



International Journal of Multidisciplinary Research and Growth Evaluation.

Green marketing: A descriptive analysis of its influence on consumer buying behavior and green marketing practices

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Article Info

ISSN (online): 2582-7138

Impact Factor: 5.307 (SJIF)

Volume: 05

Issue: 02

March-April 2024

Received: 09-02-2024;

Accepted: 12-03-2024

Page No: 369-374

Abstract

In the current era of climate change, people worldwide are increasingly concerned about the environment and its impact. Therefore, this paper aims to look into the behaviour of consumer regarding sustainable products and the implementation of green marketing practices in Barpeta district. The research put to use both the primary and the secondary data. The primary data was accumulated from 90 respondents in Barpeta District using a simple random sampling method. The study is being conducted from 2022 to December 2023. Various statistical tools such as weighted score, mean, rank analysis, and Chi-square test are employed to study the data. The findings could not find any significant difference in awareness of sustainable products based on age or education level. Similarly, gender does not play a significant role in influencing awareness of green products and marketing practices related to the environment. However, there is a significant difference in awareness of sustainable products based on employment status and income level. Based on the rank analysis, six variables are identified as significant factors influencing awareness of sustainable products and marketing practices related to the environment. These findings provide valuable insights to draw meaningful conclusions from the study.

DOI: <https://doi.org/10.54660/IJMRGE.2024.5.2.369-374>

Keywords: Green product, Green marketing, consumer and environment

1. Introduction

A sustainable product is manufactured to have minimum harm on the environment on its whole life cycle. The main goals of a green product are to minimize waste or misuse and to maximize resource productivity or efficiency.

Consumers are the most valuable assets for a business. They act as advocates, insiders, partners, and guests. Every business relies on consumers. However, green consumers are those who prioritize the environment and only purchase eco-friendly products and services. They are highly concerned about the environment and make conscious choices in their purchasing decisions.

Green marketing has been a topic of discussion since before the 1980s, but it gained more prominence between 1980 and 1990. The American Marketing Association held a workshop on "Ecological Marketing" in 1975, defining green marketing as the promotion of environmentally safe products. It is also known as environmental marketing, ecological marketing, or sustainable marketing. The goal of green marketing is to protect consumers and the environment by producing, consuming, marketing, and disposing of eco-friendly products in a way that minimizes harm to the environment. With the growing awareness of global warming, there is a need to utilize limited resources efficiently.

2. Literature Review

Ahmad, N, *et al.* (2020) ^[5], the purpose of this research is to examine how different green marketing strategies impact consumers' decisions to buy environmentally-friendly products or services. The study collected survey responses from 300 participants using

a non-probability sampling method. The results showed that only eco-packaging and environmental advertisement had a noticeable effect on consumer purchasing behavior.

Aldubai, O. A., & Develi, E. İ. (2022) ^[3]. The purpose of this study is to examine the changes in green marketing and the marketing mix over time. Specifically, the study looks at how consumers' buying habits are influenced by green products. The study finds that the importance of different elements in the green marketing mix varies, with the green product being the most significant. Additionally, consumers have a good understanding of green products, and the green marketing mix has a significant impact on consumers' environmental awareness, culture, directions, and behavior.

Boztepe A (2012) ^[1], the aim was to investigate how green marketing influences consumer purchasing behavior in Istanbul. Regression analysis was used to analyze the data. The results showed that green product features, environmental awareness, green promotion activities, and green price all have a positive and significant impact on consumers' green purchasing behavior in Istanbul.

De Jesus, F. S., *et al* (2021) ^[7], this study aimed to examine how green marketing influences consumer purchasing behavior and their perceptions of green products. The goal was to raise awareness about environmentally friendly products through advertisements, in order to change consumers' buying habits and improve the environment. The study found that using eco-friendly products had the most impact on consumers' purchasing decisions and emphasized the importance of supporting green marketing to reduce negative environmental effects.

Maiywa, E. C. (2013) ^[8], the study aimed to understand how green marketing affects consumer behavior in Nairobi County, Kenya's major supermarkets. The results showed that supermarkets use various marketing strategies to outsmart the competitors and encourage consumers to buy their sustainable products and services. It is seen as an essential strategy for competitive organizations.

Mokha, A. K. (2018) ^[4], this paper tries to explore how sustainable the labelling, branding, and advertising, influence on consumers' purchasing decisions. The study uses linear regression analysis and finds that the three factors i.e. sustainable labelling, branding, and advertising have a positive and significant effect on consumer buying behavior.

Saini, B. (2013) ^[2] this study tries to explore the impact of green marketing on consumer buying behavior and how companies can gain a competitive advantage by adopting it. The research was conducted in the Rohini district of Delhi with the help of data collected from books, journals, and websites. The findings suggest that companies should improve their communication with customers regarding their green initiatives and that factor like price and quality are more influential than being environmentally responsible.

3. Objectives of the Study

This study aims to understand how the demographic profile of individuals in Barpeta District affects their awareness of green products. It also aims to examine the level of awareness

among individuals of different genders regarding green products and marketing practices. Additionally, the study aims to find out the factors that influence consumers to purchase green products under the area and to understand the factors that influence consumer's awareness on green marketing practices and their effect on the environment in Barpeta District.

4. Research Methodology

The study is done under a survey method to collect both the primary and secondary data. For primary data interviews and questionnaires, recorded electronically were used. Secondary data was obtained from books, journals, and websites. 90 respondents were chosen through simple random sampling. The study was conducted from 2022 to Dec 2023. Statistical tools like weighted score, mean, rank analysis, Chi-square test, tables, and percentages were used for analysis after data collection.

5. Limitation of the Study

The study had several important limitations. Firstly, it only collected data up to until Dec 31th, 2023. Secondly, respondents did not openly share their true socio-economic status. Thirdly, there was a lack of consumer awareness, which was attributed to factors such as poor economic conditions, illiteracy, and ignorance.

6. Data Analysis

Data analysis helps to find out crucial information by exploring the data and make informed decisions. It involves looking for patterns and relationships in the data to extract meaningful insights. Different techniques and tools can be used for data analysis, from simple calculations to complex algorithms. The goal is to turn raw data into actionable insights that can improve business strategies and operations. By understanding data patterns, organizations can identify opportunities, risks, and improve their overall performance.

6.1. Demographic Detail

Demographic detail refers to specific information about a particular group of people, such as their age, gender, education level, and occupation. It is important for understanding the unique needs and behaviours of different groups, and can help researchers, policymakers, and businesses tailor their strategies and products accordingly. It provides a foundation for conducting in-depth studies, formulating evidence-based policies, and developing effective marketing and communication strategies. In summary, demographic detail provides a comprehensive understanding of a population, informing decision-making and promoting positive societal change. The table explores the relationship between the demographic attributes of individuals and their level of awareness regarding environmentally-friendly products, with a specific focus on the influence of gender within a particular geographic location.

Table 1: Impact of Demographic Profile on Gender wise Consumer Awareness of Green Product

S.N	Demographic Profile	Variable	Gender		Total	X ² , (C.V)	X ² (T.V)	P-Value=.05	H ₀	H ₁
			Male	Female						
						6.305	7.815	d.f =3	A	R
1	Age	Up to 20 yrs	7	10	17					
		20- 40 yrs	39	15	56					
		40- 60 yrs	10	4	14					

		More than 60 yrs	4	1	5					
		Total	60	30	90					
2	Qualification	School	1	3	4	9.291	9.488	d.f =4	A	R
		Graduate	38	14	52					
		Diploma Certificate	14	9	23					
		Postgraduate	4	2	6					
		Others	4	1	5					
		Total	61	29	90					
3	Occupation	Private	20	10	30	10.1787	7.815	d.f =3	R	A
		Government	9	9	18					
		Trade & Commerce	24	5	29					
		Other Service	6	7	13					
			59	31	90					
4	Monthly Income	Less than 20,000	29	20	49	13.14079	7.815	d.f =3	R	A
		20,000— 40,000	5	9	14					
		40,000—60,000	21	3	24					
		More than 60,000	2	1	3					
			57	33	90					

Source: Analyzed by the Researcher

Table 1 shows the impact of demographic factors on gender-specific consumer awareness of green products in a specific area. The demographic variables analyzed include age, educational level, employment, and monthly income. The table displays the number of males and females within different age groups, educational qualifications, occupations, and income level. To determine the relationship between the demographic variables and consumer awareness Chi-square tests were used. The null hypothesis (H0) assumes no relationship, while the alternative hypothesis (H1) suggests a significant relationship. The p-value of 0.05 was used as the threshold for significance.

After analyzing the data, it was determined that there is no substantial variance between demographic factors (such as age and educational level) and the level of consumer awareness regarding the use of environmentally friendly products, when considering gender. This conclusion is based on the calculated chi-square value being lower than the table value for the degrees of freedom, leading us to accept the Null Hypothesis (H0) and reject the Alternative Hypothesis (H1).

However, it was discovered that there is a significant disparity between the other two variables (occupation and monthly income) and the level of consumer awareness, when considering gender, specifically in the Barpeta District. This finding is based on the calculated chi-square value being higher than the table value for the degrees of freedom, leading us to reject the Null Hypothesis (H0) and accept the Alternative Hypothesis (H1).

6.2. Consumer awareness of sustainable products and green marketing practices

It discusses the importance of consumer awareness in relation to green products and green marketing practices. It highlights the importance for consumers to be conveyed about the environmental benefit of the products and the marketing strategies used by companies to promote these products as eco-friendly. This research aims to investigate how familiar consumers in Barpeta District are with eco-friendly products and marketing strategies, with a specific focus on any differences between men and women.

Table 2: Aims to Examine the level of Awareness among Consumers in Barpeta District regarding Green products and Green Marketing practices, focusing specifically on Gender differences

Gender	Yes	No	A little	I don't know	Total
Male	49	4	8	1	62
Female	18	3	2	5	28
Total	67	7	10	6	90

Source: Analyzed by the Researcher

Table-2 examines the level of awareness among consumers in Barpeta District regarding Green products and Green Marketing practices, categorized by gender. The table presents the number of respondents who answered "Yes," "No," "A little," and "I don't know" for each gender. A total of 62 males and 28 females participated in the study, resulting in a total of 90 respondents.

The test statistic, which measures the difference between gender-wise awareness levels of consumers regarding Green products and Green Marketing practices in Barpeta District, follows a chi-square distribution with 3 degrees of freedom. Based on the computed test statistic value of 11.20826 and a significance level of 1%, it is found to be less than the critical value of 11.341 from the chi-square table. Therefore, at a 1% level of significance, we accept the Null Hypothesis, indicating that there is no significant difference between the

awareness levels of males and females regarding Green products and Green Marketing practices in Barpeta District.

6.3. Factor Influencing the Consumer to Purchase the Green Product

This refers to the various elements that affect a consumer's decision to buy eco-friendly products. Various factors, including personal values, environmental awareness, product features, pricing, accessibility, and marketing strategies, influence consumers' decision to purchase green products. As these factors gain prominence, the demand for green products is expected to grow, leading to a more sustainable society. Effective marketing campaigns that highlight the environmental benefits of green products can significantly influence consumer behavior. The unique features and benefits of green products, such as energy efficiency and recyclability, attract consumers who desire a more

sustainable lifestyle. Personal values and beliefs, such as a sense of responsibility towards the environment, also play a role in consumers' choice of green products. Increased

environmental awareness among consumers leads to a preference for greener alternatives.

Table 3: To Identify the Factors Influencing the Consumer to Purchase the Green Product in Barpeta District

	Factor	Level of influence	Weighted Score			Mean	Rank
1	Awareness about green product	Absolutely Disagree	1	15	15	19.6	3 rd
		Slightly Disagree	2	12	24		
		Not Either Agree or Disagree	3	25	75		
		Slightly Agree	4	10	40		
		Absolutely Agree	5	28	140		
2	Product with Natural ingredient	Absolutely Disagree	1	8	8	21.13	1 st
		Slightly Disagree	2	12	24		
		Not Either Agree or Disagree	3	25	75		
		Slightly Agree	4	15	60		
		Absolutely Agree	5	30	150		
3	Product doesn't harm and pollute environment	Absolutely Disagree	1	30	30	15.87	6 th
		Slightly Disagree	2	10	20		
		Not Either Agree or Disagree	3	27	81		
		Slightly Agree	4	8	32		
		Absolutely Agree	5	15	75		
4	Safety and healthy	Absolutely Disagree	1	9	9	19.87	2 nd
		Slightly Disagree	2	24	48		
		Not Either Agree or Disagree	3	12	36		
		Slightly Agree	4	20	80		
		Absolutely Agree	5	25	125		
5	Good quality compared with normal product	Absolutely Disagree	1	10	10	19.33	4 th
		Slightly Disagree	2	23	46		
		Not Either Agree or Disagree	3	13	39		
		Slightly Agree	4	20	80		
		Absolutely Agree	5	24	120		
6	Product Price	Absolutely Disagree	1	15	15	17.8	5 th
		Slightly Disagree	2	21	42		
		Not Either Agree or Disagree	3	24	72		
		Slightly Agree	4	12	48		
		Absolutely Agree	5	18	90		

Source: Analyzed by the Researcher

Table 3 presents the factors that influence consumers to purchase green products in Barpeta District. The factors include awareness about green products, product with natural ingredients, products that do not harm the environment, safety and health benefits, good quality compared to normal products, and product price. The table also provides the level of influence, weighted score, mean, and rank for each factor. The study findings indicate that the top factor is consumers' preference for products with natural ingredients, followed by safety and health concerns. The third most influential factor is consumer awareness about green products. Fourth, consumers prioritize good quality compared to regular products. The price of the product is ranked fifth in influencing consumers to purchase green products. Lastly, the sixth preference is for sustainable products that neither

harm nor pollute the environment in Barpeta District.

6.4. Factors Influencing the Consumers' Awareness of Green Marketing Practices

The main aim is to explore the various factors that influence consumers' awareness of green marketing practices and their influence on our environment in the Barpeta District. Additionally, this study will explore how demographic factors, such as age, gender, and education level, may influence consumers' awareness and attitudes towards green marketing practices. This study will put up to a better grip of consumer behavior and help enterprises and policymakers in finding different strategies to foster sustainable practices and environmental consciousness in the Barpeta District.

Table 4: Examines the Factors that affect Consumer Awareness of Green Marketing Practices and their Impact on the Environment in Barpeta District

S. N	Factor	Level of influence	Weighted Score			Total	Rank
1	Manufacturing sustainable Product	Absolutely Disagree	1	8	8	22.87	1 st
		Slightly Disagree	2	15	30		
		Not Either Agree or Disagree	3	09	27		
		Slightly Agree	4	12	48		
		Absolutely Agree	5	46	230		
2	Manufacturing products through sustainable process	Absolutely Disagree	1	06	06	20.08	3 rd
		Slightly Disagree	2	18	36		
		Not Either Agree or Disagree	3	14	42		

		Slightly Agree	4	32	128		
		Absolutely Agree	5	20	100		
3	Promoting products through sustainable modes of communication	Absolutely Disagree	1	23	23	17.53	6 th
		Slightly Disagree	2	10	20		
		Not Either Agree or Disagree	3	27	81		
		Slightly Agree	4	11	44		
		Absolutely Agree	5	19	95		
4	Using sustainable supply chain for procurement and distribution	Absolutely Disagree	1	24	24	20.00	4 th
		Slightly Disagree	2	06	12		
		Not Either Agree or Disagree	3	35	105		
		Slightly Agree	4	20	80		
		Absolutely Agree	5	05	25		
5	Modifying products to make them environmental friendly	Absolutely Disagree	1	9	9	21.87	2 nd
		Slightly Disagree	2	11	22		
		Not Either Agree or Disagree	3	20	60		
		Moderately Agree	4	13	52		
		Slightly Agree	5	37	185		
6	Providing awareness to consumers to use products in sustainable manner	Slightly Disagree	1	10	10	19.33	5 th
		Moderately Disagree	2	22	44		
		Not Either Agree or Disagree	3	17	51		
		Slightly Agree	4	20	80		
		Absolutely Agree	5	21	105		

Source: Analyzed by the Researcher

The table presents the factors that influence consumer awareness of green marketing practices in Barpeta District. The factors include eco-friendly manufacturing, processing, promotion, supply chain for procurement and distribution, modifying, and providing awareness to consumers to use products in sustainable manner. Each factor is ranked based on its level of influence, weighted score, and total score.

The study found that manufacturing eco-friendly products is the most influential factor, followed by modifying products in sustainable manner. Manufacturing products through sustainable processes is the third most influential factor, while using sustainable supply chains for procurement and distribution is ranked fourth. Providing awareness to consumers to use products in sustainable manner is the fifth most influential factor, and promoting products through sustainable modes of communication is ranked sixth.

7. Findings

The study revealed several significant findings:

- Among the 90 respondents, there are 60 males and 30 females. 39 of the male respondents and 15 of the female respondents fall between the ages of 20-40. In this scenario, there is no notable difference between the gender and age of the respondents regarding their awareness of green products in table-1
- In table-2, out of the 90 respondents, 38 males and 14 females have a degree level certificate. The results show that there is no significant difference between gender and education level in terms of consumer awareness of green products.
- According to table-3, out of 90 respondents, 29 males and 20 females have an income of less than 20,000. This indicates a significant difference between the gender and income level of consumers in terms of their awareness of green products.
- Based on the data in Table-2, the calculated χ^2 value is lower than the χ^2 value listed in the table at the 1% significance level. This means that there is no significant difference in the awareness level of consumers regarding Green products and marketing practices on the environment, based on gender, in Barpeta District.

- According to table-3, products with natural ingredients are ranked first, followed by safety and health concerns in second place. Consumer awareness about green products is ranked third, and good quality compared to normal products is ranked fourth. The fifth and sixth ranks are given to product price and the product not causing harm or pollution.
- According to Rank analysis, the study reveals that marketing practices should focus on promoting awareness about sustainable products, making changes to products to make them more sustainable, using sustainable manufacturing processes, adopting sustainable supply chains for procurement and distribution, providing awareness to consumers to use products in sustainable manner, and promoting products through sustainable methods of communication.

8. Conclusion & Suggestion

Green marketing and green products aim to both protect the environment and educate society on how to do the same. In modern life, it has become necessary for all people, whether for personal, family, or business purposes, to use environmentally friendly products. This means that there is no significant difference in the awareness level of consumers regarding Green products and marketing practices on the environment, based on gender, in Barpeta District. This indicates a significant difference between the gender and income level of consumers in terms of their awareness of green products. The factors that influence consumers to purchase these products include quality, natural ingredients, safety, and health. The study suggests that marketing efforts should focus on promoting awareness of sustainable products, making product changes to be more sustainable, using sustainable manufacturing processes, adopting sustainable supply chains, educating customers on using products in a sustainable way, and promoting products through sustainable communication methods.

The study suggests that consumers in the Barpeta District should prioritize purchasing green products to protect the environment, and marketers should create new green products and find innovative ways to communicate their

benefits to consumers. Effective marketing campaigns should be designed to promote green products, and consumers should be encouraged to care towards the environment and look forward to different organizations to adopt sustainable practices. The study also recommends motivating customers through awareness programs and providing information about green products and their ecological benefits. Eco-labeling and packaging should be emphasized as green marketing tools, and standard rules should be implemented to avoid consumer confusion. Lastly, advertising through mediums like television and the internet can help raise awareness of green products.

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