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OBJECTIVES

HYPOTHESES

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## A FRAMEWORK FOR GREEN PRODUCT ADOPTION BY INDIAN CONSUMERS

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## ABSTRACT

The purpose of this paper is to consolidate the research done on Green Consumer Behavior into one comprehensive theoretical framework which can be use to study the Green product adoption process of Indian Consumers. The research prepositions proposed in this paper are derived on the basis of review of literature from the field of Green Consumer Behavior and Green Marketing. The paper provides a framework for studying the Green Product adoption process by Indian consumers keeping in mind the particular factors that affect environmental behaviors of Indian consumer like cultural values, legal enforcement. There is a very little body of literature available on Green Marketing and Green Consumer Behavior in India context, this paper tries to consolidate the findings of various authors regarding Green Behaviors and presents them in form of a theoretical framework for studying Green Behaviors of Indian consumers.

### **KEYWORDS**

Green Marketing, Environmental Marketing, Sustainable Marketing, Indian Consumers, Green Consumer Behavior.

### INTRODUCTION

any corporations around the world have started the green initiative to counter ill effects of business processes particularly transformation and consumption of products on natural environment and its inhabitants. Customer awareness and liking for green products are also increasing. Today citizens across the global are focused on problems like terrorism, rising inflation etc, but at the same time environmental issues also remain high on the list of concerns to the average citizen (Butler, 2006). In Asian countries particularly in China many firms have started the green initiative because of the increased demand for green products in the Asia-Pacific region of the world (Gurau and Ranchhod, 2005; Johri and Sahasakmontri, 1998).

The business world has undergone a sea change since the early days of the environmental movement when environmentalism was primarily confined to a niche segment of consumers, many of whom had emerged from the alternative life styles and consumption patterns movements, majority of people think that they reflect on the social upheaval happening in the United States and European nations during the decade of 60's (Montgomery, 2009). The "Green movement" since then has entered the mainstream status in many developed nations, where eco-friendliness is becoming a major consumer preference and an orientation among the elite living in such nations (Webb *et al.*, 2008; Holusha, 2000; Rosenthal and Revkin, 2007). But a question arises here that is whether environmental concerns have some broad appeal in the developing world economies? However, based on the data about the air quality in China and India it appears that these nations are giving more emphasis to economic expansion and progress and not to clean air and emissions (Plant, 2007). According to Head (1996), Asian countries particularly China took a long time to develop some awareness about environmental problems.

McGougall (1993) has pointed out the role of consumers in environmental movement. This fact is supported by fact that 30-40% of the environmental degradation has been brought about by the consumption activities at house hold level (Grunert, 1993). However, in a recent market research study it was found that many dual-income couples from china responded that they prefer natural ingredients and organic food products despite they are more costly than their conventional counter parts (Manget and Munnich, 2008). Like China and other developing nations today India is also facing a severe problem of environmental degradation (National Environment policy, 2006). However, apart from the studies conducted by Jain and Kaur (2004, 2006) there is a lack of studies that have explored the environment behaviors of Indian consumers. Thus to get a better understanding of India's environmental efforts, a study of how its consumers view and feel about environmental issues and how they behave accordingly serves as a good research agenda.

## **REVIEW OF LITERATURE**

For preservation of the degrading environment it necessary that a paradigm shift must occur towards sustainable consumption and this can only be achieved by increasing consumer awareness about the environment and motivating the consumers to purchase and use green products. Thus it is necessary to study and understand the green purchase behavior of the target consumer. As per Mostafa (2007) green purchasing behavior refers to the consumption of products that are:

- Beneficial to the environment
- Products are recyclable

## • And Products that are sensitive or responsive to ecological concerns.

Consumers can play a significant role in reducing their environmental foot print by purchasing green products. As per Mainieri *et al.*,(1997) consumers pro environmental concern is one of the main determinants of their "green buying" i.e. purchase of eco friendly products that have a less harmful foot print on the environment.

However, as also pointed by Laroche *et al.*, (2001) consumers, who are concerned about the environment and have knowledge about environmental problems try to purchase eco friendly or green products. Recent additions to the present body of literature also suggest that there is a many fold increase in number of consumers who are willing to purchase green products and market for green products is also expanding (Laroche *et al.*, 2001). Also the available literature suggests that such green consumers are evolving and also points that they tend to vary or differ in terms of their acceptance of green or eco-friendly products and life styles (Jungermann & Jungermann, 2010).

According to Ishaswini and Datta (2011) there is very little body of literature about green consumers in India. Booming Indian economy (Lenartowicz and Balasubramanian, 2009) and huge Indian consumer market (Enderwick, 2009) is inspiring many researchers to study various dimensions of the Indian consumers' behavior. One such dimension could be exploring the environment friendliness of Indian consumers. The studies conducted by Jain and Kaur (2004 and 2006) are a mile stone in green marketing research in Indian context, but others consumer behavior related aspects of green marketing like role of Green advertising, Eco-labels, Perceived Consumers Effectiveness, cultural values, effect of legal constraints, availability of green products to the consumer, needs to be explored along with pro-environmental awareness, attitudes and demographics of the consumers. Thus a comprehensive framework needs to be developed in order to study the green product adoption process in India.

### **NEED OF SUCH FRAMEWORK**

A framework to study green consumer behavior is need because of the following reasons:

- To make better positioning strategies for green products for Indian Markets.
- Propelling green marketing and increasing adaptability of green products then only production and capital investment in green products can be increased.
- Enhancing the role of green marketing in future Indian economy as a tool of environmental protection and increasing consumer welfare.

### DEVELOPMENT OF RESEARCH PREPOSITIONS/ RESEARCH METHODOLOGY

Based on the review of literature the following important variables that affect green consumer behavior have been identified viz., Product Pricing and Willingness to pay, Green Advertising, Eco labeling, Environmental Awareness, Environmental Attitudes, Perceived Consumer Effectiveness, Peer Groups, Socio Demographic variables, Cultural Values, Legal constraints, Availability of green products and support services. The following sections of the paper discusses about the relationship of these variables with Green product adoption.

## PRICING AND WILLINGNESS TO PAY

The pricing aspect in green marketing is mainly focused on "the consumers' willingness to pay" theme. As per Hopkins and Roche (2009) the most important factors in estimating the consumers' willingness to pay a premium price for green products is the product category and the perceived benefits received from using a green product. Also as pointed out by Molla-Bauza *et al.*, (2005) in case of Spanish consumers that they were willing to pay up to 16% more for a green alternative than the price of the conventional non green product. D'Souza *et al.*, (2006) also have reported a very important finding about pricing issues related with green products, that in a study of Australian consumers it was found that 60 percent of the respondents are having the perception that green products are expensive than conventional products. Forbes *et al.*, (2009) have also reported that the New Zealand consumers are willing to pay 5% more for an eco-friendly alternative. Willingness to pay studies are very much dependent on the demographic profile of the consumer. In this regard an important point is stated by Rowlands *et al.*, (2003) that willingness to pay studies should be concentrated more on psychographic segmentation of consumers instead of the usual demographic models. They have also pointed out that willingness to pay bear a direct relationship to ecological concern. Also in this regard Laroche *et al.*, (2001) have mentioned that consumer's attitudes towards environment and its problems plays as good predictors of consumers' willingness to pay for green products. However, in Indian consumers are not willing to pay extra for such green attributes. So any effort to make green products main stream should start by studying the willingness to pay of Indian consumers and the perceival of price premium the consumers are willing to pay for green products. Hence it can be proposed that:

P1: There is a significant relationship between cost of green products and their adoption by the consumer.

### **GREEN ADVERTISING**

Green or environmental advertisements first came to the light in the decade of 60's in the 20<sup>th</sup> century (Easterling *et al.*, 1996). Zinkhan and Carlson (1995) have defined green advertising as, "Environmental or green advertising refers to all appeals that include ecological, environmental sustainability, or nature friendly messages that target the needs and desires of environmentally concerned stakeholders." Green advertisements can be classified under three categories mainly:

- Those advertisements that directly or indirectly address the relationship between a product/ service and the natural environment.
- Those advertisements that promote an environmentally responsible life style without specifically mentioning the use or a particular product or service.
- Advertisements that also present a corporations environmental conscious image also come under this category (Banerjee et al., 1995).

Banerjee *et al.*, (1995) and Menon *et al.*, (1999) have also discussed about the content of green advertisements, as they have pointed out that some of these advertisements have educational content, while some only promote a green product and some project a responsible corporate image to the public.

Green advertisements can play a positive role in influencing the consumers towards becoming more environmentally oriented. Schuhwerk and Lefkoff-Haugis (1995) have reported that low environmentally involved consumers were positively affected by green appeals. Leonidou *et al.*, (2011) have pointed out that green advertisements are an important tool in communicating a firm's eco friendly business practices to various stakeholders and for gaining competitive advantage in the market place. As pointed out by Cohen (1973), green advertisements help to shape consumer's knowledge and transform this knowledge into the purchase of green products. However studies regarding effects of green advertisements on Indian consumer are meager. Hence on the basis of the above discussion we conclude that:

P2: There is a significant relationship between purchase process of green products and green advertising.

#### ECO LABELING

Truffer *et al.*, (2001) have defined Eco-labeling as, "Eco-labeling may be defined as making relevant environmental information about a product available to the appropriate consumers through the product label to promote environmental goal, cause or objective through consumer choice." As per OECD (1997) there are three types of Eco- Labels:

- First type refers to those labels which refer to the environment friendliness of a product compared with rest of the products and are meant to encourage the consumers to make a switch towards more green or eco-friendly products. These labels are part of third party certification program and are voluntary in use and nature.
- Second type of labels are the ones that provide environmental claims made by manufacturers and refer to specific attributes of etc.
- Third and last type use pre-set indices and give quantitative information about the products based on independent test and verification.

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An important point made by Teisel *et al.*, (2002) is that Eco-labeling affects consumer behavior. Also Eco-labels can influence both consumer and manufacturer behavior. This is so because if a large portion of the populations demands eco friendly products then presence of Eco-labels on the products may provide the manufacturer an incentive to differentiate and sell their products and services along environmental characteristics. Thogersen (2002) also points out that that majority of the consumers pay attention to Eco-labels. Also Grankvist *et al.*, (2004) have pointed out that information about the environmental outcomes provided by Eco-labels did influence product preferences. A recent study conducted by Goswami (2008) pointed out about the effectiveness of Eco-labels in Indian context for clothing brands. The study concluded that 64.2% respondents which were negative on environmental concern and certification; these consumers were also negative on the importance of certification. Thus majority of the respondents of the study did not favor Eco-labels, which is contrary to the findings of Grankvist (2004), Thogersen (2002) and Teisel *et al.*, (2002). Hence in respect of Indian consumers it can be proposed that: P3: There is no significant relationship between adoption of green products and Eco-labeling

## **ENVIRONMENTAL AWARENESS**

Environmental awareness means the individual consumers perception of the impact of human activities on the environment (Kollmuss and Agyeman, 2002). The available literature suggests a positive association between awareness of environmental problems and the environmental or green behavior of consumers (Grob 1995). Also a study carried out by Roberts (1996) reports that a high degree of environmental awareness separates the green consumers' from the non green ones. Other authors have pointed out the positive relationship between knowledge of environmental issues and environmentally responsible behaviors (Smith-Sebasto 1995; Schann and Holzer 1990; Roth and Perez 1989; Hines *et al.*, 1987). However, some researchers are in disagreement with the relationship between environmental behaviors and knowledge (Shean and Shei, 1995).

In Indian context a study conducted by Jain and Kaur (2006) explored the environmental awareness of the Indian consumer. They have reported that both Indian male and female share almost similar levels of awareness. Also age was found to show no significant relationship with awareness. Thus it can be proposed that: P4: Consumer awareness plays a significant role in adoption of green products.

## **CONSUMER'S ENVIRONMENTAL ATTITUDES**

The available literature indicates a strong relationship between attitudes and eco friendly behaviors (Lynne and Rola 1988). Kassarjian (1971) studied consumers' reaction towards a brand of petrol that reduced air pollution and also found attitudes towards air pollution as a significant predictor in determining the consumer behavior towards that brand of petrol. In this regard Balderjahn and Katz (1988) has also found that a positive attitude towards eco friendly living resulted in eco friendly behaviors like buying and using green products. Also moderating relationship between attitudes and eco friendly behaviors has been explored by authors such as Axelrod and Lehaman, (1993) and Smith *et al.*, (1994). The present body of literature also strengthens the relationship between attitudes towards the environment in general (Hines *et al.*, 1987; Schwepker and Cornwell, 1991). A few authors also have reported a weak relationship between attitudes and eco friendly behaviors like Berger and Corbin (1992).

Jain and Kaur (2006) have examined the environmental attitudes of Indian consumers and they have pointed out that gender wise difference exists between environmental attitudes of Indian consumers and age of the consumer has negative relationship with environmental attitudes. Hence it can be hypothesized that:

P5: Consumer's attitudes towards the environmental problems play a significant role in adoption of green products.

### PERCEIVED CONSUMER EFFECTIVENESS

As per the following studies for example Antil (1978); Berger and Corbin (1992); Kinnear *et al.*, (1974); Roberts (1995); Roberts (1996); Roberts and Bacon (1997); Webster (1975); Weiner and Doescher, (1991), it is evident that consumers' attitudes and responses to environmental appeals are a function of their beliefs and individuals can positively influence the outcomes to such environmental problems. Such attitude or belief shown by consumers' is referred to as Perceived Consumer Effectiveness. Roberts (1996) have mentioned PCE as the single strongest predictor of environmentally conscious behaviors. PCE was initially considered as a measure of the attitude of the consumer itself and was also modeled as a direct predictor of environmentally friendly behaviors (Kinnear *et al.*, 1974; Ritchie *et al.*, 1981; Seligman *et al.*, 1979). PCE is also defined as an estimate of the extent to which personal consumption activities contribute to the solution of a problem (Allen, 1982; Ellen *et al.*, 1991). Hines *et al.*, (1987) have mentioned that consumers are more often internally controlled as they believe that an individual consumers' action can be effective in environmental protection. Berger and Corbin (1992) also concluded that perceived consumer effectiveness is a very influencing moderating factor of the attitude - green consumer behavior relationship. Ellen at el., (1991) states that PCE is a significant predictor of environmental group activities.

However, there exists a research gap which warrants a detail investigation for determining the PCE of Indian consumers as the literature on this aspect of green consumer behavior of Indian consumers is meager.

On the basis of the above discussion it can be hypothesized that:

P6: Perceived consumer effectiveness plays a significant role in adoption of green products.

## **ROLE OF PEER GROUPS**

Relationship with peers is more intense and influential in adults (Berndt, 1982). The present body of literature also suggests that adolescent consumers learn the symbolic meaning of products and services and prefer products, brands and stores from their peers in the process of consumer socialization (McNeal and Ji, 1999). The available literature suggests that peers influence each other in the following ways:

- As reinforcing and pushing agents (Lamb *et al.,* 1980)
- As modeling agents (Sagotsky and Lepper, 1982)
- As objects for social comparisons (Shaffer, 1994)
- As value setters for a particular idea or behavior (Shaffer, 1994)

According to Lee (2010) peer groups exert direct and indirect effects on green consumer behavior. Their study suggested that peer influence on green purchase behavior could be exerted in the following manner:

- Reinforcing directly green consumption or a lifestyle
- Kindling a consumer's emotional/passion about the environment, leading in turn to green purchase behavior.

In this regard Lee (2009) also has reported that peer influence was found to be the top predictor of green purchase behavior in both male and female consumers. The power of peer influence suggests a "group effect" in environmental behaviors.

Thus it can be concluded that peer groups play an important role in shaping the green consumer behaviors. The issue regarding the role of peer groups in developing and fostering environmental behaviors amongst Indian consumers needs to be explored in detail as literature on this aspect of green consumer behavior of Indian consumer is meager.

Thus it can be a research preposition:

P7: Peer groups play a significant role in adoption of green products.

In green marketing studies profiling of consumers has been a regular feature in the past (Chan 1999; Cornwell et al., 1995; Jain and Kaur, 2006). Different characteristics have been adopted by various authors for profiling and segmenting green consumers (Kilbourne and Beckmann, 1998). The characteristics used by various authors include geographic (Picket et al., 1993; Samdhal and Robertson, 1989), culture (Anderson and Cunningham, 1972; Webster 1975) and socio demographics (Diamantopoulos et al., 2003; Jain and Kaur, 2006) such as age, gender, occupation, educational level, income level as determinates of eco friendly behaviors. Majority of authors have reported that gender and environmental knowledge have significant relationship. In general males tend to have higher knowledge of environmental issues than females (Jain and Kaur, 2006). Age is another factor that has significant and negative relationship with environmental knowledge (Anderson and Cunningham, 1972; Arcury et al., 1987; Diamantopoulos et al., 2003). In general there is a reverse relationship between age and environmental knowledge, attitudes and behaviors (Straughan & Roberts, 1999). The available literature suggests that there is a positive relationship between educational level and environmental knowledge (Arbuthnot and Lingg, 1975; Arcury et al., 1987; Diamantopoulos et al., 2003). Also educational level has been reported to be positively associated with environmental attitudes (Aaker et al., 1982; Zimmer et al. 1994; Roberts, 1996). With regards to environmental behavior, a positive relationship is also there (Arbuthnot, 1977; Devall, 1970; Scott and Willits, 1994; Webster, 1975). The study conducted by Jain and Kaur (2006) shows how different socio demographic variables effect the environmental knowledge, attitudes and behaviors of the Indian consumers but a direct link between how socio demographic variables effect the likely hood of consumers adopting green products and life styles is still far from clear. Thus this presents a research gap which needs be addressed. Also how demographics variables play a role in consumer perception and effectiveness of green advertisements and eco labels also needs to be examined. The role of socio demographic variables in influencing the consumers' willingness to pay for green products also needs to be explored in depth. Other thing like PCE (perceived consumer effectiveness) should also be studied in relation to socio demographic profile of the Indian consumers.

Hence we can conclude that:

P8: Socio Demographic variables like educational background, gender and age play a significant role in adoption of green products.

## **CULTURAL VALUES**

In different societies beliefs are there to respect the environment. Indian society particularly Hindu mythology attaches a very important role to different elements of the environment by calling them "Panch-Bhut" (Kannan, 2009). Different elements of the environment which are air, water, earth, ether and fire need to be respected, but they are also the provider of different types of material benefits which are essential to life (Kannan, 2009). It is stated time and again that man must exploit these resources for a comfortable life, but within the limits of capacity to replenish. When a society is worshipping trees, rivers, mountains, it is easily possible to sensitize the persons about efficient use of natural resources. Chinese studies by authors like Chan & Lau (2000) have examined the role of cultural values on eco-friendly purchase behavior. Chinese studies like that by Yau (1988) using the Kluckholn and Strodtbeck (1961) framework i.e. the K&S framework also have supported the view of green marketing as a result of cultural beliefs of Chinese people. In context of India where majority of population follows Hinduism, Jainism, Sikhism etc, by and large Indian society believes in religious values. It is appropriate to propose the following research preposition.

P9: Cultural values also play a significant part in adoption of green products.

### **EFFECT OF LEGAL CONSTRAINTS**

When it comes to adoption of green products and green technology legal constraints play a very important role. A very good example in this regard is the government enforced C.N.G. (Compressed Natural Gas) fuel use by commercial vehicles in major metro cities like Delhi (Khaiwal *et al.,* 2006). Discussion with experts in this regard also point out another phenomenon of banning of poly bags in many Indian cities which has forced consumers and marketers to use more eco-friendly packaging materials like paper bags. Studies focusing on this aspect of green product adoption are meager. Legal constraints are very powerful in influencing green product adoption as their presence can eliminate the whole consumer selection process. Hence it can be proposed that: P10: Legal constraints play a significant role in adoption of green products.

## AVAILABILITY OF GREEN PRODUCTS AND SUPPORT SERVICES

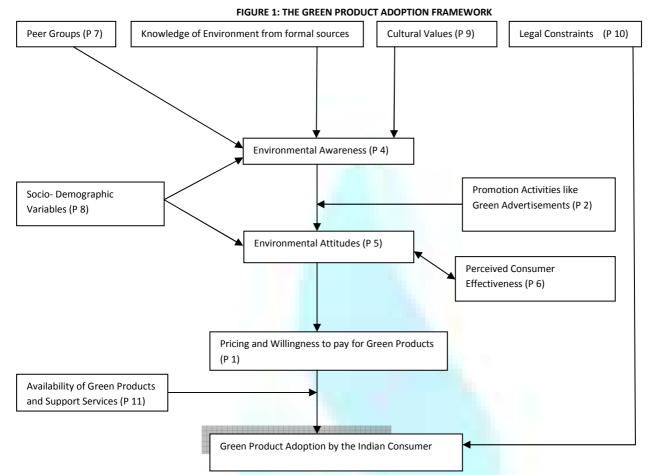
Byrne and Polonsky (2001) have pointed out that low availability of green products like alternative fuel vehicles and their under developed support services as a major barrier to adoption of such green technologies. The above authors have also reported that some firms tend to sell alternate fuel vehicles on a limited basis. This is done to attract the "early adopters", but at the same time it also excludes a larger market and is a hindrance for partners to collaborate for development of support infrastructure. The above authors also point out that the scarce availability of fuel delivery outlets and maintenance service centers are also a major barrier to consumer adoption of eco friendly vehicles. In this regard in Indian context same situation exists. Few companies like Maruti Udhyog Limited and Hyundai Motors have launched natural gas powered vehicles in India, but the non availability of filling stations and maintenance centers has caused such vehicles to attract a limited market in metro cities only where such filling stations are there. Thus this aspect needs to be explored in detail. Hence it can be proposed that:

P11: Availability of green products and their support services play a significant role in adoption of green products.



### THE PROPOSED FRAMEWORK

The following framework is proposed as per our prepositions stated above:



As per figure 1, it is evident that peer groups, knowledge of environment though formal sources (knowledge gained through compulsory environmental education at school and college level), cultural values and ethics lead to environmental awareness in individuals. This awareness is enhanced by green promotion activities like green advertising. Also socio-demographic variables also play a part in influencing environmental awareness and attitudes as pointed out by Jain and Kaur (2006) for Indian consumers. Perceived consumer effectiveness also forms part of environmental attitudes and this leads to willingness to pay for green products. At this stage availability of green products to such willing consumers lead to green product adoption by the Indian consumer. However, legal constraints play a very important role as enactment of laws by the government for making use of eco friendly products can force consumers to by-pass the whole evaluation process.

## CONCLUSIONS AND FURTHER RESEARCH

The Green Product Adoption Framework developed in figure 1 is a result of various studies conducted by different authors in different conditions. However there are few important points in this regard, the above mentioned framework should be tested statistically to first ascertain the relative importance of the factors that influence the green product adoption and secondly to ascertain the sequence of operation of all these factors. In this regard legal constraints play a very important role. Enactment of laws for compulsory use of eco friendly products can force consumers to by-pass such a decision making model to adoption of such eco friendly alternatives (as mentioned in P10). Therefore in such cases it is the foresightedness of the marketing managers that works to provide competitive advantage to a firm. If such firms already have a ready product line of green products which are in compliance with the government's environmental standards then upon enactment of such laws these firms can sell their products in large numbers very easily.

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