

## **A Study on Consumers Satisfaction towards Green Products in Consumer Electronics and Home Appliances Sector**

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### ***Abstract***

*Green Products are majorly preferred by consumers in present times as they are concerned about the environmental safety. The researcher has attempted to study the consumers satisfaction towards Green products in consumer electronics and home appliances sector related to four products viz., Television, Refrigerators, Washing machine and Air conditioners. For this purpose, a sample size of 400 respondents is drawn by employing stratified sampling techniques in Uttara Kannada district of Karnataka has been selected. Percentage technique was used to describe the demographic profile of the study area, and the Chi square test was used to determine whether there is a significant relationship between consumer satisfaction and living place under four product categories selected for study. The study's findings revealed majority of consumers are satisfied both in rural and urban areas for television, refrigerator and washing machine products but in case of air conditioners products rural consumers are dissatisfied due to price factor and urban consumers are satisfied with its products. Further it found, significant association existing between consumer satisfaction towards the usage of product and living place for television products and air conditioner products and no significant association existing between consumer satisfaction towards the usage of product and living place for Refrigerator products and washing machine product category.*

**Keywords: Consumer satisfaction, Green Products, Television Products, Refrigerator Products. Washing Machine Products and Air Conditioner Products.**

## Introduction:

Satisfaction is derived after experiencing a particular product. It illustrates the views of consumers after using a product which is important to be known as it benefits the marketer to consider the views of consumers for making necessary product improvements in future. Consumers may be satisfied/dissatisfied or delighted. When customers' requirements towards the product are met less by marketer than what they expect, it signifies customer dissatisfaction. When customers' requirements towards the product are met by marketer it signifies customer satisfaction and if consumers expectation exceeds the perceived product performance than it signifies customer delight. In recent times, green products are kind of unique products given by the marketer taking into environmental safety into consideration, so it necessitates to know how far green product in consumer electronics and home appliances sector are performing. Performance of green products can be evaluated by surveying the consumers as consumers are the end users for this type of products.

Green marketing came into prominence in the late 1980's and early 1990's. When it was taken up for discussion, it was considered as marketing strategy focusing on development and marketing of products designed to minimize negative effects on the physical environment. It includes the study of all efforts to consume, produce, distribute, promote, package and reclaim products in a manner that is sensitive or responsible to ecological concerns. Today, Green Marketing has been adhered as one of the business practices by considering the consumers concern towards promoting, preserving and conserving the natural environment. The marketers in all sectors have responded quickly for overwhelming demand for environment friendly products in several ways, each of which consist as a part of green marketing. These includes a) Promoting the environmental attributes of products b) Introducing new products specifically for those concerned with energy efficiency, waste reduction, sustainability and c) Redesigning existing products with an eye towards these same consumers. It seems to be that Green Marketing cannot be considered as just one more approach to marketing but it has to be pursued as one of the additional dimensions to be involved in marketing field.

## Literature review:

**P Kishor Kumar and Dr. Byrum Anand (2015)<sup>1</sup>** attempts to understand the factors influencing customer satisfaction with regard to green tea. The study selected two variables independent variable and Dependent variable where Customer satisfaction was considered as independent variable and Price, health and weight as dependent variable. It also further tried to explain how information has been collected by consumer about green tea. Descriptive statics, Regression analysis and Correlation analysis are some of the statistical tools utilized for data analysis. The Study concluded that there is significant relationship between dependent and independent variable.

**Dr. K. Vanaja (2016)<sup>2</sup>** assesses the consumers attitude and behaviour towards purchase of eco-friendly products in Mettupalayam in terms of level of satisfaction and factors influencing for purchase of eco-friendly products. Sample size of one hundred and twelve respondents were drawn from which hundred respondents were finalized by adopting convenient sampling method. The statistical tool viz., Parentage method, Ranking method and weighted average method were utilized for the study. Findings of the study revealed high number of respondents showed a high-level satisfaction. Product Quality factor ranked first for influencing to purchase the product and about sixty percent of respondents showed their supporting attitude towards a product quality to outsiders and eighty two percent revealed recommending attitude towards green products.

**Charu Garg (2016)<sup>3</sup>** analysis the impact of green marketing strategies on consumer satisfaction and environmental safety. The study finds relationship between customer satisfaction and loyalty which is an outcome of service quality. The researcher

states that many regulatory bodies and acts set to ensure environmental safety and protection.

**Ragini Dubey, Dr. Garima Singh and Sakshi Mishra (2020)<sup>4</sup>** aims to measure the level of consumer satisfaction towards green products. Sample size of one hundred and twenty respondents from two blocks (sixty each) were selected from the place of study. It adopted purposive sampling and random sampling method for drawing the sample size. Data collection was done by interview schedule method and for analyzing data ranking method was used. It found that advertising greatly affects purchase decision of green products, Purchase behaviour and consumer satisfaction towards green products is evident in the study, purchasing behaviour of consumer depends on their level of satisfaction towards products and are mostly influenced by attributes of green products.

**Dr. V. SampathKumari (2020)<sup>5</sup>** identifies the preference and satisfaction of consumers towards organic personal care brands consumers towards green products at Chennai city in Tamil Nadu. The study is analytical in nature targeting consumers of organic personal care brands. Sample size of hundred respondents is drawn by employing Judgmental sampling technique. Primary data is collected by constructing questionnaires based on five-point Likert scale consisting of three dimensions, 1. Socio-economic factors 2. Consumer satisfaction 3. Consumers preferences towards organic personal care brands. To analyze the data statistical tools like Reliability, Descriptive statistic, Chi square, Correlation and Freidman test has been adopted. The study finds that there is significant and positive relationship between consumer preferences and satisfaction towards organic personal care brands in Chennai.

### **Statement of the research problem:**

Through literature review, it is found that limited research is done on studying consumers satisfaction towards Green products in Consumer Electronics and Home Appliances sector in India. Therefore, the researcher wants to know whether consumer is satisfied or dissatisfied for the products they own with reasons and also to find whether there exists relationship between consumer satisfaction and living place.

### **Objectives of the study:**

The following are the objectives undertaken for study:

1. To study consumers satisfaction towards the products owned under four product categories selected for study.
2. To study significant association between Satisfaction towards owned products and living place under television product category.
3. To study significant association between Satisfaction towards owned products and living place under Refrigerator product category.
4. To study significant association between Satisfaction towards owned products and living place under washing machine product category.
5. To study significant association between Satisfaction towards owned products and living place under Air conditioner product category.

### **Hypothesis of the study:**

Following are the hypothesis used for the study based on Primary data related to consumers satisfaction towards Green products:

H<sub>01</sub>: There is no significant association between Satisfaction towards owned products and living place under television product category

- H<sub>02</sub>: There is no significant association between Satisfaction towards owned products and living place under Refrigerator product category
- H<sub>03</sub>: There is no significant association between Satisfaction towards owned products and living place under washing machine product category
- H<sub>04</sub>: There is no significant association between Satisfaction towards owned products and living place under air conditioner product category

### **Research Methodology:**

#### **a. Sources of data:**

Collection of research data has been done through Primary sources. Primary data is utilized for studying consumer satisfaction towards Consumer Electronics and Home Appliance products selected for study. For this purpose, Survey method is adopted by constructing well Structured questionnaires in close ended form. Respondents were personally met by researcher. Respondents are considered on basis of various demographic variables by drawing a sample size of 400 respondents from Uttar Kannada district of Karnataka state by employing Stratified sampling technique. Uttar Kannada district is considered as largest district in state of Karnataka with eleven talukas marked for beauty of greenery. According to Karnataka Census report 2011, the population size of Uttar Kannada district is 14,37,169. The main traditional occupations are agriculture, Fisheries, Animal Husbandry, Sericulture, Horticulture, Beekeeping and Leather works etc.

To draw sample size out of 14,37,169 total population in Uttar Kannada district of Karnataka State, the study has utilized Yamane (1967) simplified formula for calculation of sample size which is shown below:

$$n = \frac{N}{1+N(e^2)}$$

Where, N is the population size

e is the level of precision

According to him, for a 95% confidence level and p = 0.5, size of the sample will be 400 respondents.

#### **b. Sample Description:**

Consumer durable industry is diversified sector comprising various segments so it is hardly possible to concentrate on all sectors, for this purpose the study selected Consumer Electronics and Home Appliances sector as it is considered to be major contributor towards country's economic growth and also large number of consumer groups are attracted towards this sector as they require and utilize these products in their daily life. therefore; two product categories are selected as they are considered to be required products at present times viz., Television, Refrigerators, Washing machines and Air Conditioners. On basis of these products, the researcher tries to know Consumer satisfaction towards Green products in Consumer electronics and home appliances sector.

#### **c. Tools and Techniques:**

To analyze and test the primary data, statistical tool and techniques like five-point Likert scale, Percentage method and Chi Square test are been utilized for studying the consumer satisfaction towards Green products in Consumer Electronics and Home Appliances sector. Further, Specific computer software like MS-excel, SPSS statistics 20 version has been applied for computing the data.

### **Scope of the study:**

The study focuses on studying consumers satisfaction towards Green products in Consumer Electronics and Home Appliances sector with specific products selected for

study viz., Television, Refrigerator, Washing machine and Air conditioners. The study has been carried out in selected area of Uttar Kannada district, Karnataka. The study area is selected on the basis of total population of Uttar Kannada District.

### Limitations of the study:

There is wide range of products in Consumer Electronics and Home Appliances Companies. So, the products are limited to two products that includes Television, Refrigerator, washing machine and Air conditioners that are widely used by consumers in their daily lives. The researcher has considered these products as it will be easy for consumers to answer the questions because they deal with these products in their day-to-day life. Primary data is restricted to Uttar Kannada District of Karnataka State with a sample size of Four hundred respondents.

## ANALYSIS AND INTERPRETATIONS:

### 1. Demographic profile of respondents:

Table 1 highlights the demographic profile of consumers for studying their awareness level in consumer electronics and home appliances sector. The study has totally considered nine demographic factors viz., Gender, Qualification, Occupation, Age, Marital status. wherein comparison between rural and urban area.

**Table 1: Respondent's Demographic Profile**

Demographic factors	Variables	Rural	Urban	Total
Gender	Male	99 (48) (52)	109 (52) (52)	208 (100) (52)
	Female	93 (48) (48)	99 (52) (48)	192 (100) (48)
	Total	192 (48) (100)	208 (52) (100)	400 (100) (100)
Qualification	School level	43 (63) (22)	25 (37) (12)	68 (100) (17)
	Graduate	68(46) (35)	81 (54) (39)	149 (100) (37)
	Post Graduate	57 (45) (30)	70 (55) (34)	127 (100) (32)
	Professional	24 (43) (13)	32 (57) (15)	56 (100) (14)
	Total	192 (48) (100)	208 (52) (100)	400(100)
Occupation	Agriculturist	32 (55) (17)	26 (45) (13)	58 (100) (15)
	Housewife	17 (41) (09)	24 (59) (12)	41 (100) (10)
	Government employee	28(44) (15)	36 (56) (17)	64 (100) (16)
	Private employee	37 (47) (19)	41 (53) (20)	78 (100) (20)
	Business person	49 (51) (26)	48 (49) (23)	97 (100) (24)
	Others	29 (47) (15)	33 (53) (16)	62 (100) (16)
	Total	192 (48) (100)	208 (52) (100)	400 (100) (100)

Age	21 to 30 years	08(73) (04)	03(27) (01)	11 (100) (03)
	31 to 40 years	84 (49) (44)	87 (51) (42)	171 (100) (43)
	41 to 50 years	63 (46) (33)	73 (54) (35)	136 (100) (34)
	51 years and above	37 (45) (19)	45 (55) (22)	82 (100) (20)
	Total	192 (48) (100)	208 (52) (100)	400 (100) (100)
Marital status	Married	160 (52) (83)	148 (48) (71)	308 (100) (77)
	Unmarried	32 (35) (17)	60(65) (29)	92 (100) (23)
	Total	192 (48) (100)	208 (52) (100)	400 (100) (100)

Source: Field survey

Note: Figures in parenthesis shows row and column percentages

Table 1 presents the respondents demographic profile in rural and urban areas. Out of total 192 rural and 208 urban respondents, Gender wise, majority 52 percent of rural and urban respondents are male compared to female respondents. On qualification basis, majority 35 percent of rural respondents and 37 percent of urban respondents belong to graduate group. On occupation basis, majority 20 percent of rural respondents and 23 percent of urban respondents belong to businessperson group. On age basis, majority 44 percent of rural respondents and 42 percent of urban respondents belong to 31 to 40 age group, on basis of marital status, 83 percent of rural respondents and 71 percent of urban respondents belong to married group.

**Table 2: Consumers Satisfaction towards Green Products in Consumer Electronics and Home Appliances Sector**

Response	Television		Refrigerator		Washing machine		Air conditioner	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Satisfied	163	147	153	191	96	153	22	68
Dissatisfied	23	53	09	04	17	11	23	16
Total	186	200	162	195	113	164	45	84
<b>Nature of satisfaction</b>								
Affordable price	23	18	16	25	19	28	06	14
Standard quality	29	22	26	24	16	32	08	21
Easy to understand features	21	23	14	20	11	18	00	11
Long durability	28	33	24	41	06	13	03	00
Easy to dispose	11	06	00	00	00	11	00	00
Performs efficiently	38	27	44	48	32	38	05	09
Trendy for longer period	13	18	29	33	12	13	00	13
<b>Nature of dissatisfaction</b>								
Price	05	07	04	02	04	03	09	06
Lack in quality	03	08	00	01	02	03	03	00
Difficulty in understanding features	04	04	00	00	11	04	08	00
Lack in durability	00	09	00	01	00	00	01	00
Difficulty in disposal	00	06	05	00	00	00	00	06
Low in performance	07	11	00	00	00	01	02	00

Product gets quickly obsolete	04	08	00	00	00	00	00	04
Calculated value	12.176		3.097		5.117		14.282	
P value	.000		.078		.024		.000	
Degree of freedom	1		1		1		1	
Level of significance	.05		.05		.05		.05	

*Source: Field survey*

Table 2 reveals respondents experience towards the purchase of consumer electronics and home appliances in rural and urban area. In television product, out of total 186 number of rural respondents 163 are satisfied and 76 are dissatisfied. In urban area, out of total 200 number of respondents, 147 are satisfied and 53 are dissatisfied. out of total 386 number of respondents, 310 are satisfied and 76 are dissatisfied. Hypothesis testing revealed that p-value for computed chi square value is .000 which is less than significance level 0.05 with df 01. Hence, there is significant association between experiences and living place toward purchase of television product.

In refrigerator product, out of total 162 number of rural respondents 153 are satisfied and 09 are dissatisfied. In urban area, out of total 195 number of respondents, 191 are satisfied and 04 are dissatisfied. out of total 357 number of respondents, 344 are satisfied and 13 are dissatisfied. Hypothesis testing revealed that p-value for computed chi square value is .078 which is more than significance level 0.05 with df 01. Hence, there is no significant association between experiences and living place toward purchase of refrigerator product.

In washing machine product, out of total 113 number of rural respondents 96 are satisfied and 17 are dissatisfied. In urban area, out of total 164 number of respondents, 153 are satisfied and 11 are dissatisfied. out of total 277 number of respondents, 249 are satisfied and 28 are dissatisfied. Hypothesis testing revealed that p-value for computed chi square value is .024 which is less than significance level 0.05 with df 01. Hence, there is significant association between experiences and living place toward purchase of washing machine product.

In air conditioner product, out of total 45 number of rural respondents 22 are satisfied and 23 are dissatisfied. In urban area, out of total 84 number of respondents, 68 are satisfied and 16 are dissatisfied. out of total 129 number of respondents, 90 are satisfied and 39 are dissatisfied. Hypothesis testing revealed that p-value for computed chi square value is .000 which is less than significance level 0.05 with df 01. Hence, there is significant association between experiences and living place toward purchase of air conditioner product.

## **FINDINGS:**

The study reveals:

1. Majority of consumers are satisfied both in rural and urban areas for television, refrigerator and washing machine products but in case of air conditioners products rural consumers are dissatisfied due to price factor and urban consumers are satisfied with its products.
2. There is significant association between the consumer satisfaction towards the usage of product and living place for television products with p value .000 which is less than 0.05 significance level.
3. There is no significant association between the consumer satisfaction towards the usage of product and living place for Refrigerator products as p value is 0.078 which is more than 0.05 significance level.
4. There is no significant association between the consumer satisfaction towards the usage of product and living place for Washing machine products as p value is .024 which is more than 0.05 significance level.
5. There is significant association between the consumer satisfaction towards the usage of product and living place for air conditioner products with p value .000 which is less than 0.05 significance level.

## Conclusion:

Understanding the satisfaction of consumers for its products they own is very important as it benefits marketers in framing appropriate strategies for its products to do better in future. The study found majority of consumer are satisfied with television and air conditioner products compared to refrigerator and washing machine product. As in refrigerators, consumer find difficulty in disposing when the product gets obsolete and even the prices are considered to be high by consumer and in washing machine consumers find difficulty in understanding features for using the product. To conclude, Consumers have purchased the product that involves eco design practices, green packaging and labelling practices and green advertising practices but they don't understand the green attributes involved in the products for some attributes therefore companies have to take demonstrate the product feature that has green attributes at maximum level.

## References:

### Research articles:

1. **P. Kishor Kumar and Dr. Byrum Anand (2015)**, "A study on customer satisfaction towards green tea", *International Journal of Marketing, Financial Services and Management Research*, Vol. 4 (7), pp 24-30.
2. **Dr. K. Vanaja (2016)**, "An empirical study on awareness and satisfaction level of consumers towards green products in Mettupalayam taluk, Coimbatore", *International Journal of Applied Research*, Vol. 2(10).pp 267-272.
3. **Miss Charu Garg (2016)**, "The impact of Green marketing on consumer satisfaction and environmental safety", *International Research Journal of Management Science and Technology*, Vol. 7, issue.2.
4. **Ragini Dubey, Dr. Garima Singh and Sakshi Mishra (2020)**, "A study on factor a consumer buying behaviour towards selected green products", *The Pharma Innovation Journal*, SP-9(10), pp 211-215.
5. **Dr. v. SampathKumari (2020)**, "Consumer preference and satisfaction towards organic personal care brands in Chennai", *Studies in Indian Place Names (UGC care journal)* Vol. 40, issue 50, pp 5020 -5027

### Books:

- Robert Dahlstrom. "Green marketing – Theory, Practice and Strategies", Cengage Learning India private limited, Delhi, India, 2011.
- Jacquelyn A. Ottman, "The new rules of Green marketing – Strategies, tools and inspiration for sustainable branding", Greenleaf publishing limited, United Kingdom, 2011.
- Jacquelyn A. Ottman, "Green marketing – Challenges and opportunities for the New marketing age", NTC business books, 1993.
- Wayne D.Hoyer and Deborah J.Maclnnis, "Consumer behaviour", All India publishers and Distributors, Chennai, India 1999.
- D.R.Palekar and P T Pattanshetty, "Marketing Management – A basic approach", R.Chand & Co., publish house, New Delhi, India, 1997.

### Reports and Publications:

- Annual reports of Ministry of Electronics and information technology.
- IBEF reports on Indian Consumer durable industry.
- TV veopar journal.