping for green products, I do not consider where the store is, Green products, in my opinion, should be affordable to the entire public, Consumers who dare to explore high-end stores can find green products, I believe that most people are unaware of the environmental benefits of purchasing green items, Because I am concerned for the environment, I only buy green products, I believe that green products are under-promoted and under-advertised by corporations, I believe that green items backed by celebrities can be sold swiftly, If a well-known brand is affiliated with a green product, I'm more likely to buy it, I believe that green items are a rarity in the marketplace, In my opinion, customers in India aren't ready to appreciate the value of green items" and obtained results are and presented in Table 2.

**Table 2: Variable Wise Opinion Regarding the Consumers' Perception of Green Products in Erode District**

Variable	Mean Rank
Green items, in my opinion, are often affordable.	11.46
I think the price of green products is more than that of non-green ones.	15.57
Green items do not entice me with lower costs.	19.35
To me, my health is more important than its cost.	19.30
In my opinion, the vast majority of people do not purchase green products because of their expensive nature	15.56
In general, I do not believe that green products offer better quality.	10.10
Because of their superior quality, I frequently buy green products.	9.43
In my opinion, there is a mismatch between the value and quality of green goods.	12.33
As a result of the natural ingredients, I believe that green products have a higher level of quality than conventional ones.	17.17
I'll encourage my colleagues to use green products if they are high-quality.	14.54
Green products, in my opinion, are preferable.	14.56
To raise environmental awareness, I believe the government and businesses should collaborate.	14.27
People, in my opinion, are less concerned about the environment.	18.02
To protect the environment, I buy green products.	16.94
'Eco-labels' may have been viewed by customers as a marketing ploy.	14.06
It is time to switch to green products.	16.57
Only a few stores carry green products.	15.93
I believe that green items are widely available in the marketplace.	14.35
I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets.	23.19
When shopping for green products, I do not consider where the store is.	16.19
Green products, in my opinion, should be affordable to the entire public.	20.92
Consumers who dare to explore high-end stores can find green products.	15.03
I believe that most people are unaware of the environmental benefits of purchasing green items.	19.20
Because I am concerned for the environment, I only buy green products.	8.57
I believe that green products are under-promoted and under-advertised by corporations.	10.37
I believe that green items backed by celebrities can be sold swiftly.	13.33
If a well-known brand is affiliated with a green product, I'm more likely to buy it.	14.84
I believe that green items are a rarity in the marketplace.	10.19
In my opinion, customers in India aren't ready to appreciate the value of green items.	13.67

Friedman’s ANOVA analysis was used to identify the variable which is more influencing the consumers’ perception of green products in Erode District, and the results are given in Table 2. It represents the mean ranks of the twenty-nine variables of consumers’ perception of green products in Erode District. The table 2 shows that among the twenty-nine variables, “I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets” was ranked first. It is followed by the “Schedule a routine time for interaction with family.” “Have cohesive personal and career goals for both” was ranked last. Variable-wise distribution of the mean rank of the consumers’ perception of green products in Erode District shows that among twenty-nine variables, the highest mean level of 23.19 is obtained for the variable “I feel that most people avoid purchasing green items since they are not readily available in their local supermarkets.” In contrast, the lowest mean rank is 8.57 for “Because I am concerned for the environment, I only buy green products.”

Table 3 shows the chi-square statistic along with its p-value.

**Table 3: Test Statistics<sup>a</sup>**

N	124
Chi-Square	751.237
df	28
Asymp. Sig.	0.000

a. Friedman Test

The above table 3 results indicate that the p-value (0.000) is less than the usual threshold value of 0.05. Thus, the null hypothesis of mean ranks of the variables of consumers’ perception of green products in Erode District cannot be accepted, and the alternative hypothesis is accepted. So, it can be concluded that the mean ranks of the variables of consumers’ perception of green products are significantly different in Erode District.

## SUGGESTIONS

A company that produces eco-friendly items will gain a competitive advantage in the market. To begin with, the idea of a green product or implementing a green marketing plan will cost money. Though still a favorable sign for the organization, it gives it an edge over its rivals in the battle. For this reason, businesses should keep in mind that most Indians fall into the middle-income bracket, meaning that green products must be priced competitively to gain traction on the market. The government and marketers must organize green marketing campaigns to raise awareness of the notion. Most of the Indian population falls into the middle-income bracket, so the organization should manufacture green products that this group of consumers can afford.

## CONCLUSION

It’s still early days for the green product notion. Most consumers are aware of power-saving green electronic items now. Therefore, this industry has a bright future. The term “green” or “eco-friendly” is still unfamiliar, and they don’t know what that means. Before or after a product is introduced to the market, marketers must consider how consumers perceive it to

achieve a competitive advantage and encourage more people to buy it. Because of technological advancements, today's green products will become even greener in the future. For example, LCD televisions were green products because of their energy efficiency when they were first introduced to the market. However, LED televisions have since taken their place because of their superior technology and ability to save energy. Consumers' perceptions of green products need to be studied by marketers, who can then raise knowledge about them and the eco-labels significance and environmental benefits to generate demand for them. For the vast majority of consumers, eco-friendly goods should be affordable. They don't have to worry about it pinching their wallets. Social networking apps like Facebook, Instagram, WhatsApp, and so on are great ways to enhance business consumer awareness. The green items are readily available, of high quality, and at reasonable prices from a wide range of retail shops.

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