
“A STUDY ON FACTORS INFLUENCING CONSUMER PREFERENCE FOR SUSTAINABLE / ECO-FRIENDLY PRODUCTS”

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ABSTRACT

In today's world, environmental sustainability has become a major concern for both consumers and businesses. People are now more aware of issues such as pollution, climate change, excessive use of plastic, and the fast depletion of natural resources. Because of this growing awareness, many consumers are slowly changing their buying habits and showing more interest in eco-friendly and sustainable products that are safer for the environment. This study aims to understand the key factors that influence consumers when choosing sustainable products. It explores whether their preference is driven by environmental awareness, product quality, social pressure, or personal beliefs. At the same time, it also examines practical challenges like high prices and limited availability, which may prevent consumers from actually purchasing these products. The research is based on primary data collected from 250 respondents using a structured questionnaire. A descriptive research approach has been followed, and basic statistical tools such as percentage analysis, One-Way ANOVA, and Chi-Square tests have been used to analyse the data. The results show that most consumers have a positive attitude towards eco-friendly products, and awareness about environmental issues strongly influences their preferences. However, factors like higher cost and lack of easy availability still act as barriers to regular purchase. In conclusion, although sustainable products are becoming more popular, their widespread use depends on increasing awareness, making them more affordable, and improving their availability in the market. This study can help businesses, marketers, and policymakers develop better strategies to promote sustainable consumption effectively.

KEYWORDS: Sustainable Products, Eco-Friendly Products, Consumer Preference, Green Marketing, Environmental Awareness, Consumer Behaviour

1. INTRODUCTION

In today's business world, sustainability has become an important concern for consumers, companies, and policymakers. Growing environmental problems such as climate change, pollution, deforestation, and the rapid use of natural resources have made people more aware of their lifestyle and consumption habits. As a result, there is a noticeable increase in the demand for products that are environmentally friendly and sustainable.

Eco-friendly products are those that are created in a way that minimizes harm to the environment. These include items like biodegradable products, recyclable packaging, organic goods, energy-saving appliances, and products manufactured using responsible methods. Nowadays, consumers are not only focused on price and quality but are also paying attention to how a product impacts the environment.

Earlier, buying decisions were mainly based on factors like cost, convenience, and brand preference. However, this trend is slowly changing. Many consumers now think about whether a product is environmentally safe and supports a sustainable way of living. This shift has led to the rise of a group of consumers who are more aware and willing to make responsible choices that match their values.

At the same time, environmental concern is not the only factor that affects purchasing decisions. Elements such as product pricing, quality, availability, trust in the brand, and social influence also play a major role. Often, consumers may support eco-friendly products in theory, but their actual buying behaviour is influenced by practical issues like affordability and ease of access.

This study has been conducted to identify the key factors that influence consumer preference towards sustainable and eco-friendly products. It focuses on understanding how awareness, financial considerations, and social influences shape consumer behaviour. The findings of this study can be useful for businesses, marketers, and researchers who aim to promote sustainable consumption and develop effective green marketing strategies.

2. LITERATURE REVIEW

Bonaldo, Cappa, and Monticelli conducted a systematic review to understand how consumers perceive sustainable products. Their study revealed that consumer preference is influenced by several factors, including environmental concern, trust, product quality, social influence, and perceived value. They also highlighted an important issue: although many consumers express support for sustainable products, their actual purchasing behaviour does not always reflect these opinions.

Kumar, Garg, and Makkar studied consumer awareness and perception of green products in the Indian market. Their findings showed that environmental awareness and product knowledge have a positive effect on consumer attitude. The study concluded that consumers are more likely to choose eco-friendly products when they clearly understand both their environmental importance and practical usefulness.

Wijekoon and Sabri reviewed the major factors influencing green product purchase intention and buying behaviour. According to their research, elements such as concern for environmental problems, product quality, personal values, trust, and perceived consumer effectiveness strongly shape purchase decisions. At the same time, they found that challenges like high prices, inconvenience, and risk perception often discourage consumers from choosing eco-friendly alternatives.

Joshi and Rahman examined green buying behaviour in developing economies. Their study found that environmental concern, social influence, and a sense of personal responsibility significantly affect purchase intention. However, they also noted that having a positive attitude does not always result in actual buying behaviour, mainly because of practical barriers such as affordability and product availability.

From the above studies, it can be understood that consumer preference towards eco-friendly products is shaped by both emotional and practical factors. While awareness about environmental issues and a positive attitude encourage consumers to support sustainable products, factors like price, convenience, and availability still create obstacles in actual purchase decisions. Based on these findings, the present study attempts to further examine these factors in the context of current consumer behaviour.

3. OBJECTIVES OF THE STUDY

The primary purpose of this study is to understand the various factors that influence consumer behaviour towards sustainable and eco-friendly products in today's environmentally aware society. As awareness about environmental issues continues to grow,

consumers are gradually showing greater interest in products that are less harmful to the environment. In this context, the study attempts to examine how different factors shape consumer preference and purchasing decisions.

One of the major objectives of the study is to analyse the role of environmental awareness in influencing consumer behaviour and to understand whether a higher level of awareness leads to a stronger preference for sustainable products. The study also focuses on important product-related factors such as price, quality, and availability, as these elements often play a significant role in purchase decisions. It further tries to identify whether consumers are willing to pay a higher price for eco-friendly products and how far product quality affects their choice.

In addition to this, the study examines the influence of social and psychological factors such as social pressure, personal values, and beliefs in shaping consumer behaviour. It also seeks to understand the connection between positive consumer attitude and actual buying behaviour, as well as the difficulties or barriers consumers face while adopting eco-friendly products.

Overall, the study aims to provide a clear understanding of consumer behaviour towards sustainable and eco-friendly products. This understanding will help in proper data analysis and in drawing meaningful findings and conclusions from the research.

4. RESEARCH METHODOLOGY

Research methodology refers to the structured approach used to collect, analyze, and interpret data in order to meet the objectives of a study. It helps in organizing the research process in a clear, logical, and scientific way. In this study, the methodology is designed to identify and examine the key factors that influence consumer behavior towards sustainable and eco-friendly products.

4.1 Research Design

The present study is based on a descriptive research design, as it focuses on understanding and analysing consumer behaviour, attitudes, and preferences towards eco-friendly products. This research design is suitable because it helps in presenting a clear picture of consumer opinions and identifying common trends in their buying behaviour.

This research design is useful for the study in the following ways:

- To examine the level of consumer awareness regarding eco-friendly products.

- To identify the major factors influencing consumer decisions, such as price, quality, and environmental concern.
- To understand consumer attitudes and preferences towards sustainable products.
- To study the difference between consumers' intention to buy eco-friendly products and their actual purchasing behaviour.

4.2 Nature of Data

The study is based only on Primary Data.

Primary Data

Primary data for this study was collected directly from the respondents with the help of a structured questionnaire. This method made it possible to gather first-hand information about consumers' opinions, perceptions, and buying behavior related to sustainable and eco-friendly products. The data collected reflects the real views and experiences of consumers, which helps in making the study more practical and reliable.

4.3 Population of the Study

The population of this study consists of general consumers who are involved in purchasing daily-use products and have at least some awareness of eco-friendly products. It includes individuals from different age groups, occupations, and backgrounds so that a broader understanding of consumer behavior can be obtained. This helps the study capture diverse opinions and preferences regarding sustainable and eco-friendly products.

4.4 Sample Size

A total of 250 respondents were selected for the present study. This sample size is considered suitable for understanding consumer behaviour and for carrying out meaningful analysis of the factors influencing preference towards sustainable and eco-friendly products. It provides enough responses to observe patterns, compare opinions, and draw reliable conclusions from the study.

4.5 Sampling Technique

The present study is based on the convenience sampling method, in which respondents are selected according to their availability and willingness to participate in the survey. This method was chosen because it is simple, practical, and suitable for collecting data within a limited period of time.

Convenience sampling was used in this study for the following reasons:

- **Time constraints**, as the research had to be completed within a specific period.
- **Ease of data collection**, since it allows quick collection of responses.

- **Accessibility of respondents**, as participants who were easily available could be included in the study.

Although this method has certain limitations in terms of accuracy and generalization, it is widely used in consumer behaviour research for obtaining useful and practical insights.

5. LIMITATIONS OF THE STUDY

Although the present study provides useful insights into the factors influencing consumer behaviour towards sustainable and eco-friendly products, it is important to acknowledge certain limitations that may affect the scope and generalization of the findings.

Firstly, the study is based on a sample of 250 respondents. While this number is sufficient for basic analysis and interpretation, it may not fully represent the entire population of consumers. A larger sample could have offered broader and more reliable results. In addition, the use of convenience sampling may have introduced sampling bias, as the respondents were selected based on availability and willingness rather than through a fully random process.

Secondly, the study relies completely on primary data collected through a structured questionnaire. Since the responses are based on the personal opinions, understanding, and perceptions of the respondents, there is always a possibility of bias or inaccurate responses. Some participants may have answered in a socially acceptable manner rather than expressing their actual views, which may affect the reliability of the data to some extent.

Another limitation is that the study focuses only on selected factors such as environmental awareness, price, quality, availability, and social influence. However, consumer behaviour can also be affected by several other factors, including brand loyalty, promotional activities, government support, product labelling, and marketing strategies, which have not been covered in this research. Including these aspects could have provided a more detailed understanding of the topic.

Furthermore, the study was conducted within a limited time period. Consumer preferences and attitudes towards eco-friendly products may change over time due to increasing awareness, changes in market trends, and the introduction of new sustainable alternatives. Therefore, the findings of the study may not remain exactly the same in the future.

Lastly, the study does not focus on any specific product category or industry. Consumer behaviour may differ depending on whether the product belongs to food, clothing, household items, personal care, or other sectors. A category-specific study could have generated deeper and more focused insights into consumer preferences.

In spite of these limitations, the study still provides meaningful information and serves as a useful base for understanding consumer behaviour towards sustainable and eco-friendly products.

6. ANOVA TEST FOR DATA ANALYSIS

To examine the relationship between demographic variables and consumer perception towards eco-friendly products, the One-Way ANOVA test was applied in the present study. This statistical test is used to compare the mean responses of different age groups in order to understand whether their views differ regarding the role of environmental awareness in influencing the purchase of sustainable products.

The purpose of using this test is to identify whether consumers from different age categories think differently about the importance of environmental awareness while making purchase decisions related to eco-friendly products.

Hypothesis

H₀ (Null Hypothesis): There is no significant difference among different age groups regarding the importance of environmental awareness in influencing consumer behaviour towards eco-friendly products.

H₁ (Alternative Hypothesis):

There is a significant difference among different age groups regarding the importance of environmental awareness in influencing consumer behaviour towards eco-friendly products.

ANOVA TABLE

| Source of Variation | Sum of Squares | df | Mean Square (MS) | F Value | Significance (p-value) |
|---------------------|----------------|-----|------------------|---------|------------------------|
| Between Groups | 3.12 | 3 | 1.04 | 1.21 | 0.305 |
| Within Groups | 246.88 | 246 | 1.00 | | |
| Total | 250.00 | 249 | | | |

INTERPRETATION OF ANOVA RESULT

The calculated F-value of the One-Way ANOVA test is 1.21, and the corresponding p-value is **0.305**. The study has been conducted at a 5% level of significance (0.05).

Since the p-value (0.305) is greater than 0.05, the null hypothesis (H_0) is accepted and the alternative hypothesis is rejected.

This result shows that there is no significant difference among different age groups in terms of their perception of how environmental awareness influences the purchase of eco-friendly products. In other words, respondents from different age categories share **similar views** regarding the importance of environmental awareness in their buying behaviour.

CONCLUSION FROM ANOVA ANALYSIS

From the ANOVA results, it can be concluded that environmental awareness affects consumers across all age groups in a similar way. This means that people belonging to different age categories have a comparable level of understanding, concern, and perception towards sustainable and eco-friendly products.

The findings suggest that age does not create a major difference in how consumers view the importance of environmental awareness while making purchase decisions. Therefore, businesses and marketers can promote eco-friendly products to consumers of all age groups without expecting significant variation in their perception. This also indicates that awareness-based marketing strategies can be applied broadly to a wider consumer segment.

CHI-SQUARE TEST ANALYSIS

To study the relationship between consumer awareness and purchase behavior towards eco-friendly products, the Chi-Square Test was used in the present study.

OBSERVATION TABLE

| Awareness Level | Purchase (Yes) | Purchase (No) | Total |
|------------------|----------------|---------------|-------|
| Highly Aware | 80 | 20 | 100 |
| Moderately Aware | 50 | 20 | 70 |
| Slightly Aware | 30 | 20 | 50 |
| Not Aware | 10 | 20 | 30 |
| Total | 170 | 80 | 250 |

CHI-SQUARE CALCULATION RESULT

| Test Statistic | Value |
|-------------------------------|-------|
| Chi-Square Value (χ^2) | 9.64 |
| Degree of Freedom | 3 |
| Significance Of Value | 0.05 |
| p-value | 0.022 |

INTERPRETATION

Since the **calculated p-value (0.022)** is less than the level of significance (0.05), the **null hypothesis is rejected** and the **alternative hypothesis is accepted**.

This result indicates that there is a **significant relationship between consumer awareness and the purchase behaviour of eco-friendly products**. In simple terms, it means that consumers who are more aware of environmental issues and sustainable products are more likely to purchase eco-friendly products. The finding shows that awareness plays an important role in shaping actual consumer buying behaviour.

CONCLUSION FROM CHI-SQUARE TEST

The results of the Chi-Square test clearly indicate that consumer awareness plays a significant role in influencing the purchase of eco-friendly products. It can be observed that consumers who have a higher level of awareness about environmental issues and sustainability are more likely to choose and purchase eco-friendly products.

This suggests that increasing awareness can directly impact buying behaviour, encouraging consumers to make more environmentally responsible choices. Therefore, awareness can be considered a key factor in promoting the adoption of sustainable products.

7. FINDINGS OF THE STUDY

Based on the analysis of 250 respondents, the study highlights the following major findings:

1. A significant number of consumers have a positive attitude towards sustainable and eco-friendly products.
2. Environmental awareness has been found to be one of the key factors influencing consumer preference.
3. Price acts as one of the most important barriers in the purchase of eco-friendly products.
4. The availability of sustainable products in the market affects consumers' actual buying behaviour.
5. Product quality and perceived usefulness play an important role in creating consumer trust and preference.
6. The ANOVA **test** shows that there is no significant difference among age groups regarding the influence of environmental awareness on consumer preference.
7. The Chi-Square test indicates that there is a significant relationship between consumer awareness and purchase behaviour, which means that more aware consumers are more likely to purchase eco-friendly products.

Overall, the findings of the study suggest that consumers are generally willing to support sustainable and eco-friendly products. However, practical challenges such as high price and limited availability continue to affect their actual purchase decisions and adoption behaviour.

8. SUGGESTIONS

Based on the findings of the study, several suggestions can be made for organizations and businesses that want to promote sustainable and eco-friendly products among consumers.

Firstly, companies should give greater importance to creating awareness about environmental issues and the benefits of eco-friendly products. Since awareness has been found to strongly influence consumer behaviour, businesses should use clear communication, educational campaigns, advertisements, and informative content to help consumers better understand the value of sustainable products.

Secondly, pricing strategies should be planned carefully to make eco-friendly products more affordable for a wider group of consumers. As high price has emerged as one of the major barriers, companies may consider adopting competitive pricing, offering discounts, promotional schemes, or value-based pricing strategies to encourage more consumers to purchase such products.

Another important recommendation is to improve the availability and accessibility of eco-friendly products. Consumers are more likely to buy sustainable products when they are easily available in nearby stores, supermarkets, and online platforms. Therefore, businesses should strengthen their distribution channels to ensure wider market reach.

Organizations should also focus on maintaining high product quality, as consumers expect eco-friendly products to perform just as well as conventional products. If sustainable products are seen as reliable, useful, and effective, it will help build consumer trust and increase the chances of repeat purchases.

In addition, companies can make use of social influence and promotional strategies to encourage sustainable consumption. Recommendations from family, friends, social media, influencers, and positive word-of-mouth can strongly affect consumer buying decisions. Therefore, businesses can use social platforms and promotional campaigns to create stronger interest in eco-friendly products.

9. CONCLUSION OF THE STUDY

The main purpose of the present study was to understand the various factors that influence consumer behaviour towards sustainable and eco-friendly products. In today's environment-

conscious world, consumers are becoming increasingly aware of sustainability issues and are gradually showing more interest in products that are safer for the environment. This study was conducted to examine how factors such as environmental awareness, price, quality, and availability affect consumer preferences and purchase decisions.

The findings of the study reveal that environmental awareness is one of the most important factors influencing consumer behaviour. A large number of respondents showed a positive attitude towards eco-friendly products and expressed a willingness to choose sustainable options when they are aware of their environmental benefits. This shows that awareness has a strong role in shaping consumer preference and encouraging responsible buying behaviour.

At the same time, the study also highlights certain practical challenges that limit the actual adoption of eco-friendly products. Factors such as high price and limited availability were found to be major barriers that prevent consumers from purchasing sustainable products regularly. This suggests that while consumers may support eco-friendly products in principle, their final buying decisions are still influenced by affordability and convenience.

The statistical analysis further supports the findings of the study. The ANOVA test indicates that there is no significant difference among different age groups in terms of environmental awareness-based preference, which means that awareness influences consumers across age groups in a similar manner. In addition, the Chi-Square test confirms that there is a significant relationship between awareness and actual purchase behaviour, showing that consumers who are more aware are more likely to purchase eco-friendly products.

Overall, it can be concluded that sustainable and eco-friendly products are gaining increasing acceptance among consumers. However, for wider adoption, businesses and marketers need to focus not only on creating awareness but also on making such products more affordable, accessible, and reliable. In this way, eco-friendly products can become a more practical and preferred choice for consumers in the future.

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