

## A Study of Consumer Preferences towards Green Consumer Durables: An Empirical Approach

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**Abstract:** The objective of the present study is to examine the consumer preference regarding green durables. To achieve the objective primary data has been collected from green consumers of Haryana State, India only. The total 500 respondents were interviewed so total sample for the study is 500. The self-structured questionnaire has been used to assess the consumers' preference on five point Likert scale. Simple random sampling method has been used to collect the data. Findings the study suggested that majority of consumers were not prefer green air conditioner, microwave, washing, refrigerator and laptop as a green durable. The study also found that female respondents' preference is high for green microwave, washing, refrigerator and laptop than the males. Further, it is concluded that unmarried respondents' preference is high for green air conditioner, microwave, washing, refrigerator and laptop than the males.

**Keywords:** Consumers' Preference, Green Consumer Products, Consumer Durables Products, Haryana & India.

### INTRODUCTION

Over the last two decades, the world has experienced significant changes in terms of societal attitudes towards environmental conservation. Along with this, there has been a considerable shift in consumer behavior, reflecting an emerging preference for environmentally conscious or 'green' consumer durables (Peattie, 2001). The green consumer durables market, which spans a diverse array of products from energy-efficient home appliances to low-emission vehicles, has been expanding at an unprecedented pace in response to this demand (Chen & Chai, 2010).

The modern consumer's inclination towards green consumer durables can be traced back to a multitude of factors. The rising environmental consciousness, fueled by increasing media exposure and educational initiatives, has played a pivotal role (Ottman, 1992). In addition, legislative changes pushing for sustainability, changing social norms, and a desire for healthier lifestyles have all contributed to this shift (Roberts, 1996).

Despite the proliferation of green consumer durables and the escalating consumer interest, a detailed understanding of the consumer's preferences towards these products is still lacking (D'Souza, Taghian & Lamb, 2006). In-depth examination of the underlying motivations, barriers, attitudes, and behaviors

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guiding these preferences is crucial for various stakeholders, from manufacturers to policymakers and marketers, for effective strategic planning (Moisander, 2007).

In response to this identified knowledge gap, this research paper endeavors to illuminate the landscape of consumer preferences towards green consumer durables. Utilizing both quantitative and qualitative research methods, we strive to provide an intricate understanding of the dynamics at play. Our methodology comprises a broad-based survey capturing demographic and psychographic factors and in-depth interviews for a more nuanced exploration (Johnstone & Tan, 2015).

The anticipated insights derived from this research are set to make a significant contribution to the literature on sustainable consumption. Moreover, they provided practical guidance for the development, pricing, and marketing strategies of green durable goods, thereby fostering their acceptance and market penetration (Rex & Baumann, 2007).

## LITERATURE REVIEW

The concept of 'green consumerism' has been an area of interest for researchers over the past few decades, as consumers are becoming more mindful of the environmental implications of their purchases (Peattie, 2001). In particular, the burgeoning field of green consumer durables represents a significant frontier for exploration.

Green consumer behavior, defined as the conscious decision to prefer environmentally friendly products, is deeply rooted in individual attitudes and beliefs about environmental issues (Chen & Chai, 2010). These attitudes often stem from increased environmental awareness, facilitated by education, media exposure, and public discourse (Ottman, 1992). These factors shape consumer attitudes and behaviors, consequently influencing their product preferences.

While many studies have been conducted on green consumerism, research specifically focused on green consumer durables remains relatively limited. D'Souza, Taghian & Lamb (2006) investigated the influence of environmental labels on consumers, finding that well-designed and properly communicated labels can significantly enhance the perceived value of green products. This suggests that manufacturers and marketers of green consumer durables need to pay particular attention to the design and communication of their environmental labels.

Another crucial factor that influences consumers' preference for green consumer durables is the perceived health benefits. Roberts (1996) found that health considerations are a strong motivator for purchasing green products. This finding implies that the health benefits of green consumer durables, such as reduced exposure to harmful substances, should be emphasized in product positioning and marketing strategies.

The role of demographics in green purchasing behavior has also been examined. Mostafiz et al. (2019) conducted a study among consumers in Malaysia and found that younger consumers, females, and consumers with higher education levels were more likely to purchase green products. This demographic information can be invaluable for targeting marketing efforts towards specific segments.

## RESEARCH METHODOLOGY

The purpose of this research paper is to examine consumer preferences towards green consumer durables. The study aims to identify factors that influence consumers' decisions to purchase green products in the consumer durables sector.

## RESEARCH DESIGN

This study adopted an empirical research design, utilized a survey questionnaire to collect data from a sample of consumers. The survey approach allows for the collection of a large amount of data in a

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relatively short period, enabling statistical analysis to uncover patterns and relationships between variables.

## SAMPLING

The target population for this research consists of consumers who have purchased or intend to purchase consumer durables. A convenience sampling technique was employed, and a sample size of 500 respondents were targeted from Haryana State, India. The respondents have been selected from different demographic backgrounds and geographic locations to ensure representation of diverse consumer preferences.

## QUESTIONNAIRE DEVELOPMENT

A structured questionnaire will be developed to gather data on consumer preferences towards green consumer durables. The questionnaire consisted of multiple-choice questions, Likert scale items, and open-ended questions.

## DATA COLLECTION

Data have been collected through an online survey platform, ensuring anonymity and convenience for respondents. The survey link was distributed through various online channels, including social media platforms, email invitations, and relevant online communities. The survey is available for a defined period, typically four weeks, to gather a sufficient number of responses.

## DATA ANALYSIS

The collected data has been analyzed using appropriate statistical techniques. Descriptive statistics, such as frequencies and percentages, were used to summarize the demographic characteristics of the respondents. To find out variations across gender and marital status t-test has been used.

**Table: 1 Which Green Durables Product Generally You Prefer**

Sr. No.	Products	No Preference (%)	Slightly Prefer (%)	Prefer (%)	Strong Prefer (%)	Very Strongly Prefer (%)
1	Air conditioner	142 (28.4%)	123 (24.6%)	77 (15.4%)	92 (18%)	35 (13.2%)
2	Microwave	211 (42.2%)	74 (14.8%)	90 (18%)	90 (18%)	35 (7%)
3	Washing Machine	235 (47%)	67 (13.4%)	99 (19.8%)	85 (17%)	14 (2.8%)
4	Refrigerator	193 (38.6%)	86 (17.2%)	69 (13.8%)	112 (22.7%)	40 (8%)
5	Laptop	218 (43.6%)	46 (9.2%)	112 (22.4%)	85 (17%)	39 (7.8%)

**Source:** Primary Data

Table 1 shows the frequency and percentage of consumers' preference of green durables products. More than 50 per cent of consumer were not prefer air conditioner as a green durable. The 57 per cent were not preferred microwave and 43 per cent preferred microwave. Only 39.6 per cent consumers were preferred green washing machine. Nearly 40 per cent consumers were having no preference regarding green refrigerator and more than 50 per cent preferred laptop as and green durables products.

**Table: 2 Results of t-test toward Consumers' Preference of Green Durable Product across the Gender**

Items	Gender	N	Mean	Std. Deviation	Mean Difference	t-value	p-value
Air conditioner	Male	299	2.3880	1.39630	-.61204	-4.944	.000
	Female	201	3.0000	1.33041			
Microwave	Male	299	2.1003	1.30691	-.56633	-4.619	.000
	Female	201	2.6667	1.36870			
Washing Machine	Male	299	1.8662	1.17103	-.71089	-6.353	.000
	Female	201	2.5771	1.26304			
Refrigerator	Male	299	2.1204	1.31545	-.79502	-6.432	.000
	Female	201	2.9154	1.38124			
Laptop	Male	299	2.0201	1.26103	-.85058	-6.914	.000
	Female	201	2.8706	1.40470			

**Source:** Primary Data

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the gender. The mean value for male and female respondent are 2.3880 and 3.0000 with the standard deviations of 1.39630 and 1.3304 respectively for air conditioner. The mean difference for the air conditioner is -.61204. The value of t- test is -4.944 and found significant at 5 per cent of significance level which indicate that there is a significant difference in preference of green air conditioner between male and female. On the basis of mean, it is concluded that female respondent's preferred more green air conditioner than the male.

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the gender. The mean value for male and female respondent is 2.1003 and 2.6667 with the standard deviation 1.30691 and 1.36870 respectively for microwave. The mean difference for the factor microwave is -.56633. The value of t- test is -4.619 and found significant difference 5 per cent of significance level which indicate that there is a significant difference in consumers' preference of green microwave between across gender. On the basis of mean, it is concluded that female respondents preferred more green microwave more than the males.

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable products across the gender. The mean value for male and female respondent is 1.8662 and 2.5771 with the standard deviation 1.17103 and 1.26304 respectively for washing machine. The mean difference for the factor washing machine is -.71089. The value of t- test is -6.353 and found significant difference at 5 per cent of significance level which indicate that there is a significant difference consumers' preference of green washing across gender. On the basis of mean, it is concluded that female respondent's preference towards washing machine is more than the males.

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the gender. The mean value for male and female respondent is 2.1204 and 2.9154 with the standard deviation 1.31545 and 1.38124, with respectively for refrigerator. The mean difference for the factor refrigerator is -.79502. The value of t- test is -6.432 and found significant difference with the 5 per

cent significance level which indicate that there is a significant difference between male and female regarding green refrigerator. On the basis of mean, it is concluded that female respondent's preference towards refrigerator is high than the males.

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the gender. The mean value for male and female respondent is 2.0201 and 2.8706 with the standard deviation 1.26103 and 1.404470, with respectively for laptop. The mean difference for the factor laptop is -.85058. The value of t- test is -6.914 and found significant difference at 5 per cent of significance level which indicate that there is a significant difference between male and female regarding green laptop. On the basis of mean, it is concluded that female respondent's preference towards laptop is more than the males.

**Table: 3 Results of t-test toward Consumers' Preference of Green Durable Product across the Marital Status**

Items	Marital Status	N	Mean	Std. Deviation	Mean Difference	t-value	p-value
Air conditioner	Married	374	2.5695	1.45504	-.25588	-1.942	.053
	Unmarried	126	2.8254	1.21378			
Microwave	Married	374	2.2193	1.32619	-.43154	-3.015	.003
	Unmarried	126	2.6508	1.41035			
Washing Machine	Married	374	2.0080	1.25446	-.57134	-4.658	.000
	Unmarried	126	2.5794	1.16861			
Refrigerator	Married	374	2.3262	1.39532	-.45157	3.220	.001
	Unmarried	126	2.7778	1.34990			
Laptop	Married	374	2.1604	1.34859	.13648	-5.861	.000
	Unmarried	126	2.9603	1.31697			

**Source:** Primary Data

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the marital status. The mean value for married and unmarried respondent is 2.5695 and 2.8254 with the standard deviation 1.45504 and 1.21378, with respectively for air conditioner. The mean difference for the factor air conditioner is -.25588. The value of t-test is -1.942 and found significant difference at 5 per cent of significance level which indicate that there is an insignificant difference between married and unmarried. On the basis of mean, it is concluded that unmarried respondent preference towards air conditioner is slightly more than the married respondent.

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the marital status. The mean value for married and unmarried respondent is 2.2193 and 2.6508 with the standard deviation 1.32619 and 1.41035, with respectively for microwave. The mean difference for the factor microwave is -.43154. The value of t- test is -3.015 and found significant difference with the 5 per cent significance level which indicate that there is a significant difference between married and unmarried. On the basis of mean, it is concluded that unmarried respondent preference towards microwave is more than the married respondent.



To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the marital status. The mean value for married and unmarried respondent is 2.0080 and 2.5794 with the standard deviation 1.25446 and 1.16861, with respectively for washing machine. The mean difference for the factor washing machine is -.45157. The value of t- test is -4.658 and found significant difference with the 5 per cent significance level which indicate that there is a significant difference between married and unmarried. On the basis of mean, it is concluded that unmarried respondent preference towards washing machine is more than the married respondent.

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the marital status. The mean value for married and unmarried respondent is 2.3262 and 2.7778 with the standard deviation 1.39532 and 1.34990, with respectively for refrigerator. The mean difference for the factor refrigerator is -.45157. The value of t- test is 3.220 and found significant difference with the 5 per cent significance level which indicate that there is a significant difference between married and unmarried. On the basis of mean, it is concluded that unmarried respondent preference towards refrigerator is more than the married respondent.

To find out the variation in male and female regarding consumer preference of green durable products t-test has been applied. Table 2 depicts the results of t-test toward consumers' preference of green durable product across the marital status. The mean value for married and unmarried respondent is 2.1604 and 2.9603 with the standard deviation 1.334859 and 1.31697, with respectively for laptop. The mean difference for the laptop is .13648. The value of t- test is -5.861 and found significant difference with the 5 per cent significance level which indicate that there is a significant difference between married and unmarried. On the basis of mean, it is concluded that unmarried respondent preference towards laptop is more than the married respondent.

## CONCLUSION

From the results of present study, it is concluded that majority of consumers were not prefer air conditioner as a green durable. The fifty-seven per cent were not preferred microwave and only forty-three per cent preferred microwave. Only thirty-nine per cent consumers were preferred green washing machine. Nearly forty per cent consumers were having no preference regarding green refrigerator and more than fifty per cent preferred laptop as and green durables products.

The results of t-test concluded that there is a significant difference in consumers' preference of green air conditioner, microwave, washing, refrigerator and laptop between acrossgender. On the basis of mean values, it is concluded that female respondents' preference is high for green microwave, washing, refrigerator and laptop than the males.

there is a significant difference in consumers' preference of green microwave, washing, refrigerator and laptop between acrossmarital status. On the basis of mean values, it is concluded that unmarried respondents' preference is high for green air conditioner, microwave, washing, refrigerator and laptop than the males.

## LIMITATIONS

This research may have certain limitations. Firstly, the study will rely on self-reported data, which may be subject to response biases. Secondly, the convenience sampling technique may limit the generalizability of the findings to the broader population. Finally, the research focused only on consumer preferences and may not fully capture actual purchasing behaviors.

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