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Customers Preference Before and After Green Marketing, Awareness and Reasons Behind Buying Green Products - A study

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Abstract:

Purpose :

The main objective of the present study is to know whether demographics of respondents influence the study on green marketing. Further, the study conducted to know the consumer preference before and after of green marketing. The study also further focused to know consumers seriousness and awareness on environmental concern and reasons behind consumers buying green products. Consumers across the globe realised the significance of protecting environment. The consumers at Bengaluru urban are demanding more and more green products and ready to pay more for green products. Demanding organic milk, fruits, rice and vegetables is on the rise.

Approach :

A structured questionnaire was administered in order to collect the data. The participants of the study include employees, business doing, persons, professionals, self employed agriculturists and housewife. These persons were interviewed in a natural setting. x^2, contingency co-efficient Kendall's co-efficient of concordance, Garret Ranking technique and ANOVA, quantitative techniques were performed.

Findings :

The study probed about demographics and found the presence of significant variation with high degree of relationship. There is an improvement in the preference of customers in green products after green marketing rather before marketing. Further, the study on consumers seriousness and awareness which are ranked reveals that destruction of ozone, pesticides on food and warming up of earth. The reasons behind consumers buying green measured by performing Kendall's co-efficient of concordance include improvement in social conditions, cost reduction due to insist from pressure groups etc., and employment generation.

Keywords : Awareness, environment, green products, preference, customer satisfaction, anthropocentric.

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Introduction:

Of late green marketing rationally gaining quick momentum on account of pressure groups, need for protecting environment and growing awareness among consumers about green marketing and products. Green marketing means manufacturing and marketing of products and services which are manufactured through green process (Sujith, T.S. 2017). Green marketing covers a wide range of activities like modification of products, changes to the production process, packaging changes as well as modifying advertisement etc., It can be safely concluded that green marketing is a holistic marketing concept wherein the production, marketing, consumption and disposal of products and services happen in a manner that is less detrimental to the environment with growing awareness.

Growing awareness among consumers about environmental problems has led a deviation in the way of living styles of consumers. There has been a remarkable change in consumer attitudes and are trying to gain an edge in the competitive market by exploring the potentials in the green market industry (Jaya Tiwari, e-ISSN:2278-487x). Green marketing is the marketing of products as they are presumed to be environmentally preference to others (Sharma, D.M. 2014). Environmental issues have always been a challenge since the creation of the term environmental sustainability which has enhanced the sensitivity of consumers towards purchasing greener products (Kumar Phookan, 2020). The intention of green marketing is to protect environment and satisfy the needs and preference of green liking consumers. Satisfied consumers are more likely to repeat buying products and services when compared less satisfied consumers (Oliver, 1999).

Statement of the problem:

Environmental degradation has impacted on the human survival. Hail storm, cloud burst, untime raining, dust storm etc., occurred due to improper protection of environment. Issues like global warming, depletion of ozone umbrella are the main environmental issues that are considered as significant as they contribute towards human survival. Consumer awareness and motivation continue to drive change in the market place, notably through the introduction of more eco-friendly products. Indian consumer has much less awareness of global warming issues when compare to developed countries. The rising consumer awareness about products and concern over the global environmental crisis are enhancing the opportunities to marketers to convince consumers. Consumers should be willing to patronise green products and make their contribution supporting the sustainable environment. (Hartmam et al. 2006). The decrease in the environment has led to the adoption and development of consciousness among consumers to buy eco friendly products. Though consumers are willing to pay more it has become a global struggle to achieve the purpose of environmental protection (Kumar, 2011).

Review of literature

Sujith, T. S. (2017) reported that people have awareness about the eco-friendly products and they flow a positive attitude towards green marketing and green

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products. The researcher suggested the awareness level has to be enhanced. The consumers awareness level is limited to organic vegetables and consumable items. The price of the green products should be decreased so that all may prefer eco-friendly products.

Lievano Pulido Yineth et al. (2021) presents a theoretical picture of the significance of green marketing and also the study identifies Germany as a key market for green strategies in Europe. Further, the researchers have analysed to impact of green policies on key sectors of Spanish companies. The result of the study revealed that the green marketing variables need to be managed to give companies a competitive advantage.

Balwan Kumar et al. (2022) stated that the demand for green products has increased to protect families health. More observational knowledge are expected to test the theoretical elements that discover the cavity between the apparent greeneries of consumers buying intention. The concept of environmental attitude with consumers buying intention is growing in India at a faster rate. Further, the researchers stated that green products buyers pay more attention to maintain cleaner and greener climate. In future as per the researchers only such organisations that improve with innovative objects, resources and novelties that are eco-driven will receive the best results.

Resul Ozturk (2020) stated that environmental consciousness consumers are willing to pay more by choosing environmental friendly products. On account of spread of green environmental awareness the consumers are sharing large interest to buy green products Enterprises on the other hand have started to redesign their products and production methods to minimise environmental impacts by including environmental management in their culture. Steps already taken to protect the environment by reducing packaging as well as using recyclable and environmentally friendly materials.

Objectives

1. To study the socio-economic characteristics impacting on the study.
2. To analyse customers preference before and after green market.
3. To study consumers seriousness and awareness on environmental concern.
4. To study the reasons behind consumers buying green products.

Hypothesis

1. The socio-economic characteristics are not impacting on the study.
2. There are no customers preference before and after green marketing.
3. Consumers in the study area are not serious and unaware of environmental concern.
4. There are no reasons behind purchase of green products.

Research questions

1. What are the reasons for the skewed impact of demographics on the study and they are not significantly variable?
2. What are the customers preference before and after green marketing?

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3. What is the consumers seriousness and awareness on environmental concern?
4. What are the reasons behind consumers buying green products?

Research Methodology

In order to probe the research objectives, both primary data and secondary data collected and analysed. The first stage of research process was an detailed search of articles, reports books and internet. The analysis of secondary data gave the general context for initiating the collection, analysis and the interpretation of collected data. Research design is essential as it is going to assist the research to collect the required data smoothly and efficiently. The primary data was collected through questionnaire containing closed ended questions.

Questionnaire design : A well manageable questionnaire with opinions of 3 point Likert scale was administered to quantify the variables. Each proportion is considered as a variable and most of the propositions are framed in a positive scale.

Statistical methods : The statistical methods used in the analysis were means, chi-square, contingency co-efficient, Kendall's co-efficient of concordance and weighted arithmetic mean. Kendall's co-efficient and weighted arithmetic mean. Kendall's co-efficient of concordance is used to measure the degree of relationship between the concerned two variables of before and after green marketing and drivers of preferences and Garret Ranking technique was performed and the variables are ranked.

Sample and sampling design : A convenient sampling design was followed and intercept method was used for data collection. 50 respondents were approached with a questionnaire and required data was gathered.

Universe of the study : The present study confined to Urban Bengaluru. All the sample respondents were met and data collected. The researcher met all the respondents and convinced about the purpose of data collection.

Source of data : The study uses both primary and secondary data. Primary data was collected by administering a neatly designed questionnaire. The secondary sources include journals, books and internet.

Survey Findings:

Table - 1 highlights data about socio-economic profile of sample respondents. There are 41 males and the rest females. Out of 50, 36 are married, 9 single and 5 divorcees. 23 respondents belongs to 28-32 years age group followed by 10 to the 23-27 age group, 8 in between 18-22 years, 5 in between 33-37 years and 4>38 years. The qualification details reveals 24 are degree holders, 8 PUC, 7 PG, 6 professional and 5, 10th standard. The occupation data reveals that 28 were employees, 6 each doing business and agriculture, 4 professionals, 3 each self employed and housewife. The monthly income data reveals that 23 drawing monthly salary of 40K-60K, 5 less than 20K and 4 > 80K. The frequency of buying green products reports that 38 regularly buy green products, 6 not regular

and 5 occasions. 46 are aware of green marketing and 4 not aware of green marketing. The need is decided by health 32 respondents, 10 survivability and product features, and 8 stated about the need due to quality of life. The respondents 23 purchased food green products, 10 household products, 7 health products, 6 cleaning products and 4 purchased cosmetics. All the demographics reveal significant variation and with high degree of relationship.

Table - 2 & 3 reveal about customers preference before and after greening. The data on before reveals that 11 preferred short term orientation, 10 each customer satisfaction and 10 limited product risk and 6 opined that customers prefer fragmented thinking. The 'w' value stood at 0.242. Data on preference after green marketing reveals that 28 preferred customer satisfaction, 5 preferred production risk and 4 integrated thinking. the 'W' value stood at 1.067. After finding difference between after 1.067 and before 0.242, w stood at 0.845 and TV 15.507 and the calculated value being 20.28 stipulated that 'W' fail to accept H_0 and accepts H_1 and hence it is concluded that there exist significant relationship between before and after green marketing.

Table - 4 let slip data about consumers seriousness and awareness on environmental concern. The opinion expressed by respondents is defined as "f" and the multiplication opinions and Garrette value is defined as "fx". Scale value are depending upon number of variables. There are 10 variables and hence 10 scales are shown. Below each scale value Garrett value are presented. fx total is shown as "T". The sum of fx is divided by 50 to get mean score. The mean score are the basis for declaration of ranks. The strength is basis for declaration of rank. The first rank was awarded to destruction of Ozone, the second rank given to pesticides on food and the third rank was awarded to warming up of earth.

Table-6 reveals about reasons behind consumers buying green products. To measure the same ANOVA is adopted. 34 respondents stated strongly agree, 10 agree and 6 somewhat agree. ANOVA fails to accept H_0 and accepts H_1 and hence it reveals about the existence of significant variation of data.

Discussion

Consumers and manufacturers have directed their attention towards environment friendly products that are presumed to be environmental friendly. Bengaluru marketers have also realised the significance of green marketing concept. Although there exist a large scale research on green marketing little academic research on consumer preference has been carried out in India. The study probed about demographics and found the presence of significant variation with high degree of relationship. There is an improvement in the preference of customers in green products after green marketing rather before marketing. Further, the study on consumers seriousness and awareness which are ranked reveals that destruction of ozone, pesticides on food and warming up of earth. The reasons behind consumers buying green measured by performing Kendall's co-efficient of

concordance include improvement in social conditions, cost reduction due to insist from pressure groups etc., and employment generation.

The collected data has been tabulated and suitable quantitative techniques has been performed.

Conclusion:

Green marketing come into prominence in the late 1980s and early 1990s. Concerns have been expressed by manufacturers and consumers about the environmental impact on products. The study probed about demographics and found the presence of significant variation with high degree of relationship. There is an improvement in the preference of customers in green products after green marketing rather before marketing. Further, the study on consumers seriousness and awareness which are ranked reveals that destruction of ozone, pesticals on food and warming up of earth. The reasons behind consumers buying green measured by performing Kendall's co-efficient of concordance include improvement in social conditions, cost reduction due to insist from pressure groups etc., and employment generation.

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Table-1 : Demographics of Respondents

Demographics	x^2	TV @ 0.05	df	Result of x^2	"c"	Result of "c"
Gender	20.48	3.841	1	Significant	0.53	High Degree
Marital Status	41.59	3.841	1	Significant	0.67	High Degree
Age in years	23.40	9.488	4	Significant	0.56	High Degree
Qualification	25.0	9.488	4	Significant	0.58	High Degree
Occupation	56.81	11.070	5	Significant	0.72	High Degree
Monthly Income (INR)	23.40	9.488	4	Significant	0.56	High Degree
Frequency of buying green products	44.89	5.991	2	Significant	0.82	Low Degree
Awareness of green marketing	35.28	3.841	1	Significant	0.57	High Degree
Need for protecting environment	21.26	5.991	2	Significant	0.54	High Degree
Type of products purchased	23.00	9.488	4	Significant	0.56	High Degree

Source: Field Survey

Note : x^2 = Chi-square

'c' = $\sqrt{(x2 / x2 + N)}$

Where 'c' = Contingency Co-efficient, N = Number of Observations

When the value 'c' is equal or nearer to 1, it means that there is high degree of association between attributes. Contingency co-efficient will always to be less than 1. High degree is considered here if 'c' is 0.50 and above.

Table – 2 : Customers preference before Green Marketing

Drivers of preference before green marketing	SA	A	SWA	RT	RT^2
Customer satisfaction	6	3	1	10	100
Fragmented thinking	4	1	1	6	36
Non-boundary spanning	3	-	-	3	9
Short term orientation	5	4	2	11	121

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Anthropocentric	3	-	-	3	9
Limited Product risk	6	3	1	10	100
Local / Regional / National	2	-	-	2	4
No / underpaid ecological costs	3	2	-	5	25
Total	32	13	5	50	404

Source : Field Survey

Note : SA = Strongly Agree, A = Agree, SWA = Somewhat Agree, RT = Row Total

$SSR = \Sigma RT^2 – (\Sigma RT)^2 / N$

$= 404 – 2500 / 8 = 404 - 312.5 = 91.50$

Using the sum of squares (SSR) in the following formula to obtain Kendall's W.

$W = 12 \times SSR / k^2N (N^2 – 1)$

$= 12 \times 91.5/ 9 \times 8 (64 – 1) = 1098 / 4536 = 0.242$

Table – 3 : Consumer preference after green marketing

Drivers of preference after green marketing	SA	A	SWA	RT	RT^2
Customer satisfaction	20	5	3	28	784
Ecosystem compatibility	2	-	-	2	4
Integrated thinking	2	1	1	4	16
Boundary spanning	1	1	-	2	4
Long term orientation	2	-	-	2	4
Bio centric basis	2	-	-	2	4
Product risk	3	1	1	5	25
Global / international ecological accountability	2	1	-	3	9
Fail accounting of ecological costs	1	1	-	2	4
Total	35	10	5	50	854

Source : Field Survey

Note : SA = Strongly Agree, A = Agree, SWA = Somewhat Agree, RT = Row Total

$SSR = \Sigma RT^2 – (\Sigma RT)^2 / N$

$= 854 – (50)^2 / 9 = 854 - 277.78 = 576.22$

Use the sum of squares (SSR) in the following formula to obtain Kendall's W.

$W = 12 \times SSR / k^2N (N^2 – 1)$

$= 12 \times 576.22 / 9 \times 9 (81 – 1) = 6914.64 / 6480 = 1.067$

Finding the difference between 1.067 and 0.242 = 0.845

Test the significant of 'w' by using the x^2 static

$x^2 = k (n - 1) w$

$= 3(9-1) \times 0.845 = 3 \times 8 \times 0.845 = 20.28$

Decision: At 8 df level of significance the TV = 15.507. The calculated value being 20.28 higher than the critical TV and hence "w" fails to accept H_0 and

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accepts H_1. Therefore it is concluded that there exist significant relationship between before and after green marketing.

Table-4 : Consumers seriousness and awareness on Environmental concern

Variables	Scale and scale value													
	Scale	I	II	III	IV	V	VI	VII	VIII	IX	X	T	MS	R
	Value X	82	70	63	58	52	47	42	37	30	18			
Warming up of earth	f	25	5	3	2	3	3	2	2	3	2	50		
	fx	2050	350	189	116	156	141	84	74	90	36	3286	65.72	III
Destruction of ozone	f	27	6	2	1	2	4	3	3	2	-	50		
	fx	2214	420	126	58	104	188	126	111	60	-	3407	68.14	I
Industrial water pollution	f	22	5	4	3	2	5	4	2	1	2	50		
	fx	1804	350	252	174	104	235	168	74	30	36	3227	64.54	VI
Industrial air pollution	f	24	4	4	2	3	2	2	1	3	5	50		
	fx	1968	280	252	116	156	94	84	37	90	90	3167	63.34	VIII
Ocean contamination	f	20	8	6	4	2	1	2	2	3	2	50		
	fx	1640	560	378	232	104	47	84	74	90	36	3245	64.90	V
Endangered Species	f	18	7	5	3	3	4	2	3	2	3	50		
	fx	1476	490	315	174	156	188	84	111	60	54	3108	62.16	IX
Destruction of rain forest	f	16	8	6	3	4	4	2	1	3	3	50		
	fx	1312	560	378	174	208	188	84	37	90	54	3085	61.70	X
Pesticides on food	f	18	9	6	5	3	4	2	1	2	-	10		
	fx	1476	630	378	290	156	188	84	37	60	-	3299	65.98	II
Drinking water contamination	f	22	5	5	4	3	3	2	3	2	1	50		
	fx	1804	350	315	232	156	141	84	111	60	18	3271	65.42	IV
Hazardous Waste	f	21	6	4	5	3	2	1	2	3	3	50		
	fx	1722	420	252	290	156	94	42	74	90	54	3194	63.88	VIII

Source : 1) Mean score = fx / f, 2) Ranks given on the basis of highest of variable.

Table-5 : Garrett Ranking Conversion Table

Sl. No.	10 (R_{1j} - 0.5) / N_{1j}	Calculated Value	Garrette Value
1	100 (1 - 0.5) / 10	5	82
2	100 (2 - 0.5) / 10	15	70
3	100 (3 - 0.5) / 10	25	63
4	100 (4 - 0.5) / 10	35	58
5	100 (5 - 0.5) / 10	45	52
6	100 (6 - 0.5) / 10	55	47
7	100 (7 - 0.5) / 10	65	42
8	100 (8 - 0.5) / 10	75	37
9	100 (9 - 0.5) / 10	85	30
10	100 (10 - 0.5) / 10	95	18

Source: https://pro.com.edu

Table-6 : Reasons behind consumers buying green products

Variables	SA	A	SWA	T
Implementation in social conditions like nutrition, health and housing	13	4	2	19
Employment generation	4	2	1	7
Reduces migration	2	-	-	2

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Decrease in pollution	3	1	1	5
Decrease in industrial waste	2	-	-	2
Cost reduction due to insist by pressure groups, government and CSR	5	2	2	9
Prevention of over use of natural resources	3	1	-	4
Assumed qualitative products	2	-	-	2
Total	34	10	6	50

Source: Field Survey

Hypothesis

H0	There exist no significant variation in the data	Reject
H1	There exist significant variation in the data	Accept

ANOVA Table

Source of variation	SS	df	MS	F-ratio	5% F limit (from F-table)
Between sample	57.33	(3-1)= 2	57.33/2 = 28.67	28.67 / 5.37 = 5.33	
Within sample	112.94	(24-3) = 21	211.94 / 21 = 5.37		
Total		(24 - 1) = 23			(2, 21) = 3.47

ANOVA Analysis: The calculated value of F is 5.33 which is greater than the value 3.47 @ 5% level with df being $V_1 = 2$ and $V_2 = 21$ and hence ANOVA fail to accept H_0 and accepts H_1 and it is concluded that there exist significant variation in the data.