

Consumer Perception towards Sustainable and Green Products

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Abstract— The issue of environment and sustainable development development has become a key aspect in consumer purchasing behaviour in today's markets. The aim of this study is to explore the consumer perception about sustainable and green products by analyzing the consumer awareness, purchasing behavior, environmental concern, price perception and factors affecting sustainable purchase decision. It is descriptive study and utilizing primary and secondary data. The data was obtained from the field using a structured questionnaire given to 60 respondents from various demographic cross overs. The results indicate that consumers are more aware of sustainable products, and they show that there are positive attitudes towards environmentally friendly consumption. Product quality, eco-labelling, environmental benefits and brand image are important positive factors that impact purchasing behaviour, and high price and low affordability are critical main barriers that impact adoption. Finally, it is concluded that, in order to achieve sustainable consumption, there is need for effective green marketing efforts and increase consumer awareness programs that can help reinforce environmentally responsible purchase behaviour.

Keywords— Sustainable Products, Green Marketing, Consumer Perception, Eco-Friendly Products, Environmental Awareness, Green Consumer Behaviour, Sustainable Consumption, Purchase Behaviour.

I. INTRODUCTION

A. Background of the Study

Over the past few years, there has been a rise in pollution, climate change and natural resource depletion, along with over industrialization creating environmental sustainability to be one of the most important global concerns. The share of sustainable practices seeking support from the government, businesses, and consumers have grown, with rapid economic growth and rising consumerism driving the increase in environmental challenges. To address these fears, organizations have responded with the greater introduction of sustainable, green products that limit the damage to the environment and encourage responsible use. The term green products in general terms can be described as green products, such as recyclable products, biodegradable products, energy-saving products and environmentally friendly products. Consumer attitudes on protection of the environment and ethical behaviour towards purchasing are shifting and this is reflected in the growing popularity of sustainable products. Users are more aware about the environment and social effects of their purchase decisions and this has led to increased implementation of green marketing strategies and sustainable production processes. Knowing what consumers value in sustainable and green products is thus crucial for companies looking to sustainably grow and act green.

B. Statement of the Problem

Though there is now greater awareness about environmental sustainability, some consumers fail to purchase sustainable and green products. Many consumers testify a positive attitude towards the products with the environment-friendly characteristics but they do not necessarily turn such positive attitudes into purchasing behavior. There are factors that continue to impact consumer decisions, including high prices, low product availability, lack of confidence in green claims,

low consumer awareness and perception of less product effectiveness. Though, businesses are affectionately spending money on sustainable marketing practices as well as are still having difficulties comprehending user expectations as well as preferences on eco-friendly products. The goal of the present study is to study the consumer perception towards the sustainable and green products and the major factors affecting the consumer awareness, attitude and purchase behaviour.

C. Objectives of the Study

The study aims at finding the consumer awareness and perception about sustainable and green products, identifying the factors affecting the purchase of environment-friendly products, studying the effect of environment related awareness on their buying behaviour and to check the willingness of consumers to pay premium price for environment friendly products. The study also seeks to find out challenges related to Green products and propose recommendations to enhance Green Marketing.

D. Research Questions

The study aims to address the questions: What is consumers' awareness of the sustainable products, what factors affect consumers green purchasing behavior, what is the importance of the issue of environmental concern in consumer buying behavior, whether consumers are willing to pay more for environmentally friendly products, and what are the problems consumers encounter when buying sustainable products.

E. Significance of the Study

The findings of the study are important as it will give some insight into the attitude and behavior of consumers towards sustainable and green products. The results could guide firms to develop successful green marketing strategies, enhance product positioning, build customer confidence as well as foster their environmentally-friendly consumption behaviour. The study also makes a contribution for the academic knowledge in the field of green consumerism and sustainable marketing behavior.

F. Scope and Limitations

The study is based on the perception of selected consumer sample having different demography toward sustainable and green products. Takes into account various factors like awareness, pricing, product quality, environmental concern, and purchasing behaviour. Relatively small sample size and reliance on respondent opinion which could include their own bias and changes in the market over time limit the study.

II. LITERATURE REVIEW

The concept of 'sustainable and green products' has become very relevant in the current economy, represented by the consumer markets, ever since people realized that there is a problem with the environment and natural resources are being depleted and so much waste is being generated. Sustainable and green products are gaining significant relevance in the current market economy as a result of profound concerns regarding environmental issues, the generation of excess waste, and the

scarcity of natural resources, to mention just one thing, for today is the era of green and sustainable products. Science has broadly studied the fact that consumers have their perception, environment awareness as well as purchasing behavior towards sustainable consumption practices. Studies in the literature demonstrate that the attitude of modern consumers towards the environment and society is slowly shifting in the direction of awareness. Sustainable and green products tend to be considered as products that have an environmental benefit as well as minimize pollution, resources, waste and promote ecological balance. Green consumerism refers to studies that indicate consumers' growing demand for items that are packaged in materials they can recycle, include organic ingredients, have eco-labels, lower carbon footprints, and have sustainable production techniques. The literature also mentions that there are some interdependent aspects related to consumer perception about a green product, including environmental awareness, product quality, price, trusting, eco-labelling, social influence and brand image. One study has noted that being concerned with the environment is a key driver for consumers to support sustainable products and environment-centered organizations. Media publicity, education initiatives, governmental action and social networking have played a considerable role in raising awareness about environmental sustainability and the responsible consumption behaviour. Current research also shows that young people and those with higher education levels are more positively oriented towards more sustainable products as they are more aware of climate change, pollution and ecological protection. The significance of the green marketing strategies to form the perception and affect the buying decision of the consumers have been stressed by many researchers. Positive consumer trust and brand loyalty is influenced by green advertising, sustainable packaging, and green certifications, as well as committing to transparent information about sustainability practices. The literature also gives the explanation that one of the important importance that Eco-Labeling has is helping consumers find a product that is environmentally friendly and allowing consumers to make environmentally informed purchasing decisions. Conversely, there are several studies suggesting that there is an "attitude-behaviour gap" in that consumers say they want to buy environmentally friendly products, but not when they are actually being sold in a market context. Many times barriers include high product cost, availability, accessibility, lack of information regarding the product and skepticism about companies' green claims. Studies have unearthed that many customers feel green alternatives are too costly, although they may feel positive about such alternatives compared with traditional alternatives, which means that they do not purchase green alternatives as often. Product quality and performance additionally contribute to consumer satisfaction and re-purchasing tendency towards sustainable products. Many people would think that if they are purchasing an environmentally friendly product they would also want to know that it would be environmentally friendly without being inferior, much less inconvenient or, of course, ineffective. The literature also emphasizes the increasing relevance of ethical practices, corporate social responsibility and sustainable innovation that can impact consumer behaviour and thus the long-term brand reputation. Companies that implement sustainable strategies are becoming more attractive to the environmental attitude consumers who see the companies' willingness to protect the environment and society. To conclude, the literature showed that psychological, social, economic and environmental factors affect the attitude of

customers towards the use of sustainable and green products and it is important to understand them in order to encourage customers' sustainable consumption and enhance the appreciation of green marketing.

III. RESEARCH METHODOLOGY

Research methodology is a systematic design that is followed in the research and helps in scientific and organized analysis of the research problem. To understand the consumer awareness, attitude, purchasing behaviour and perception of the consumer towards sustainable and green products, the present study entitled "Consumer Perception towards Sustainable and Green Products" has been designed. Considering the growing awareness of damages to the environment and the ecological problem of climate change, pollution as well as the problem of resource depletion, it seemed necessary to observe consumer behaviour related to green product consumption. This study uses a descriptive research approach since it aims to describe and analyse the consumer's attitudes, awareness and actions towards sustainable and green products. The researcher mentioned that the descriptive approach is appropriate since it allows the researcher to gain the factual data straight from the respondents and also allows him to interpret the respondent's opinion or point of view on the concept of environmental sustainability, its environmental-friendly product, pricing perception, and green marketing practice. The approach of the study is quantitative where the data obtained from the respondents in numbers are analyzed systematically using various statistical analysis method like percentage analysis, frequency distribution, tabular representation and graphical interpretation. The nature of the research would be an empirical and analytical one in the sense that it would depend on the concrete reaction of consumers gathered through the structured questions and scientifically elucidated it would detect the trends and behaviour of consumers. The study has been conducted using both primary and secondary sources of data to enhance reliability and comprehensiveness of the results. Primary data was gathered first hand from the consumers using survey questionnaire specifically to see the level of awareness, frequency of purchasing and environmental concern, willingness of paying premium price, satisfaction level of the product and factors that affect the purchasing decision of the sustainable product. The conceptual understanding and the theoretical support of this research were produced by secondary data gathered from journal, books, research articles, online publication, company reports and sustainability-related studies. Consumers belonging to various demography like students, other occupation groups and earning population groups with awareness of sustainable/green products, etc. were targeted for the study. Time and resource constraints necessitated using a convenience sampling approach to get respondents. The sampling technique enabled the researcher to gather the samples in an effective manner as these were readily accessible and ready to answer the questionnaire. Sixty (60) respondents were selected for study with a size that was deemed sufficient in the scope of research for descriptive statistical study. To elicit a wide range of respondent perspectives on consumer behavior and sustainable purchasing practices, the respondents were divided into various groups as determined by age, education, income level and occupation. The content of the learning performance based questionnaire used in the research instrument was mostly closed and represented by statements with the Likert scale, which is easy to be classified, coded, and interpreted the results statistically. Survey questions were centered on awareness of the sustainable products, how often

each person makes purchases on green products, what factors affect purchasing decisions, if they care about the environment, whether they view the products as more expensive, if they favor eco-products over products without eco-labels, the quality of the eco-products, and if they would pay a premium for green alternatives. The language used in the questionnaire was simple and easy to comprehend in order to ensure that the respondent(s) could give the correct answer and the answer given would not be ambiguous.

The questionnaire was physically and electronically distributed due to better accessibility so as the process of collecting the questionnaire would be easier and the respondents caught in sampling might give reply. The respondents were told of the academic interest of the study before involvement and confidentiality of responses was assured throughout the research process. The survey was voluntary and the ethical issues regarding privacy, honesty and transparency were considered when collecting and analyzing the data. Responses were then systematically organized, coded, classified and tabulated for statistical interpretation. Data was organised and presented in a visually interpretable way in form of Frequency table, percentage analysis, Bar diagrams, Pie chart and Fractional column diagram. The analysis primarily concentrated on identifying consumer awareness levels, purchasing preference, environmental attitude, as well as important factors affecting his or her sustainable purchasing behaviour. The research has been carried out with the same standardized questionnaires and questions that are directly related to the objectives of the study to ensure reliability and validity of the research. The questionnaire was designed based on the literature that reviewed to ensure that it is relevant and consistent with existing surveys related to green consumers and sustainable marketing practices. There is also a high degree of reliability by use of identical questions for all the respondents and simple words used in order to prevent misunderstanding. In designing the standard and format of the questionnaire, it was ensured its content was well correlated with the research objectives and research variables to be discussed so as to guarantee the validity of the questionnaire. There are also some limitations found with the research methodology utilized in the study. Convenience sampling was used and thus the results cannot be generalized to the entire consumer population since the respondents selected were not randomly chosen. This sample size also was relatively small (60 respondents) and may limit the generalizability of findings. Another constraint is that most of the studies use consumer perceptions and opinions as expressed by the consumer, which can include personal bias, misleading lies and short-lived behavioural changes as reported by the consumer. The market landscape and also the level of environmental awareness and also consumer preference can vary over time as a result of technological improvements, financial circumstances, plus developing sustainability practices. The adopted research methodology has some drawbacks, but it provides valuable insights into consumer perceptions of sustainable and green products and provides a framework to discuss about environmentally responsible purchase behaviour in the modern market.

IV. RESULTS AND DISCUSSION

The present chapter concentrates the analysis and interpretation of the collected data from the respondents on their perception towards sustainable and green products. A structured questionnaire was used in collecting data from the

respondents within the scope of this study who were 60 respondents of different demographic backgrounds. To better understand the awareness of consumers, their purchasing behavior, environmental concern and factors affecting sustainable consumption practice, percentage analysis, frequency distribution, tabular interpretation have been used for analysis. The results offer useful insights on the attitudes of consumers about green products in the market and problems related to green purchasing behaviour. The responses have been systematically presented in tables followed by detailed interpretation and graphical representation suggestions for better understanding of the findings.

Table 4.1. Awareness regarding Sustainable and Green Products

	Response Number	Percentage
Yes	48	80.0%
No	12	20.0%
Total	60	100%

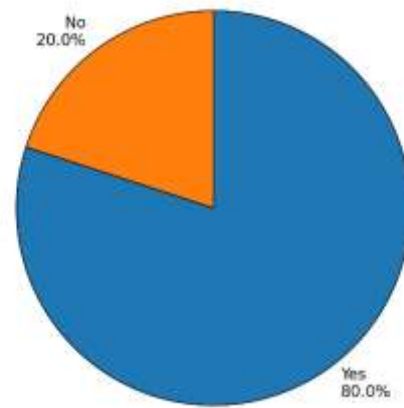


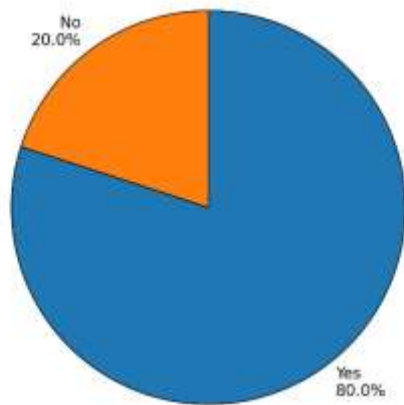
Fig. 4.1. Awareness regarding Sustainable and Green Products (Pie Chart)

Interpretation:

The following table gives the level of consumer awareness of sustainable and green product benefits to the respondents of the study. A total of 60 respondents out of 80% opinion showed that they know about sustainable and environment friendly products while 12 respondents (20%) showed lack of opinion that they do not know about environment friendly and sustainable products. The results show that consumers' awareness of sustainability and consuming in an eco-friendly manner has greatly improved. Advances in consumer awareness about environment-responsive products have been brought about by environmental awareness, social media campaigns, educational initiatives and green marketing activities. The findings revealed that the respondents' level of awareness was quite high, indicating that there is a gradual increase in the awareness of modern consumers on environmental protection and sustainable purchase behavior. Today more consumers are aware of the need to minimize pollution, conserve natural resources and choose brand choices that are environmentally friendly. Additionally, the study indicates that awareness is a basic factor that affects sustainable purchasing behavior since aware consumers are more favorable to buy a pro-ecological product and sustainable behavior.

Table 4.2. Frequency of Purchasing Sustainable and Green Products

Frequency Purchase	of Number Respondents	of Percentage
Always	10	16.7%
Often	18	30.0%
Sometimes	22	36.7%
Rarely	7	11.6%
Never	3	5.0%
Total	60	100%

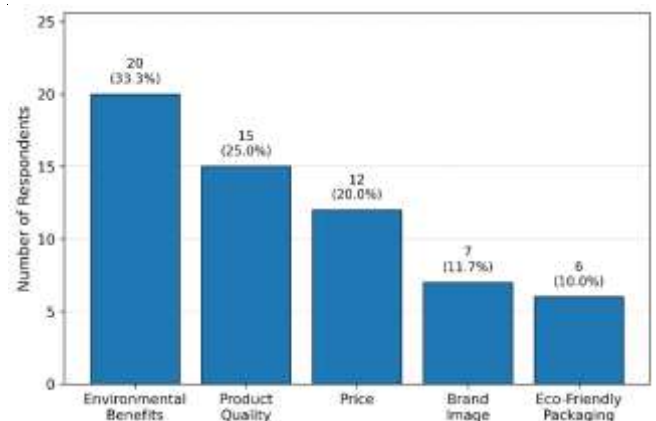

Fig. 4.2. Frequency of Purchasing Sustainable and Green Products (Bar Graph)

Interpretation:

The frequency indicates by which the respondents buy sustainable and green products as shown in above table. Out of the total respondents, the highest number (36.7%) claimed that sometimes they buy envirofriendly product. 30% of respondents reported that they regularly buy sustainable products and 16.7% said that they always buy green products when buying. Only 5% of the respondents stated that they never purchased sustainable products, while a smaller percentage stated to purchase it rarely (11.6%). The results indicate that the awareness of this product is fairly high but consistent purchase behaviour is moderate level. It seems that although many of the respondents have a certain interest in environmentally friendly products they do not often buy or at least do not only buy those products because of costs, positioning and availability, or because they doubt the sustainability claims. The data highlights an attitude-behaviour gap, whereby consumers indicate willingness to be more sustainable, but are not necessarily willing or able to make this move frequently in their purchasing behavior. Further analysis reveals that sustainable consumption is gradually becoming more popular with consumers, especially with the younger and more environmentally aware. If businesses want to encourage more frequent buying habits among consumers, they must take a multifaceted approach, including pricing, availability and communications about sustainable products.

Table 4.3. Factors Influencing Purchase Decision towards Green Products

Influencing Factor	Number Respondents	of Percentage
Environmental Benefits	20	33.3%
Product Quality	15	25.0%
Price	12	20.0%
Brand Image	7	11.7%
Eco-Friendly Packaging	6	10.0%
Total	60	100%


Fig. 4.3. Factors Influencing Purchase Decision towards Green Products (Column Chart)

Interpretation:

The above Table shows some of the significant factors affecting the customer's buying decisions on sustainable and green products. The most important factor was environmental benefits, which was chosen by 33.3% of respondents. 25% answered product quality and price 20% were the next factors indicated. Brand image (11.7%) and eco friendly packaging (10%) constituted the next two reasons. The results show that the key factor in the consumers' mind is environment protection and ecological responsibility when it comes to sustainable products. Pollution, climate change, waste management and conservation of natural resources seem to be a concern of consumers more and more, which encourages them using green products. Product quality is also important as consumers expect green products to function well and reliable without sacrificing its performance. Price sensitivity is another important factor influencing this, as many people see sustainable products as being more costly than their counterparts. The findings indicate that even though the consumers are becoming more aware of environmental issues, the adoption of eco-friendly alternatives seems to be hindered by the price of these products. Moreover, brand image and sustainable packaging help to build up positive consumer perception; environmental responsibility firms are perceived as ethical and trustworthy. Therefore, it can be concluded that both the environmental and economic factors along with the product-related factors account for the consumer purchasing decisions towards green products. Businesses need to build resilience, value, and acceptance for these sustainable products in the market both from a sustainability as well as cost of goods perspective.

Table 4.4. Willingness to Pay Premium Prices for Sustainable Products

Response	Number of Respondents	Percentage
Yes	32	53.3%
No	15	25.0%
Maybe	13	21.7%
Total	60	100%

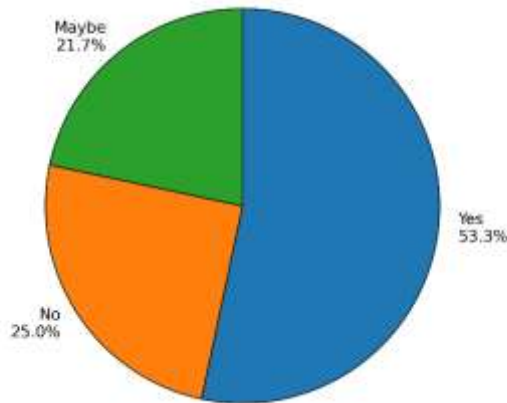


Fig. 4.4. Willingness to Pay Premium Prices for Sustainable Products (Pie Chart)

Interpretation:

The consumer WTP values for paying for the purchase of sustainable, green products are shown above. When considering the total sample, 53.3% of the respondents indicated the willingness to pay premium prices for environmentally friendly products whereas 25% of the respondents were indicating that they were not willing to pay the premium price. The rest (21.7%) were undecided in the premium pricing domain. The results show that over half of the respondents are aware of environmental and social values of sustainable products, and are willing to pay more for sustainable options. Environmentally conscious consumers are likely to feel an increase in price is understandable as they are more likely to consider sustainable products to have eco-friendly materials, socially responsible production processes, packaging able to be recycled and to have a reduced impact on the environment. Meanwhile, a significant percentage of respondents said they would be hesitant to buy any of the vehicle types at a higher price, revealing the price factor's crucial role in purchasing decisions. In particular, financing difficulties could be a problem for middle-income consumers as they look to regularly buy sustainable products. The responses were also inconsistent, suggesting that the buying decision while may vary as per product type, quality and brand trust, customer concern towards the environment etc. Thus the analysis indicates that while consumer concerns about sustainability is gaining momentum, price is identified as one of key obstacles to mass adoption of green products. Therefore, it is important that businesses targeting expansion of sustainable markets strive to decrease production costs, make the products more affordable and accessible all while keeping up with environmental standards and products quality.

V. CONCLUSIONS AND FUTURE WORKS

The present study is titled “Consumer Perception towards Sustainable and Green Products” where the level of consumer awareness, attitude, purchase behaviour and factors affecting the consumer purchasing intention of sustainable and green products were investigated. Judy's study results demonstrate that there is a significant high level of environmental awareness of consumers, and on average, a strong majority of participants have positive attitudes towards sustainable consumption. As the awareness of consumers continues to grow, they have made an increasing realization of the need for environmental protection, reduction of pollution, conservation of resources and ethical consumption behavior in today's society. The study showed that factors like environmental benefits, product quality, price, eco labelling and brand image play an important role in consumer's purchasing decision for sustainable products. Moreover, the analysis revealed that while consumers value and embrace sustainability and are willing to buy green products, the availability of those products, the price and consumer confidence in green claims still drive attitudes towards purchasing. There were high interest responses to buy sustainable products frequently, but high price still hinders the uptake and possible accessibility. Another finding emphasized that consumers with a higher level of education and younger generations are more aware and supportive of environmentally responsible consumption practices because they are more exposed to the environmental education and environmental awareness raising campaigns. Firms with sustainable marketing methods and established interaction practices will likely to develop consumer confidence and much better brand stability more easily. The study therefore suggests that the market potential for sustainable and green products is huge in the future especially with the increase of environmental awareness among consumers. Little by little, greater awareness of climate change and the need for ecological protection is making consumers more conscious about leading an eco-friendly life and making eco-friendly purchases. Further studies can be conducted on larger sample sizes, regional comparative studies, rural consumers' behaviors and sustainable product categories in different industries for a broader green consumer perspective. Additional research is possible to investigate the influences of sustainable purchasing behaviour and identify possible changes under the influence of digital marketing, social media impact, governmental measures and technological innovation. Researchers might also investigate the reasons for the attitude-behaviour-gap in green consumption from a psychological or cultural perspective. However, the key driver to achieve a prosperous sustainable market will be consumer education, socially priced products, better inclusion of products and more cooperation between companies, government and environmental movements to encourage responsible consumption and environmental sustainability for the future.

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