



## **Consumer Responses to Brand Image and Purchase Intention: The Moderating Role of Green and Non Green Appeals in Advertising**



## ABSTRACT

*The concept of green advertising has assumed many synonyms, each suggesting products and production processes that consume less energy, recycle materials and reduce waste or pollution. The present paper examines issues in understanding the role played by green and non-green advertising on brand Image and Intention to purchase. The research examined the relationship between attitude towards the ad and brand image and purchase intention with the moderating effect of type of ads in the context of stationary product. Hypotheses developed on the basis of literature were developed and tested in two different experiments. One group considered a "green" appeal which emphasized the environmental attributes of the product. Another group considered the "non green" appeal for the same product category. We measured each group's attitude toward the ad and brand image. Results from a survey of 150 consumers suggest that type of ad significantly moderates the positive relation between attitude toward the ad and brand image but does not moderate the relation between ad attitude and purchase intention.*



**Keywords:** *Green Advertising, Attitude toward Advertising, Brand Image, Intention to Purchase, Moderation.*

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## INTRODUCTION

Over several decades, the issue of environmental preservation has been on top of the agenda at both the national and international levels (MSEA, 2005). At the organizational level, the past two decades have witnessed an explosion of commercial and organizational research activities related to sustainability and green initiatives (Bonini and Oppenheim, 2008). The organizations undertaking the responsibility of positively impacting the environment are ensuring effective communication of green brand features to their top most stakeholders- the consumers. The fact that more and more consumers want to support companies that incorporate sustainability efforts into their product and service offerings (Polonsky, 1994) reflects that green marketing, which not only promotes the environmental benefits of products, but also company's sustainability initiatives, is growing in popularity.

Green marketing, a vital constituent of the holistic marketing concept, is based on the assumption that customers will view a product or service as environment friendly and then implement buying choices accordingly. Charter et al. (2002) put the concept into more sustainable context by strongly linking Green marketing to achieving sustainability through generating and delivering sustainable solutions while continuously satisfying the needs of consumers and other stakeholders. Similarly, Peattie and Charter (2003) define Green marketing as "the holistic management process responsible for identifying, anticipating and satisfying the needs of customers and society, in a profitable and sustainable way".

The "going-green" trend has now extended to the Asian region (Lee, 2008), including India. In India, companies are serious about building environmental sustainability into their business practices. Many people believe that green marketing is a way to promote or advertise a specific product using environmental terms, including a wider range of organizational activities, such as; product modification, changes to the production process, packaging changes, delivery changes, and modifying advertising as well (Polonsky, 2007). New products are positioned on the basis of environmental appeal and green advertising is on the rise as more manufacturers are informing their consumers about the pro-environmental aspects of their products and services. Recent evidence has shown that green advertising has grown exponentially in the last two decades (Futerra, 2008), becoming the driving force behind increasing public awareness of ecological issues and skyrocketing demand for eco-friendly goods (Easterling et al., 1996; Polonsky et al., 1997). Not surprisingly, the emergence of green consumerism signifies that some consumers are even willing to pay a premium price for green products (Sammer and Wustenhagen, 2006; Haytko and Matulich, 2008; Okada and Mais, 2010; Litvine and Wustenhagen, 2011).

Numerous studies have been conducted in the past on green consumerism in Asian market, particularly on the predictor variables, such as consumer's demographic profiles, consumer's environmental attitudes, consumer's

environmental threats, perceived consumer effectiveness, and perceived behavioral controls (Tan and Lau, 2010; Punitha and Azmawani Abd, 2011; Teng et al., 2011). However, studies to unveil the relationships between consumer's perception of green products and green purchase intention are still relatively less, especially in the Indian scenario. There is uncertainty among firms on the product dimensions to be considered when developing green products and some of the greatest challenges faced by these firms are changes in consumer preferences, suspicion of green advertising claim, unfavorable consumer perception of green products and the high cost invested in developing green products. As a result, it is vital to explore how consumers view environmental issues, and how they behave, especially in their attitudes towards green or environmental friendly products. Since these relationships are relatively under researched in the Indian context and understanding of these aspects is not supported by empirical evidence, the present study is a follow up on the previous studies and thus finds its significance and motivation. An explanation of such a relationship would provide an operational understanding to marketers who consider it important not only to foresee the reaction of green consumers to green communication, but is also important to find means that would enable to affect them in such a way that the final result of decision making (the buying of an eco-friendly product) would be favorable for a certain company.

The present research paper is therefore vital in filling the current literature gap on green consumerism in the Indian market. The main purpose of this study is to investigate if consumers' perception of green print advertisements influences their attitudes towards the brand and their intention to purchase such brands in contrast to non-green advertisement of the same product. We propose to expand on the existing framework of green ads and present a new scheme analyzing consumers' perception of green and non-green print advertisements by providing an explanation of such a relationship that would enhance the operational understanding of marketers for whom it is of great importance to foresee how green claims of their product are ultimately affecting consumers' attitude and whether such claims tend to be beneficial for the company in terms of improving brand image and consumers' intention to purchase.



## VIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

Research in the last decade (Lee, 2009, Rahbar and Wahid, 2011, Lee 2008; D Souza 2004) indicates that consumers are aware of and are willing to pay more to "go green". There is limited research which has examined the impact of green marketing on consumers from emerging economies like India (Bhattacharya, 2011; Prakash, 2002), though, there has been extensive growth in interest exhibited by marketing academics as well as practitioners with regard to the impact of marketing on promoting and maintaining ecological balance (Chammaro et al., 2009; Bhattacharya, 2011). Companies now have greater desire to act in a socially responsible manner and cater for socially responsible consumers (Polonsky and

Ottoman, 1998). Research suggests that consumers are willing to support responsible businesses (Pickett-Baker and Ozaki, 2008) and incorporate ethical considerations into their purchasing decisions (Crane, 2000). Carlson, Grove and Kangun (1993), found that consumers are willing to choose companies that they consider to be environmentally friendly in their business and marketing strategies and are responsive to environmental concerns.

Therefore, marketer's interest in green marketing is also growing and companies are increasingly making green marketing a part of their strategies to appear socially responsible to these consumers. Green marketing incorporates a wide range of activities, including product modification; production processes, packaging, as well as advertising of products through messages specifically focusing at promoting environmental benefits of products and services (Prakash, 2002).

#### *Attitude towards Advertising*

In recent years, pro-environmental behavior among consumers has risen dramatically as demonstrated by increasing involvement in environmental activities such as saving energy, recycling packages, or using public transportation and a willingness to pay higher prices for environmentally friendly products and to rely on their purchase decision on environmental-related issues (Leonidou et al., 2010). As the issue of environmental deterioration has become prevalent and environmental concerns and awareness among consumers has rapidly grown, a new market segment, environmentally conscious consumers, has been widely acknowledged by both marketing practitioners and academic scholars (Leonidou et al., 2010; Mostafa, 2007; Gardyn, 2003).

It has always been believed by consumer behaviorists that an individual's actions can be predicted by their attitudes. There have been a number of attempts to improve the ability to predict an individual's actions and a variety of factors have also been suggested to involve factors which can be classified as either dispositional or situational. Spruyt (2007) indicate that prediction of behaviour is directly dependent on attitude of the consumer which is found to be associated with knowledge and personal experience they have (Davidson et al., 1985). The impact of beliefs and attitude on consumer buying habits has been studied extensively (Fazio and Zanna 1981; Ajzen 1989).

Previous research into consumer attitudes toward green advertising was very comprehensive and addressed some of the same concepts we look for today. Several authors noted motivations for a firm to produce green advertising (Davis, 1992; Frankel, 1992; Gillespie, 1992; Ottman, 1992, 1998, Zinkhan and Carlson, 1995). Others researched consumer responses to green advertising and products in terms of loyalty (Frankel, 1992), willingness to pay higher prices (Phillips, 1999; Schlossberg, 1992), and perceptions of product safety or harm to the environment (Davis, 1994; Wheeler, 1992). Finally, we included items examining the positive and

negative impact of green advertising on society, as noted by Banerjee et al. (1995), Davis (1992), Ottman (1992b), and Schlossberg (1992). In addition to themes used in previous research, we also included three new items. Based on the research conducted by Manrai, Manrai, Lascu and Ryans (1997), we included "Green advertising strengthens company image." Based on the research conducted by Chan (2001), we included "I plan to switch to products and services that were advertised as being green." Finally we included "I prefer products with eco-labeled packages" based on current trends in packaging and labeling to include environmentally friendly messages and/or recycling information. Furthermore research in this area has indicated that if attitudes are to be used in predicting the consumers behavior's then there are a number of methodological issues that have to be sorted out. According to (Ajzen and Fishbein, 1977), behavior and attitudes have to be measured at the same correspondence level. There are a number of theories that have been put forth to explain the process by which attitudes predict behavior.

According to (Ajzen and Fishbein, 1980), theory of reasoned action, "people consider the implications of their actions before they decide to engage or not engage in a given behavior". Thus according to the above theory, people's attitudes play a significant role when it comes to their forming an intention to act in a certain behavior. The model primarily argues that people engage in processing that leads to the formation of attitudes, norms and intentions prior to performing the behavior. Fazio (1986), proposed another theory in which he states that "attitudes guide behavior through an automatic and spontaneous process instead of a deliberate one as argued by the earlier two theories". Thus when an individual forms a favorable (or unfavorable) attitude towards an object then the object will automatically be seen as one that has many favorable (or unfavorable) characteristics to the individual. The attitude is accessed spontaneously by the mere presence of the object

In spite of the presence of theories that aid in prediction of behaviors from an individual's attitude, when it comes to environmental consumerism, the predictive ability of attitude is still being debated by researchers. There have been a number of attempts to provide a valid explanation to the presence of inconsistencies among behavior and attitudes, effects of external variables and lack of measurement reliability and validity (Mainieri et al., 1997), low correlations among environmental behaviors and different levels of specificity in the attitude behavior measures.



#### **YPOTHESES DEVELOPMENT**

##### *Green Advertisement and Brand Image*

Combining the understanding of attitudes with brand image, Trommsdorff (2008) defines brand image as "a subjective perception of a brand that is based on verbal and pictorial associations and represents, by the means of attitudes, an overall judgment of a brand based of convictions and feelings". Attitudes, both cognitive and affective, are a relevant aspect of research, because they

determine the consumer's behaviour (Trommsdorff, 2008).

Researchers support the notion that consumers tend to use beliefs about a product's environmental influence to characterize a brand's image (Rios, Francisco, J.M., Martinez, Teodoro, L., Moreno, Francisca, F., and Soriano, Paloma, C., 2006). Specifically, advertising being a significant medium between the corporations and consumers helps in maintaining a favorable image. The role of advertising in informing consumers, either directly (Grossman and Shapiro, 1984; Stigler, 1964) or indirectly (Milgrom and Roberts, 1986; Nelson, 1974) about brand attributes and/or prices, now includes terms such as recyclable, environmentally friendly, ozone safe, biodegradable etc. popularizing it as green advertisements and often exposing consumers to such messages. As a result, consumers develop feelings and judgments towards such advertisement claims, which affects their attitude and beliefs about the brand (Batra and Ray, 1986) and hence their intention to purchase.

Keller (1993) views brand image as perceptions about the brand as reflected by the brand associations held in consumer memory and suggested that associations that are unique, strong and favorable should create a positive brand image which when processed by consumers will bias consumer brand behavior (Keller, 1993). This implies that if a consumer holds a strong, positive and favorable association of the ad to which he/she is exposed, it is likely to result in a positive image of the advertised brand i.e. a positive brand image. Also it is suggested that an effective brand image construction can cast a strong impression in consumer's mind as it differentiates products and services based on tangible quality features (Mudambi et. al., 1997) including symbolic meanings that associate with specific attributes of the brand, making a mental picture of a brand in the consumer's mind (Cretu and Brodie, 2007; Padgett and Allen, 1997).

In this context, consumer's exposure to green advertisements as opposed to non-green advertising, should lead to differentiated patterns of perceptual and behavioral consequences. Companies, therefore, embody the concept of green advertising in their marketing mix to obtain such a differentiation advantage of their products (Chan et. al., 2006; Peattie, 1992; Porter and van der Linde, 1995) as well as invest many efforts in improving their brand image as it is an important determinant of customer satisfaction and their consequent intention to purchase. This implies that if consumers link strong, favorable, and unique associations to a brand (Aad), in their memory, they are more likely to favor brand image and are more likely to consider the branded product for purchase (Aajer, 1996; Keller, 1993). Therefore, we propose that:

**H01: The effect of Attitude towards the Ad on Brand Image is more for green ads than for non-green ads.**

Similar to other universal product trends (e.g. technology, fashion, etc.), the green "industry" has unique properties and consumer relationships that influence purchasing patterns, both negatively and positively. Consumer's willingness to

purchase green products has often been contributed to their self-labeled level of environmental enthusiasm, coupled with their skepticism and awareness of green claims.

Leonidas et al., (2011) studied the relationship between consumer's knowledge of environmental issues and the effectiveness of advertising claims. The advertisements used in these studies featured basic or "shallow" claims, and were perceived by consumers to be lacking in credibility and comprehensiveness. Results also concluded that only low environmentally involved participants found validity in the green appeals (Leonidas et al., 2011). Mitchell & Ramey (2011) suggested that consumer's willingness to purchase green may be rooted in their passion for the environment. They wrote that those who are considered environmental enthusiasts are more likely to purchase green products than others. Mitchell and Ramey (2011) go on to state that those passionate about the environment will be motivated to purchase any product that is "green".

Research conducted by Basgöze, & Tektas (2012) found various factors that make a difference in consumer's purchasing decision after interviewing both environmental and non-environmental enthusiasts. Their research outlined various elements and barriers that impact consumer's willingness to purchase green products. The elements such as price of the product, confusion regarding its authenticity, product's unavailability and lack of trust among consumers towards the green advertisements were among the few factors that hampered the process of conversion from demand into sales.

Similar research conducted by Leonidas, Palihawadana & Hultman (2011) highlighted that the most challenging aspect of green advertising and consumer purchasing patterns is the gap between the attitudes and buying behavior of consumers. One study conducted by Coleman et al. (2011) suggested that purchasing patterns might follow the foundations of the Competitive Altruism Theory. This theory describes the process in which an individual attempts to outperform others in terms of generosity/status. For example, a green enthusiast would view a green purchase as a means of obtaining long-term gains, such as respect or admiration for their actions. However, research has also documented environmental enthusiasts avoiding green products. Such contradictions have also been interpreted through the Competitive Altruism Theory. In this view, environmental enthusiasts believe that by avoiding false claims in green advertising they are in turn paying a better service to the environmental community. Ultimately, the disconnect within green advertising lies between what is getting consumers interested, and what is getting them to act on these interests.

According to Mostafa (2007), attitude is an important predictor to the behavior; therefore the understanding on the environmental attitudes of a typical consumer is by means to predict their behavior towards green purchasing. There are many studies being conducted to understand the relationship between environmental attitudes and environmental related issues. Numerous of these studies supported positive relationship between environmental attitudes and green



purchase intention in different cultures, such as Asian, US, and European, and in different product categories, such as organic food, timber-based products, organic products and environmental friendly vehicles (Sinnappan and Rahman, 2011; Kim and Chung, 2011; Yahaya, Nizam and Aman, 2011; Ahmad and Juhdi, 2010; Mostafa, 2007; Tarkiainen and Sundqvist, 2005; Chan and Lau, 2001; Kalafatis, Pollard, East and Tsogas, 1999).

Given the range of findings, it seems to be clear that the link of attitude and purchase behavior has to be approached differently and tested deeply. The attitude of consumers toward a green product or service can be a major deciding factor for a positive purchase decision. Interaction between consumers with positive attitude towards green products and high product availability will create a favorable attitude towards purchase behavior, which would result in a stronger intention to purchase leading to a higher purchase of green products (Ahmad and Juhdi, 2010).

Therefore, we hypothesize that:

**H02: The effect of Attitude towards the Ad on Intention to Purchase is more for green ads than for non-green ads.**



#### RESEARCH DESIGN AND METHODOLOGY

##### *Data collection form and generation of scale items*

The feedback form was developed after a thorough research of secondary data. Various references led to the development of an optimal questionnaire to achieve the research objectives. First part of the questionnaire consists of a brief demographic profile. The second part consists of measures of attitude towards the ad, brand image and intention to purchase. Each construct's development is briefly discussed as follows.

##### *Attitude towards the Ad*

The measures of attitude toward the ad was assessed using a 21 item seven-point semantic differential scale, with 1 representing strongly disagree and 7 representing strongly agree. The statements adopted have been included in numerous other studies (e.g. Burke and Edell, 1989; Zinkhan et al., 1986; Aaker and Lee, 2003; Hopkins, C. D., et.al. 2004; Cotte et al. 2005; Bernard, R. J., 2009; Marchand, J., 2010 and so on). Respondents were asked: "When looking at the advertisement and considering all the information given in it, what is your overall attitude toward the advertisement?" Respondents rated their agreement with statements like "the ad is useful", "the ad is pleasant", "the ad has a status appeal" that measured Cognitive response, affective response and materialistic response towards the ad shown. The internal reliability of the scale items is well documented in earlier studies. The composite reliability for statements 1-13 was 0.750 for the cognitive dimension and 0.770 for the affective dimension. The square structural link between the cognitive dimension and the affective dimension was 0.681 and the average variance extracted was 0.500 for the cognitive

dimension and 0.534 for the affective dimension. While for the affective statements, cronbach  $\alpha$  is 0.91, composite reliability is 0.90 and extracted variance is 0.76. The last three items measure materialistic appeal "not an 'image' appeal/an 'image' appeal", "non-materialistic/materialistic", and "not a status appeal/a status appeal" with  $\alpha=0.81$ .

##### *Brand Image*

Brand image has been conceptualized and operationalized in several ways (Reynolds & Gutman, 1984; Faircloth et al., 2001). It has been measured based on attributes (i.e. Koo, 2003; Kandampully & Suhartanto, 2000); brand benefits/ values (i.e. Hsieh et al., 2004; Roth, 1995; Bhat & Reddy, 1998); or using Malhotra's (1981) brand image scale (i.e. Faircloth et al., 2001).

The study adopted the measure described by Keller (1993) that the image benefits can be classified into functional, experiential and symbolic benefits, which was originally derived from the work of Park et al. (1986). The present research paper adopted five dimensions to measure the overall brand image i.e. experiential, symbolic, social, functional, and appearance enhancer. The items under each of the sub-category is developed and modified in context of the requirements of the present research work. Sondoh Jr, S.L. et.al. (2007) has also categorized brand image into the above mentioned five dimensions and the items under each sub-category is a adoption from the work of various authors, i.e. Sweeney and Soutar, (2001); Tsai (2005); Dee Rio, Vazaquez and Iglesias (2001). The two most appropriate scales, earlier adopted by Cronin and Taylor (1992) and Sondoh Jr, S.L. et.al. (2007) were reviewed and complimented to make it suitable in context of the present study.

##### *Intention to Purchase*

The scale used is typically characterized by multiple Likert-like items used to measure the inclination of a consumer to purchase the product shown in the advertisement. The various versions of the scale discussed here employed between two and four items. Most of the studies appear to have used seven-point response scales with the exception of Okechuku and Wang (1988) who used a nine point format. The most widely used and validated instrument for the measurement being a 3-item 7-point scale, i.e., likely/unlikely, probable/improbable and possible/impossible developed by Scott, Mackenzie, Lutz, and Belch in 1986. The scale suggests acceptable Cronbach's alpha reliability with 0.857. A similar three-item metric scale was developed by Dodds et al. (1991), to study measures of willingness to buy. Respondents were asked to respond to the question, "If you were in the market for [the product], how likely is it that you consider buying [the target brand]?" on three seven-point scale items, measuring likelihood, probability and willingness to purchase. Several authors (Faircloth, Capilla and Alford, 2001; Kozup et al., 2003; Hopkins, Raymond and Mitra, 2004) adopted these measure, both in original and modified versions in their studies. Also, four additional statements developed by Bruner II (2000), were included to make the scale more comprehensive in nature.

Before the finalization of the questionnaire, mentioned in pre-testing of the questionnaire was carried out for qualitative investigation. Ten percent of the total sample i.e. 15 respondents were administered the questionnaire for this purpose. Subsequently, the language of some of the questions was simplified. For the final data collection, respondents were personally briefed about the purpose of the study and all queries were clarified.

### **Subjects**

A total of 150 postgraduate university students in business administration, from North India, volunteered to participate in the study. The sample shows strong internal validity, which is prioritized over external validity in testing theory (Calder et al. 1982; 1983). Also, respondents belonged to only one region, thereby enhancing homogeneity among sample. The post graduation students, with age demographics ranging 22-25 years were chosen because the product's consumption is drastically affected by the opinion of the young consumers. Youngsters make an explicit effort to select such products, and even if they lack financial soundness to buy that product, they are the major decision influencers in this product category. As per the pretest results which asked the respondents to enlist the product categories that they are major purchase decision makers of, the advertised product ranked among the top of the list and was therefore selected for the present study.

### **Stimulus Design**

Two hypothetical ads were designed to help identify consumers' attitude towards green and non-green ads and their intention to buy the brands. The hypothetical advertisements for the purpose of the experiment were developed using an advanced version of Corel graphics with the help of a professional graphic designer to ensure that the advertisements appear real and convincing to the respondents. Care was taken to develop the advertisements which dealt with some claims that explicitly reflected how the sponsor or its offering interacted with the biophysical environment. In terms of green and non-green, two versions of print advertisements (green and non-green) for a hypothetical brand (Paper Art) of stationary product were developed. Advertised page contained the full-page color print of the advertisement, along with the text about the advertisement and image of the advertised product. The ad page consisted of the text at the bottom half of the page and the top half of the page carried the picture of the advertised product along with the brand name printed in large bold letters, a logo and a tag line. The text of both the advertisements consisted of a set of statements about the product attributes. In line with the objectives of the study, one ad consisted of green claims while the second ad made no connection with the greenness of the brand. In addition to the hypothetical ads, we also used hypothetical brand name to avoid any previous perceptions about the brand due to past experiences.

Finally, the ads were viewed by five viewers independently and were asked to identify an ad to be green or otherwise. All the viewers correctly identified the green ads as being green and

no green ads as being non green in nature and therefore the two ads constituted our stimulus.

### **Pilot Study**

After the pretests and development of the advertisement stimuli, the questionnaire was made to undergo pilot survey consisting of the small sample size of 50 respondents to ensure that the questionnaire items are modified and corrections are incorporated. The procedure of the pilot survey was similar to the procedure followed for the final data collection, constituting the sample with same demographic characteristics.

### **Manipulation Checks**

In order to avoid manipulations by the respondents, all subjects were verbally informed that the study was concerned with measuring the effectiveness of advertising in print media, designed to measure ad effectiveness. In this stage, the subjects were provided with a print advertisement of the product with enough time to look at the ad and study it. No attempt was made to prevent the interaction among the respondents over the exposure period. Since the green and non-green ads developed both for low and high involvement product categories were hypothetical, the respondents were asked to analyze the given ads assuming these appeared in a magazine or newspaper. This manipulation check on our sample, prior to data collection confirmed that our manipulation was effective in creating required experimental conditions.

### **Procedure for final Data Collection**

This exploratory study uses an experimental design as this design lends itself to establishing causal relationships (Hoyle, Harris and Judd, 2002; Tabachnick and Fidell, 2001). Each of the 150 subjects was first exposed to the non-green visual print stimuli and told that this was a research to measure attitude of students toward advertising in general. They were given 90 seconds to read the stimulus advertisement. Following this, they were asked to provide feedback regarding the stimuli by checking what they thought was a valid response to each item on the questionnaire. The questionnaire contained items related to attitude toward ad, brand image and intention to purchase.

The procedure was repeated with the same respondents, but this time with a green advertisement stimulus of the same product. The respondents were asked to provide their feedback regarding the change in the advertisements. Demographic items were also included and the respondents were allowed to complete the questionnaire at their own pace. The entire task took approximately sixty minutes. The response sheets from each respondent was compared and analyzed to identify a shift or change in the respondent's attitude and perception with the change in the advertising appeal.



## DATA ANALYSIS

### Demographic Profile of the Respondents

The demographic profile constitutes the first part of the questionnaire including Gender, Qualification and Age group. Table 1 summarizes the demographic profile of the respondents.

**Table 1: Demographic Characteristics of Respondents**

S.No.	Respondent's characteristics	% of respondents
1	<b>Age group</b>	
	Below 20	29.3
	20-25	68.7
	25-30	2.0
2	<b>Gender</b>	
	Male	43.3
	Female	56.7
3	<b>Education</b>	
	Graduate	54
	Post Graduate	30
	Others	16

According to Table 1, males comprised 43.3 % while 54 % of students were graduates, 30 % post-graduate students and remaining 16 % belonged to other courses. Out of total 150 respondents, 44 respondents belonged to the below 20 age group, leaving 103 to the age group ranging 20-25.

### Reliability Analysis

Firstly, the reliability coefficients for all the three scales of attitude toward advertising, brand Image and purchase Intention scales were measured. The most significant measure of reliability is coefficient alpha. The internal reliability score was measured using cronbach's alpha. The coefficient alpha reliability estimates indicate that the items in each scale are acceptable measures of each of the factors. Nunnally (1978) suggests that an acceptable level of coefficient alpha in exploratory analysis is 0.70. The overall Cronbach's alpha for 'Attitude toward Advertising' scale was 0.781 across all 21 items. For the brand Image and Intention to Purchase scales, the values of Cronbach's alpha were 0.821 and 0.857 respectively. Both these values were also within the acceptable limits.

### Test of the Proposed Hypotheses

A multi-group moderated linear regression analysis was employed to test the relationship posited in the hypotheses. A moderator analysis is used to determine whether the relationship between dependent and independent variable depends on or is moderated by the value of a third variable i.e. type of ad-green/non-green.

### Moderating Effect of 'Type of Ad' between Attitude towards Advertising and Brand Image

The first hypothesis states that the effect of Attitude towards the Ad on Brand Image is more for green ads than for non-green ads. The present study uses SPSS Ver.17 to measure the moderating effect of type of ad (Green or non-green) between attitude toward advertising and brand image. We created three variables- attitude toward the ad, which is the respondents' level of attitude towards advertising measured on a seven point scale; brand image- which is the respondents' perceptions about the brand as reflected by the brand associations held in consumer memory and type of ad i.e green ad and non-green ad. However, the moderator variable, type of ad, cannot simply be entered into linear regression equation and therefore a dummy variable is created.

To test the hypothesis that brand image is a function of attitude toward advertising, and more specifically whether type of advertising moderates the relationship between ad attitude and brand image, a linear regression analysis was conducted. In order to understand the moderating effect of ad type, we interpret the Model Summary (Table 2) which provides the change in  $R^2$  measure used to determine the statistical significance of the interaction term and, subsequently, whether type of ad moderates the effect of attitude towards the ad on brand image, as highlighted in Table 2.

In the first step, two variables were included: ad attitude and type of ad. These variables accounted for a significant amount of variance in brand image,  $R^2 = .340$ ,  $F(2, 153) = 76.57$ ,  $p < .001$ . To avoid potentially problematic high multicollinearity with the interaction term, the variables were centered and an interaction term between ad attitude and type of ad was created (Aiken and West, 1991).

**Table 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.582	.340	.336	22.4865	.340	76.573	2	153	.000
2	.600	.360	.354	22.1800	.020	9.265	1	152	.003

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.542	.294	.285	.56965	.294	31.885	2	153	.000
2	.550	.303	.289	.56810	.008	1.838	1	152	.177





**Figure 1:** Green advertisement for the hypothesized brand of stationary products (Paper Art)

Next, the interaction term between ad attitude and type of ad was added to the regression model, which accounted for a significant proportion of the variance in brand image,  $\Delta R^2 = .02$ ,  $\Delta F(1, 152) = 9.27$ ,  $p = .001$ . The  $R^2$  Change suggests an increase in variation explained by the addition of the interaction term (i.e., the change in  $R^2$ ), which is the percentage increase in the variation explained by the addition of the interaction term. We can also see that this increase is statistically significant ( $p < .05$ ). Examination of the interaction shows a change in effect with green advertising resulting in increased brand image while non green ads showed significantly lesser change in brand image. We, therefore, conclude that type of ad does moderate the relationship between attitude toward the ad and Brand Image.

#### *Moderating Effect of 'Type of Ad' between Attitude toward Advertising and Intention to Purchase*

Further, to test the hypothesis that the effect of Attitude towards the Ad on Intention to Purchase is more for green ads than for non-green i.e. type of ad moderates the relationship



**Figure 2:** Non-Green advertisement for the hypothesized brand of stationary (Paper Art).

between attitude toward the ad and Intention to purchase, a multi group linear regression analysis was conducted. The overall model was significant,  $R^2 = .294$ ,  $F(3, 152) = 21.99$ ,  $p = .001$ . Variables that were predicted to have problematically high multicollinearity were centered (i.e., Attitude toward the ad and Intention to purchase; Aiken and West, 1991).

In the first step, two variables were included: attitude toward the ad and type of ad. These variables accounted for a significant amount of variance,  $R^2 = .294$ ,  $F(2, 153) = 31.89$ ,  $p < .000$ . Next, in the final step of the regression analysis, an interaction term between attitude toward the ad and type of ad score was created, which was entered into the next step of the regression. The interaction term did not account for a significant amount of additional variance in brand image scores,  $\Delta R^2 = .008$ ,  $\Delta F(1, 152) = 1.84$ ,  $p = .117$  (Table 3).

The R Square Change shows the change in variation explained by the addition of the interaction term (i.e., the change in  $R^2$ ). The change in  $R^2$  is reported as .008, which is a proportion. More usually, this measure is reported as a percentage so we can say that the change in  $R^2$  is 0.08%, which is the percentage change in variation explained by the addition of the interaction term- type of ad. We can also see that this change is statistically insignificant ( $p > .05$ ). As a result we conclude that type of ad does not moderate the relationship between attitude toward the ad and Intention to Purchase.



#### **DISCUSSION AND IMPLICATIONS**

To gain equity and to appeal to the environmentally conscious consumer, firms are increasingly trying to establish their brands as green brands. By doing so, marketers hope that consumers will respond more favorably to brands that offer a natural or eco-friendly alternative to satisfy their needs. Researchers in the past have struggled with the question about why despite concerns towards the environment (attitude), consumers fail to purchase environmentally friendly or green products. The present study therefore attempted to investigate the moderating effect of type of ad between attitude toward advertising and intention to purchase and brand image.

Findings of the present study reveal that the positive relationship between attitude towards ads and brand image is moderated by the type of advertisement such that the relationship between the dependent variable, brand image and the independent variable, attitude towards the ad is more positive for green ads as compared to non green ads. This implies that consumers' attitude and perceived quality or image of the product depends on the type of advertisement. It is established that high brand equity is accompanied by favorable, strong and unique associations in memory. In the case of environment or green advertisements, the perceived image of the brand becomes positive as such communications promote the environmentally responsible behavior of the firms. The same is not true in the case of non green communications; as such ads do not distinguish themselves from the run-of-the-mill advertisements.

Furthermore, the findings suggest that although type of ad moderates the relation between attitude and brand image it does not moderate the relationship between attitude and intention to purchase such brands. This implies that the positive relationship between attitude and purchase intention does not differ for green and non green ads. One can think of several reasons for such findings. In the Indian context, although consumers may be concerned about the environmental impact of what they buy, they still look for financial benefits that accrue from such a decision. Despite an increase in the number of green advertisements both in print and television, the persuasiveness of such appeals on the target audience is still relatively low. Consumers differ in their concern for and behavior toward environment preservation. This implies that the consumers concern for and attitude toward the environment may be high, but their inclination to spend more for such products is not high. A direct implication of this finding for the marketers and advertisers is that green advertising will help in building a strong and positive brand image but it may not translate in consumers' decision to purchase such brands.



#### IMITATIONS AND FUTURE RESEARCH

Although the present study took a positive approach in reviewing previous literature of attitude toward green ads, brand image, and intention to purchase and the moderating role of type of ad using advanced statistical tools, the conclusions and managerial implications of this study must be adopted with due caution, given that the research was experimental in

nature and the data were gathered in an artificial environment. Some of the limitations worth acknowledging include issues with the presence of a single product category used in the study. Although we took care to ensure that the product used in our study was relevant to the test population, yet the findings are based on only one hypothetical brand of stationary notebooks and therefore generalization beyond this set should be made with caution. However, although the specific findings on the hypothetical brand may not be the same as the general populations', it is expected that the measurement protocol is generalizable. For future study, it will be worthwhile to investigate the same set of relationships with high involvement/feeling and low involvement/feeling product categories.

Further, although the present study examines linkages between multiple constructs which has not been undertaken in earlier studies, clearly, future research is required to provide a further understanding of linking these constructs by exploring the possibility of inclusion of other variables such as consumer satisfaction and brand equity. Research in the future might also concentrate on measuring the behavioral and attitudinal effects of green and non green advertising. Such a comparative analysis will in turn result in an improved understanding of the relationships between the considered constructs. A follow up study in the next 2-4 years is strongly recommended to determine if the recent changes in green advertising have further led to a change in the perception of consumers and whether advertisers have been able to take advantage of the strength of environmentally conscious consumers in the future.

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