

## **An Analytical Study to Find the Relationship between Consumer's Intentions to Purchase Green Products and Environmental Purchase Behaviour**

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### **Introduction**

It has been observed in the past few decades that consumers are becoming more conscious and attentive on environmental issues. Concept of green marketing emerged in the late 1980s and early 1990s. Green marketing refers to selling product and rendering services that has least detrimental impact on the environment. AMA defines green marketing as the marketing of products that are presumed to be environmentally safe; it incorporates several activities such as product modification, changes to production processes, and packaging, advertising strategies and also increases awareness on compliance marketing amongst industries. Advertising is an integral part of marketing as well as green marketing activities.

Green marketing has been slowly inculcated in the marketing practices and today is the most common practice involved in the trendy marketing. There is an innate need to focus on the impact of this new market on the consumers and the environment, so far, because it not only preserves the environment but in broad sense affects all the areas of the economy of any nation. As a result of increased social and political pressure firms have started embracing green marketing strategies as an integral part of their marketing strategies. Profit driven firms are exploiting the environmental issues as a source of competitive advantage and as well for translating the environment friendly needs of consumers.

However, some of the greatest challenges in road ahead of green marketing faced by these firms are consumer knowledge, consumer awareness, consumer preference, consumer attitude and the consumer suspicion about the green advertising claims, high cost etc. Therefore, it is mandatory for the steward companies

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to understand how consumers view the environmental issues, and how they respond towards the green product and how their attitude is influenced by the green advertising activities; only then the companies would be able to fetch purchase commitment of green products from their customers. One of the most important marketing tools used by the organizations exhibiting environmental sensitivity is green advertising. Corporations perceive that the consumer willingness to pay has gradually increased and roll out of green products from top retailers like Wal-Mart, Home Depot, and Kroger Co. have made a significant contribution in changing the consumer attitude towards green products.

Based on the growing significance of green products and green advertising in today's market place, the current research tries to update the previous studies done to measure consumer attitudes toward green advertising and consumer environmental attitudes. Analysis of different advertising philosophies of different companies and how the consumers responds to different green advertising, can be useful, and the results can be deployed by the marketers to enhance the effectiveness of their advertisement. Such analyses will help to outline the attitude of consumers towards green advertising. The rationale of this research is to examine the influence of green advertising on perceived consumer effectiveness and consumer attitude, intention and behaviour towards green advertising and green purchase behaviour. Finally, the managerial implications of the research results are discussed.

### **Literature Review**

Khan Niazi G. S., Siddiqui J. & Shah B. Ali, Hunjra A. I. (2012), advertising is an important promotional tool that marketers exploit to create brand awareness and position their products in the minds of the customer. The paper attempts to determine whether any relationships exist between emotional response and environmental responses with dependent variable i.e. consumer buying behaviour and the source from which these responses are drawn.

Subhani M. Imtiaz, Hasan S. Akif, Osman A., Rudhani S. Wazir Ali (2012), this study draws that males are affected by the Environmental Concern and Brand's Environmentally Friendly Perception while females are affected by the Social Influence and Environmental Concern when concerning purchases of green products. It has been reflected in the paper that knowledgeable social group of individual discusses about the environmental issues and has positive impact on the individuals green brand preferences.

Albayrak T., Caber M., Moutinho L. & Herstein R., (2011), the study examines the influence of scepticism on green purchase behaviour besides to environmental concern and perceived consumer effectiveness. The results of the study reveal perceived consumer effectiveness as the most important determinant that have positive influence and scepticism has negative influence on green purchase behaviours.

Hanzaee K. H., Behboudi M., Khah A. Q., Monsefi M. & Maneshi Ali (2011), this study rolls out a new concept of “intangible advertising,” in advertising theory. Author investigated examined four exogenous latent variables (advertisement type, product involvement, media and demographics) and one endogenous latent variable (intangible advertising of brand). The results of the study shows that the exogenous variables successfully explain intangible advertising of brand and all of these are able to collectively affect advertising effectiveness.

Lau, Teck-Chai (2011) today the companies are interested in knowing the factors that promote green product purchases so that they can implement their green strategies in a better way. The results of the study reflect that specific attitudinal variable is a better interpreter in explaining specific consumer behaviour than the general attitudinal variable.

Shammot Marwan M. (2011), study is based on Jordanian consumer behaviour. The main focus of the study is to identify the effects of green marketing on buying decisions of consumers. The results of the study are reflections of previous researches in explaining that females are more concerned than males about the environment and green marketing.

Yazdanifard R. and Mercy I. E. (2011) there is a general perception in public in general that green practices are healthier practices. Researches' have shown that environmental conscious consumers are willing to pay premium prices for the protection of the environment.

Ahmad H., Shah I. A. & Ahmad K. (2010), author examined the green purchase behaviour of Pakistani consumers. Research findings reflect that the Pakistanis customer in general are aware of the environmental issues and are intended to buy green products.

Chen T. B. & Chai L. T. (2010), main cause of the environmental degradation is the rapid economic growth in the last century due to rapid industrialization and also the change in the consumption behaviour worldwide. The paper attempts to identify if any relationship exists between gender and attitude towards the environment; attitude towards the environment and the green products.

Smith E.E. & Perks S. (2010), the paper delineate businesses perceptions concerning the impact of green practice implementation on their business functions. Results of the study outline that the business functions that are least affected by the green practices implementation are general management/human resources, purchasing/supply chain management and finance/information technology.

Gan C., Wee H. Y., Ozanne L. & Kao Tzu-Hui (2008), the research paper focus on the fact that environmental conscious consumers tends to do more environmental purchases though traditional product attributes remains important in making purchase decisions.

Ha, Louisa (2008), the paper attempts to identify the important variables that advertisers and media can use to minimize perception of clutter and also the set of uncontrollable factors that are beyond the control of advertisers and media.

Haytko Diana L., Matulich E. (2008), consumers who are more concerned about the environment have better attitude towards green marketing and green advertising. The study examines the consumer attitudes towards environmental behaviours, green products and green advertising flaunting them as a "green".

Hartmann P., Ibanez V. A. & Sainz F. Javier Forcada (2005), brand communication is one of the important aspects of marketing as well as positioning strategies. The study intends to test prevailing green positioning strategies against one another, and evaluate their effect on perceived brand positioning and brand attitude.

Kaul A. And Wittink Dick R. (1995), consumer sensitivity on prices is the prime area of concern for the researchers and the marketers. The study attempts to detect the relationship between advertising and the price sensitivity of the consumers. Author focused on the role of moderators in affecting the relationship between advertising and price sensitivity.

### **Objectives of the Study**

Following are the main objectives of the present study:

- To find if any relationship between consumers' intentions to purchase green products and environmental purchase behavior.
- To measure the effect of green advertising on environmental purchases.
- To find if any relationship between pro-environmental attitude and consumer's intention to purchase green products.

### **Research Framework**

The content like in formativeness, credibility, relevancy, company/brand image and attractiveness of ads are important predictors of their value and are crucial to the effectiveness of Green advertising. Interesting and pleasing ads have a positive impact on consumers' attitudes toward a brand. Attributes of green advertising that positively affects consumer attitude are analyzed through factor analysis. Attitude, intention, and behavior are three major constructs in the theory of reasoned action (TRA) proposed by Fishbein and Ajzen in the early 1970s. The paper intends to find the relationships among attitudes and intention to purchase green products.

### **Research Methodology**

- **The Study:** The study was exploratory in nature.
- **Sample Design**
  - **Sampling Population:** Questionnaire was distributed in person at different locations of Bhopal city.

- **Sample Frame:** The sample frame included all elements in the population who were present in the city during the time of data collection.
- **Sampling Technique:** Purposive sampling technique was utilized to select the sample elements.
- **Sample Size:** A total of 100 questionnaires were distributed, and 87 of them were returned. The respondents included 56 males and 31 females. Ninety-three percent of them were under 30 years of age, 65 percent were students, which clearly indicates that the respondents were young and well educated.
- **Tools Used for Data Collection:** The survey utilized a self designed questionnaire to collect data which intends to measure attitudes toward Green advertising, asked about the respondents' general attitudes toward green advertising as measured by the major attributes. Questionnaire also included questions about awareness of green marketing and green marketing activities, intentions to purchase green products and environmental behavior. Data was collected on a Likert type scale, where 1 stands for minimum agreement and 5 stands for maximum agreement.
- **Tools Used for Data Analysis:**
  - Item to total correlation was applied to check the internal consistency of the questionnaire.
  - The measure was standardized through computation of reliability and validity
  - Factor analysis Test was applied to find out the underlying factors of green advertising influencing, consumer attitude.
  - Relationship between the individual independent variable and dependent variable was evaluated using simple regression analysis.

## Results and Discussions

### • Consistency Measure

Consistency of all the factors in the questionnaires was checked through item to total correlation. Under this correlation of every item with total was measured and the computed value was compared with standard value (0.164571 for 87 respondents). The factors having item to total correlation lower than the critical value should be declared as inconsistent and dropped from the questionnaire, but no item found inconsistent.

**Table 1 : Showing Items to Total Correlations for the Measure Evaluating**

S. No.	Items	Computed correlation value	Consistency	Accepted/ Dropped
1	Advertisement promotes environmental benefits	0.18210425	Consistent	Accepted
2	Advertisement promote environmental awareness	0.19904342	Consistent	Accepted

3	TV ads promote environment awareness	0.16997607	Consistent	Accepted
4	Print ad promote environment awareness	0.18503721	Consistent	Accepted
5	Environment ads are relevant	0.17432545	Consistent	Accepted
6	Environment ads are overstated	0.25066963	Consistent	Accepted
7	Environment ads are attractive	0.38508749	Consistent	Accepted
8	Environment ads display product feature	0.29196822	Consistent	Accepted
9	Environment advertisement provide relevant information	0.47057576	Consistent	Accepted
10	Environment advertisement increased	0.31035163	Consistent	Accepted
11	Environmental advertisement misleads	0.32089537	Consistent	Accepted
12	Environment claims in advertisement are vague	0.35118417	Consistent	Accepted
13	Advertised product not have eco-friendly image	0.22416528	Consistent	Accepted
14	Manufacturer Advertiser not bear eco-friendly image	0.27707078	Consistent	Accepted
15	Claimed eco-friendliness not match consumption experience	0.31348099	Consistent	Accepted
16	I like advertisement contain information regarding environmental benefits	0.20422862	Consistent	Accepted
17	Advertisement displays green products as energy efficient	0.16679259	Consistent	Accepted
18	Advertisement displays green products are reuse, recycle or disposed	0.21940775	Consistent	Accepted
19	Advertisement displays green products save environment	0.34103353	Consistent	Accepted
20	Plan to buy environment friendly products	0.17216698	Consistent	Accepted
21	Participation influences family, friends to participate too	0.29525821	Consistent	Accepted
22	Carry out some pro-environmental behaviour	0.4497667	Consistent	Accepted
23	I would like to purchase green product as it saves the environment	0.19144592	Consistent	Accepted

- **Data Reliability**

Most researcher treats a value higher than 0.7 as acceptable, the values in the table indicate that the data collected from the survey are reliable and suitable for further analysis.

**Table 2 : Data Reliability**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.89	23

- **Validity Test**

Validity of the questionnaire was checked through face validity method and was found to be high.

- **Factor Analysis**

Principle component factor analysis with Varimax rotation was applied. The factor analysis resulted in 6 factors. The details about factors, the factor name, Eigen value, Variable convergence, Loadings, Variance% and cumulative% are given in the table.

**Table 3 : Showing Factor Analysis for Consumer Perception**

Factor Name	Eigen Value	Variance%	Variable Convergence	Loadings
1. In formativeness	2.264	9.846	An environmental advertisement of a product displays the environmental features of a product, provides all the relevant information, environmental benefits of a product. Advertisement displays green products as energy efficient and can be reused recycled and disposed.	.651 .638 -.571 .502 -.358
2. Relevancy	2.063	8.971	Advertising promotes environmental benefits and are relevant. Environmental advertisements are overstated and claims are vague.	.701 .635 .586 .412
3. Credibility and Image	1.778	7.728	Number of environmental advertisement has increased and many ads are misleading. Claims do not match consumption experience. Advertisement and Manufacturer/ Advertiser of the advertised product bear an eco-friendly image.	.605 .580 -.535 .428 -.405
4. Attitude and Intention	1.753	7.623	Pro-environmental behaviour and plan to buy the environmental friendly products.	.752 .690
5. Behavior	1.572	6.833	Participation in environmental influences my family and friends and purchase of green product.	.584 -.542
6 Attractiveness and Raising Awareness	1.386	6.025	Environmental advertisements are attractive and promote environmental awareness. Television and print media are promoting environmental awareness. Green products could save the environment.	.689 -.614 .472 .447 .381

- **Results and Discussion**

- **Results and Discussion of Factors**

- **In formativeness:** This factor has emerged as the most important determinant of green advertising that influences consumer attitude towards green marketing and green products with total eight value of 2.264 and % variance of 9.846.

- **Relevancy:** This factor has total eigen value of 2.063 and % variance of 8.971. Major elements of this factor include Advertisement are essential, Contents are relevant reliability, Claims are vague and advertisement are overstated.
  - **Credibility & Image:** This is also one of the important factors with total eigen value of 1.778 and % variance of 7.728.
  - **Attitude & Intention:** This factor also emerged as important factor with total eigen value of 1.753 and % variance of 7.623 with elements consisting of pro-environmental behaviour, plan to purchase green products after watching ads.
  - **Behaviour:** This factor has Eigen value of 1.572 and % variance of 6.833.
  - **Attractiveness & Awareness:** This is one of the important factors with total eigen value of 1.386 and % variance of 6.025.
- **Relationship between Attitudes and Intention**
    - **Regression Analysis**

**Table 4 : Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.437	.396		6.152	.000	1.649	3.224
	Consumer attitude	.205	.118	.186	1.744	.085	-.029	.439

(a) Dependent Variable: Consumer Intention

$$\text{Consumer Intention} = 2.347 + .205X \text{ Consumer attitude}$$

The relationship between the consumer pro-environmental attitude and consumer environmental intention is insignificant as indicated by the beta value of .186 and t value of 1.744 significant at 0 level of significance. Therefore there exists no relationship between pro-environmental attitude and consumer intentions to purchase green products.

- **Relationship between Intention and Behavior**
  - **Regression Analysis**

**Table 5: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.676	.378		9.717	.000	2.924	4.428
	Consumer intention	-.174	.114	-.163	-1.522	.132	-.401	.053

a. Dependent variable: Consumer purchase behavior

$$\text{Consumer Purchase} = 3.676 + (-.174)X \text{ Consumer intention}$$



The relationship between the consumer environmental intention and consumer green purchase behavior is insignificant as indicated by the beta value of .163 and t value of 1.522 significant at 0 level of significance. Therefore there exists no relationship between consumers' intentions to purchase green products and environmental purchase behavior.

### **Conclusion**

The present study discussed in this paper investigated various factors of green advertising influencing consumer attitudes towards green products and green marketing. Informativeness was the most significant factor of green advertising affecting respondents' attitudes, followed by relevancy, credibility & image, attitude & intention, behavior and attractiveness & awareness. Pro-environmental attitude is not related to the environmental purchase intention and Environmental purchase behavior is also not affected by the environmental intention. Moreover influence of pro-environmental attitude on family members and friends also not affected by the environmental intention. The results of this research study clearly indicate that there exists a weak association between pro-environmental attitude with the environment purchase intention and environment purchase intention with consumer buying behavior including the behavioral influence on family members and friends. Therefore, it is established through this research that consumers purchase green products in the areas of Bhopal because of some attachments that are created through advertisement in audio, video and text form, which appeals him or her.

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