

***“Impact of Green Marketing Mix on Consumer’s Purchase Intention in
Consumer Durable Industry: A Study of Gujarat State”***

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Abstract: India is one of the developing nation where the demand for consumer durables is increasing day by day. By the year 2025, India will upscale its position from 12th to 5th rank in consumer durable segment globally. According to ICSI-CCGRT report, the industry accounts for US\$ 15 billion as on May 2017. It is fastest growing sector because of availability of manufacturing facility, help from government, technological advancements, and rural people’s inclination towards consumer durable goods. But the boom in this sector is taking a toll on the environment. As per environmental sustainability index (2005), India has 101th rank (Esty et al, 2005) and according to environmental governance, India’s score is 0.10 being at 66th rank. Thus manufacturers as well as consumers are being environmentally conscious giving birth to the term “Eco-friendly”.

“Eco-Friendly” terminology has become quite prevalent across the globe thus companies are constantly introducing green products and are also exercising green marketing to lure the customers. However, it is unclear that green marketing mix has affected consumer’s intention to purchase eco-friendly goods. This dilemma can be solved with an in-depth analysis. This study is conducted in seven major cities of Gujarat i.e. Ahmedabad, Gandhinagar, Anand, Vadodara, Surat, Bharuch and Rajkot to know the correlation between all 4 parameters of green marketing mix i.e. product, price, place & promotion on purchase intention. A survey of 700 households was conducted and data was analyzed using correlation, analysis of variance and regression analysis. The results reveal that independent variables (green marketing mix) has significant influence on dependent variable (consumer’s purchase intention) and regression equation is developed to calculate the dependent variable accurately. The outcome of the study can provide guidelines to marketers for strategizing their marketing approaches while targeting customers in Gujarat for green products.

Key words: Green Marketing, Consumer Durables, Green Marketing Mix, Consumer’s Purchase Intention

I. Introduction

21st century is the era of information and advanced technology where consumer durable sector has contributed a lot in making it an information era. Consumer durables involves goods whose life expectancy is up to 3 years which includes computer, printer, air conditioner, cellphone, television etc. These segment generates a lot of e-waste in form of discarded monitors of computer, motherboards, cell phones, chargers etc. As per the UN report submitted in World Economic Forum in January 2019, India ranks fifth in e-waste generation after the US, China, Japan and Germany by producing annually about 2 million tonnes of electronic waste. These e-waste is detrimental for the environment by creating air, water and land pollution and it also deteriorates human health. Which creates a dire need to employ green marketing by the firms.

Green marketing deals with the goods/services that are environmentally safe. It consists of series of activities including modification in the product, alteration in production procedure, biodegradable packaging and innovation in the advertisement to reveal the greenness (Katait, 2014). Green marketing term was found first in the book named “Ecological Marketing” in late 1980s (Laheri et al., 2014).

II. Literature Review

Green products can be defined as those products that save natural resources, conserve energy, does not make use of harmful chemicals and reduces waste (Singh and Pandey, 2012). Price is one of the critical ‘P’ in marketing mix. Customers will pay premium price for any product until and unless they perceive extra value in the product (Eric, 2007). This additional benefit can be in terms of improved performance, visual appeal, better design or taste (Sharma, 2011). Green distribution means managing logistic in such a way that it lessens the emission and decreases the carbon footprint (Shil, 2012). For a firm to be considered as green business requires that their distributors are environmental conscious and follow eco-friendly distribution strategies (Eric, 2007). Green promotion includes advertising, promotional schemes, public relation, website, direct marketing etc. by considering people, planet and profit together (Shil, 2012). Ansar (2013) conducted study to know the green marketing’s impact on people’s purchase intention. The study included variables such as socio-demographic, biodegradable packaging, price and green promotion and their impact on purchase intention. The outcome revealed that these variables have positive and significant

correlation with consumer's purchase intention. Ali et al. (2011) reveals that customer who have positive intentions towards green products displays greater purchasing rate than those with no or lesser intention. Also the comparative price and quality of goods have favorable effect on consumer's green purchase behavior if they have greater intention towards green products.

III. Conceptualization



Figure 1: Proposed conceptual model

Intention can be defined as expectation of consumers about future purchasing behavior of any object(Aaker et al., 2001). Buying intention forms after some efforts of deliberate problem solving. The conceptual framework in figure 1 shows that green marketing mix of a company affects customer's intention to buy green products. Green marketing mix consists of several activities such as producing eco-friendly product, green pricing, green distribution and green promotion (Khan and Khan, 2012). The firms can affect customers in countless ways by its policy and strategy to influence their purchase intentions (Aseem, 2002). This will be researched in this study if the green marketing mix activities of companies can influence customer's buying intentions or not.

IV. Research Methodology

Objectives:

To identify the correlation between green marketing mix and consumer's purchase intention.

To identify the factors in green marketing mix that influence consumer's purchase intention.

To know the degree of impact green product, price, place & promotion has on consumer's purchase intention.

Sampling and Data Collection:

The study is quantitative in nature and it examines the impact of independent variables i.e. green product, price, place & promotion on dependent variable consumer's purchase intention. The research design used in this study is descriptive research design to know the behavior of the consumer towards green marketing. Non-probability sampling method i.e. convenient sampling method is used where units in the population do not possess equal opportunity of getting selected. A pre-structured questionnaire with closed ended questions is used which was distributed in 07 major cities of Gujarat i.e. Ahmedabad, Gandhinagar, Anand, Vadodara, Surat, Bharuch and Rajkot. The sampling unit is individual household being 100 households from each city making it 700 as the sample size. Total 832 questionnaires were distributed but 741 respondents submitted their response. Incomplete questionnaires were discarded, finally reaching to the size of the sample as 700 questionnaires. The questionnaire contained the questions in 2 sets: Set-1 contained the statements on green marketing mix and their purchase intentions about green products and Set-2 included questions about their demographic information such as age, occupation, income, gender etc. 5 point likert scale was used to measure respondent's opinion.

V. Data Analysis

Table 1: Reliability Analysis

Scale	Cronbach's Alpha	No. of Statements
Green Marketing Mix	0.779	15
Product	0.643	5
Price	0.584	3
Place	0.469	2
Promotion	0.492	5
Consumer Purchase Intention	0.624	5

A reliability analysis was done to check the inter item consistency reliability. The cronbach's alpha reliability coefficients of the dependent & independent variables were achieved. Accordingly, the alpha value for green marketing mix and purchase intention was 0.779 and 0.624 respectively. Other variables of environmental marketing mix also indicate the value higher than the standard reliability score.

Relationship amongst Green Marketing Mix & Purchase Intention

In this part the relationship amongst green marketing mix and consumer’s purchase intention is analyzed in order to test the following hypothesis.

H₀: Green marketing mix is negatively correlated with consumer’s purchase intention.

The subsequent model is articulated to find out the relationship between green marketing mix and consumer’s purchase intention for the purpose of testing the above null hypothesis.

$$\text{Consumer's Purchase Intention} = f(\text{Green Marketing Mix})$$

The following table represents the correlation between the green marketing mix and consumer’s purchase intention.

Table2: Correlations			
		Green Marketing Mix	Consumer Purchase Intention
Green Marketing Mix	Pearson Correlation	1	.587^{**}
	Sig. (2-tailed)		.000
	N	700	700
Consumer Purchase Intention	Pearson Correlation	.587^{**}	1
	Sig. (2-tailed)	.000	
	N	700	700

******. Correlation is significant at the 0.01 level (2-tailed).

It can be evidenced from Table 2 that there is a positive linear relationship amongst green marketing mix & consumer’s purchase intention. The correlation value is 0.587 and which is significant at the level of 0.05. Therefore the null hypothesis is rejected. Therefore, it is clearly evident that there is a strong positive correlation between green marketing mix and consumer’s purchase intention.

Regression Analysis

By using the correlation analysis, it can be found that there is relationship between the green marketing mix and consumer’s purchase intention. But the exact degree of relationship between the green marketing mix and consumer purchase intention cannot be found just by using correlation analysis. Therefore, regression analysis is done in order to compute the exact relationship amongst these variables.

Regression analysis is made to find out the equation, which describes the relationship amongst these variables. From this analysis, dependent variable can be forecasted through the independent variables. The predictor variables is symbolized by ‘x’ and predicted variable is usually symbolized by ‘y’ and. The regression line is $y = a+bx$ and the regression summary output obtained through the statistical analysis is as follows.

Table 3: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.587^a	.345	.344	.51419
a. Predictors: (Constant), Green Marketing Mix				

In this section, the green marketing mix’s impact on consumer’s purchase intention is analyzed for the purpose of the testing the following hypothesis.

H₀: Green marketing mix has no impact on consumer’s purchase intention.

In order to test the above null hypothesis, following equation is formulated.

$$\text{Consumer's purchase intention} = \beta_0 + \beta_1 (\text{Green marketing mix})$$

(Where β_0, β_1 are the regression coefficient)

Table 4: ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	97.220	1	97.220	367.709	.000^b
	Residual	184.547	698	.264		
	Total	281.768	699			
a. Dependent Variable: Consumer Purchase Intention						
b. Predictors: (Constant), Green Marketing Mix						

Analysis of variance also reported an interaction relationship between green marketing mix on consumer’s purchase intention. ANOVA (F-value) elucidates predictor variable’s most possible combination that could contribute to the association with the dependent variables. For model 1, F value is 367.709 ($p = 0.000, <0.05$). Thus it is evident that the corresponding F value is significant with respect to their resulting values. However, it should be noted that there may be some other variables which can have an impact on consumer’s purchase intention, which need to be further studied.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.067	.129		8.256	.000
	Green Marketing Mix	.711	.037	.587	19.176	.000

a. Dependent Variable: Consumer Purchase Intention

To assess the impact of green marketing mix on consumer purchase intention, the following regression equation was formed. Given only the scores on these predictors, one can predict consumer's purchase intention by computing:

$$\text{Coefficient} = 1.067 + 0.711 (\text{Green marketing mix})$$

Here when the green marketing mix change by 1 unit, consumer's purchase intention will be changed by 0.711. According to the regression analysis, the null hypothesis is rejected. Therefore, it can be inferred that the green marketing mix has an impact on consumer's purchase intention.

H₀1: There is no impact of green product on consumer's purchase intention

H₀2: There is no impact of green price on consumer's purchase intention

H₀3: There is no impact of green place on consumer's purchase intention

H₀4: There is no impact of green promotion on consumer's purchase intention

	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
Green Product	1	.395^a	.156	.155	.58359	129.325	.000^b
Green Price		.476^a	.227	.226	.55863	204.916	.000^b
Green Place		.377^a	.142	.141	.58851	115.540	.000^b
Green Promotion		.514^a	.264	.263	.54498	250.711	.000^b

a. Predictors: (Constant), Product/Price/Place/Promotion

Table 6 indicates 15 per cent of impact of green product on consumer's purchase intention, 22 per cent of impact of green price on consumer's purchase intention, 14 per cent of impact

of green place on consumer's purchase intention and 26 per cent of impact of green promotion on consumer's purchase intention. They all are significant at 5 per cent level, because p value is less than 0.05 ($P < 0.05$). Therefore, null hypothesis is rejected. Hence, there is an impact of green product, price, place & promotion on consumer's purchase intention.

VI. Conclusion

The research was carried out to measure the green marketing mix's impact on consumer's purchase intention with reference to consumer durable industry in Gujarat. The research objective was to measure relationship between variables of green marketing mix and consumer's purchase intention. It is found that variables of green marketing mix such as product, price, place & promotion are significantly correlated with consumer's purchase intention. Another objective was to find out to what extent green marketing mix influence the consumer's purchase intention. Regression analysis indicated that the green marketing mix contributes significantly to increase the consumer's purchase intention in Gujarat at 34 per cent and remaining 66 per cent can be contributed by other variables. This indicates that the green marketing mix has significant impact on consumer's purchase intention. Green marketing seems much more important in developing countries like India as environmental issues are rising by twofold. The companies who can innovate their products, process, material and technology, are only going to reap benefit in future. This study concluded that green marketing mix urges customer's intention to buy eco-friendly products.

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