



## CONSUMERS BEHAVIOR TOWARDS GREEN PRODUCTS CONSUMPTION IN INDIA

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### **Abstract**

There is always a pressure from various stakeholders and regulatory bodies to promote green consumption. Green buying behavior can stimulate firms and society in the pursuit of sustainability. This study explores the factors which play vital role in the adoption of green purchasing behavior of Indian consumers. The study revealed the existence of five variables environmental attitude (EA), environmental consciousness (EC), environmental knowledge (EK), green purchase intention (GPI) and perceived effectiveness of environmental behavior (PEEB) that affect green purchase behavior (GPB). The model is tested by applying structural equation modeling using 340 responses collected from Indian consumer through a structured questionnaire using the purposive convenient sampling. The results validate that GPI, EK, EA, EC and PEEB, have important role in playing GPB.

**Keywords: Green Purchasing Behavior, Environmental Involvement, Environmental Attitude, Consumers.**

### **Introduction**

Environment is getting degraded day by day because of increasing consumption not only in developed economies but also in densely populated developing economies. It necessitates adoption of alternatives which promote sustainability. Unsustainable level of consumption leads to severe environmental sustainability issues such as global warming, water, air and land pollution, and waste generation. It leads the society to change their conventional consumption patterns and purchase the sustainable goods .Green purchase behavior is evolved as a new paradigm of marketing discipline for marketers and researchers in there alm of contemporary consumer research (Ottman, 1998; Charteret *al.*, 2002; Peattie and Belz, 2010; and Lai and Cheng, 2016). Regarding this behavioral phenomenon, various studies have been done in developed nations.



### **Green Purchase Behavior**

Green purchase behavior refers to buying products which can be recycled and being responsive to environmental concerns (Mostafa, 2007). GPB is explored by many researchers who suggested that it can become a barrier to overall green consumption as well as to marketers (Crane, 2000; Mintel, 1995; Wong *et al.*, 1996). Environmentalism is gaining momentum in India too (Punyatoya, 2014). Indian companies have started incorporating green management practices and even disclosing more environmental information like LEED certification etc. (Chaklader & Gulati, 2015). Indian consumers are consciously taking initiatives to reduce environmental hazards. Nielsen Survey (2011) on Global Online Environment and Sustainability found that 86 percent of Indian consumers have shown positive attitude towards energy efficient products and appliances, 79% towards recyclable packaging and least impact was given to products not tested on animals (41%), and fair-trade products (44%). Green or sustainable products are those which are beneficial to the environment and society usually includes eco friendly carry bags, recycled papers, herbal products, energy saving bulbs, energy efficient appliances and vehicles, and household Products etc. (Lee, 2008; Joshi and Rahman, 2015). Moreover, such products adopt ecologically sound production, are recyclable and having low waste generation (Chen and Chai, 2010).

### **Green Purchase Intention**

Green purchase intention (GPI) refers to consumers' willingness to purchase green products expressed by the consumer for the benign of the environment, and such consumers' willingness holds motive to be purchased green products (Chan, 2001; Akehurst *et al.*, 2012; Dagher and Itani, 2014). Consumers are not only concerned about the ecological quality of the product but also about the environmental consequences associated with their purchase decision for such products.

### **Environmental Attitude**

Environmental attitude has been always emphasized as one of the important factors affecting GPB. Fishbein and Ajzen(1975) defined the term attitude as “a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” (p. 211). Moreover, this behavioral phenomenon represents what consumers like and dislike in



general and specific terms concerning to purchase decision for product or services (Blackwellet *al.*, 2006). Consumers with more favorable attitude towards green products are expected to have high degree of involvement in purchase decision for such products (Lee, 2008; Chen and Chai, 2010; Joshi and Rahman,2015). The present study tried to examine the attitude towards green products with the purchase intention for such products.

### **Environmental Consciousness**

Environmental consciousness is always treated as an individual's concern level to the environmental issues (Hines *et al.*, 1987). Environmental consciousness is described as one of the key measures to predict one's ecological friendly behavior of green products. It holds the individuals' consciousness towards the environmental problems and their readiness to solve the problem. It implies the sense of responsibility to protect the environment, embodied with emotional appeal at the individuals' level which is reflected in their involvement towards the environmental protection. consumers having high environmental consciousness directly associates with their positive attitude toward green products which in turn result in their high level of purchasing intention for such products.

### **Perceived Effectiveness of Environmental Behavior**

Perceived effectiveness of environmental behavior first illustrated by Kinnear *et al.* (1974) as a measure of an individual belief that he or she can have an effective contribution on pollution abatement. Ellen *et al.* (1991) defined perceived consumer effectiveness as the consumers' perception of what extent to which their actions can make a difference in solving environmental issues.

### **Environmental Knowledge**

Environmental knowledge(EK) can be described as one's ability to understand about environmental or sustainability related issues majorly including air, water and land pollution, energy usage and efficiency, and recycling and waste generation, and their consequences on society and physical environment (Chan, 2001; Murphy, 2005; Mostafa,2006; Tan, 2011; Yadav and Pathak, 2016). This paper tried to examine the relationship of environmental knowledge and sustainable buying behavior in the emerging market .The present study approached the subjective measure of environmental knowledge based on individual



perception about the phenomenon in order to capture the attitude towards green products and green purchase intention.

**The above statements lead to development of following hypotheses:**

- H1: Purchase intention for green products has a positive and significant impact on purchase behavior for such products
- H2: Attitude toward green products has a positive and significant impact on purchase intention for such products
- H3: Environmental consciousness has a positive and significant impact on attitude toward green products
- H4: Environmental consciousness has a positive and significant impact on purchase intention for green products
- H5: Perceived effectiveness of environmental behavior has a positive and significant impact on attitude toward green products
- H6: Perceived effectiveness of environmental behavior has a positive and significant impact on purchase intention for green products
- H7: Environmental knowledge has a positive and significant impact on attitude toward green products
- H8: Environmental knowledge has a positive and significant impact on purchase intention for green products

**Objectives of the Study**

This study explores the factors which play vital role in the adoption of green purchasing behavior of Indian consumers.

**Methodology**

- **Data Collection**

A well-structured questionnaire was framed to test the relationship of the proposed model. The language used for the questionnaire was English. The questionnaire comprises of two sections; first section consists of demographic details of respondents consists of age group, income group, gender, education, marital status, and occupations. The second section includes questionnaire items intended to measure environmental consciousness, perceived effectiveness of environmental behavior, environmental attitude, environmental knowledge



,green purchase intention, and green purchasing behavior. Data was collected from 340 young and educated adult (age 21-40).The green behavioral phenomenon under investigation is easily interpreted by young adults and educated population which leads to respond the survey more appropriately rather than minors and less educated(Chan, 2001; Paul et al., 2016; Kumar et al., 2017).

The sample comprised 53 per cent males and 47 per cent females, out of which around 70 per cent respondents were in the age band of 21-30 years while remaining 30 per cent respondents were in the age group of 31-40 years. The respondent belonged to highly socio-economic and educationally advantaged background and were familiar with the concept of green consumerism.

**Table 1.** Demographic Profile of the Respondents

Demographics		Percent (N = 340)
Gender	Male	53
	Female	47
Age (Years)	21-30	70
	31-40	30
Family monthly income (INR)	Below 10,000	13.4
	10,000–25,000	25.6
	25,000–50,000	45.2
	Above 50,000	15.8

**Source:** Prepared by the authors.

- **Statistical Analysis**

The proposed research model was analyzed using SPSS The structural equation model was performed using SPSS to test the hypothesized model .To test the relationship between GPI, EA, EC, EI and PEEB with GPB, the study employed linear regression analysis. The purpose was to examine the impact of independent variables (viz., EA, EC, EK, GPI and PEEB) on dependent variable (i.e., GPB).

The regression model was found to be statistically significant. The regression model explained 16 per cent ( $R^2$ ) of the total variance and was significant at  $F(5,334) = 12.57, p <$



0.000. Tables A2, A3 and A4 represent the model summary for the regression model, ANOVA model and Standardized Regression weights and P-values respectively.

**Table 2.** Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
I	0.400	0.160	0.149	0.681

**Source:** Prepared by authors.

**Notes:** Predictors (constant): environmental knowledge, environmental attitude, environmental consciousness, perceived effectiveness of environmental behavior, green purchase intention

**Table 3.** ANOVA Model

Model	Sum of Square	df	Mean Square	F	Sig.
Regression	11.49	5	2.8725	12.57	0.000 <sup>a</sup>
Residual	76.54	334	0.2285		
Total		339			

**Source:** Prepared by the authors.

**Notes:** Predictors (constant): environmental knowledge, environmental attitude, environmental consciousness, perceived effectiveness of environmental behavior, green purchase intention; Dependent variable: green purchasing behavior.

**Table 4.** Standardized Regression Weights and P-values.

Hypothesis	Path	Estimate	p value	Result
H1	GPI → GPB	0.435	***	Supported
H2	EA → GPI	0.361	***	Supported
H3	EC → EA	0.323	***	Supported
H4	EC → GPI	0.211	0.027	Supported
H5	PEEB → EA	0.106	0.001	Supported



H6	PEEB → GPI	0.124	0.011	Supported
H7	EK → EA	0.156	0.571	Rejected
H8	EK → GPI	0.122	0.096	Rejected

Source: Authors' calculation.

Notes: \*Significant at the 0.05 level; \*\* Significant at the 0.01 level.

The hypothesized model was assessed with the help of standardized regression weights ( $\beta$ ) and P-values in order to evaluate (predict) the effect of independent variables (predictor variables) on dependent variable. Moreover, the Adjusted  $R^2$  of each equation represents the explanatory power of predictor variables on each dependent variable in the proposed research model. It is clear that there are three dependent variables exist in the model, namely GPB, GPI, and EA.

#### • Results

The present study investigates the impact of EC, PEEB, EK, GPI and EA on GPB directly and indirectly via the mediating role of EA as the antecedents of GPI, which in turn further affects the GPB. In other words, EA also acts as the mediating role between EC, PEEB, and EK and GPI. Therefore, GPI acts as both endogenous and exogenous variable of GPB. The results shown in Table 4 with the help of coefficients ( $\beta$ ) and P-values shows that the most of the hypothesis (H1–H6) were accepted at ( $p < 0.01$  and  $p < 0.05$ ), except for H7 i.e., EK → EA ( $\beta = 0.156$ ) and H8 i.e., EK → GPI ( $\beta = 0.122$ ) in the integrative model of the present study. The result also confirmed that, environmental attitude is positively and significantly related to green purchase intention ( $\beta = 0.361$ ,  $p < 0.01$ ) and found to be the most significant predictors of GPI followed by EC → EA ( $\beta = 0.323$ ,  $p < 0.01$ ), PEEB → EA ( $\beta = 0.106$ ,  $p < 0.01$ ), and EC → GPI ( $\beta = 0.211$ ,  $p < 0.05$ ). In addition, results also revealed that perceived effectiveness of environmental behavior was found to be least positive and significant impact on green purchase intention among all the significant predictor variables ( $\beta = 0.124$ ,  $p < 0.05$ ) in the present model. Further, green purchase intention is also showing a positive and significant impact on green purchase behavior ( $\beta = 0.435$ ,  $p < 0.01$ ). However, the structural equation model analysis shows that there is no significant impact of environmental knowledge on both environmental attitude ( $\beta = 0.156$ ,  $p > 0.05$ ) and green purchase intention ( $\beta = 0.122$ ,  $p > 0.05$ ) in the hypothesized model.



## Discussion

We found that the overall environmental behavior of study sample comprising 340 consumers is affected by a number of factors namely, EK, EA, EC, GPI and PEEB, that have a role to play in GPB. Among the predictors, GPI was the most important predictor of GPB. The multiple linear regression model confirms that the consumer's GPI is significant in explaining their green purchase behavior. One major reason for this could be its nature, as it encompasses notion of environmental protection, symbolizing the elements such as saving environment, ethical responsibility and love for environment. Studies have also suggested that younger consumers are more concerned with environmental issues than older consumers (Coddington, 1993). Chan (1998) has examined the worth of adolescents towards local and general environmental issues. Our findings also correlate with this observation. Younger generation helps in sustainable consumption.

The present study assessed the relationship of environmental consciousness (EC), perceived effectiveness of environmental behavior (PEEB), environmental attitude (EA), and environmental knowledge (EK) with green purchase intention (GPI) directly and indirectly via the mediating role of EA as the antecedents of GPI, which examined with green purchasing behavior (GPB) to validate that GPI is the fundamental factor of GPB. The results of this study supports that six hypothesis were accepted and found consistent except H7 (EK  $\rightarrow$  EA,  $\beta = 0.156$ ,  $p > 0.05$ ) and H8 (EK  $\rightarrow$  GPI,  $\beta = 0.122$ ,  $p > 0.05$ ) which were found to be insignificant, however EK  $\rightarrow$  GPI was only significant at ( $\beta = 0.122$ ,  $p < 0.1$ ). Therefore the findings concerning to H7 and H8 implies that only having knowledge about environment doesn't mean that the consumer will buy green products unless he/she will have intension, consciousness and attitude to buy green products. The result also revealed that environmental attitude (EA) was emerged as the best predictor of purchase intention for such products followed by EC and PEEB. Moreover, EA plays the mediating role between EC, PEEB, and EK with GPI. Therefore, EA is positively and significantly driven by EC and PEEB and have direct or indirect effects on GPI. At present major population of India are young adult i.e., below the age group of 40 and educated, they are more internally controlled rather than other age and non-educated group of population in taking their own decision making towards the environmental sustainability and they would go for higher purchasing for ecological safe





products in their regular buying behavior. If consumers perceive that their efforts in this regard will influence the environment positively, they will certainly go for eco-friendly products. Therefore, the measure of perceived effectiveness of environmental behavior should be more emphasized by policymakers to avoid using plastic bags, use eco-carry bags, and prefer sustainable products in their shopping behavior. More involvement of college and school students in environmental activities can also initiate a sense of responsibility that can go a long way in promoting green buying behavior.

### **Limitations**

- The use of researcher-controlled sample of consumers may limit the generalizability of the findings.
- The study focuses on individual perceptions towards green buying behavior rather than on situational factors.
- The study is limited to the particular geographical area of India.
- The data were collected from 20-40 years age of population using purposive convenient sampling and the subjects were constituted majorly educated segment. Therefore, the results cannot warrant for generalization in the overall Indian context.
- This study evaluates the construct of purchase behavior for green products rather than actual purchase for such products. Such expressed behavior cannot be transformed into actual behavior.

### **Annexure 1. Questionnaire items**

#### **A. Environmental Consciousness**

EC1: I am worried about the quality of the environment in India

EC2: Environment is my major concern

EC3: I try to reduce energy and water use at work and home

EC4: I frequently recycle products in my home

#### **B. Perceived Effectiveness of Environmental Behavior**

PCE1: A person's behavior helps in promoting the environment.

PCE2: I am capable of solving the environmental problems.

PCE3: I can protect the environment by buying eco-friendly products

PCE4: I can solve natural resource problems by conserving scarce natural resources



### **C. Environmental Attitude**

EA1: I like the idea of purchasing eco-friendly products

EA: I have positive attitude to purchase eco-friendly version of any product

### **D. Environmental Knowledge**

EK1: I have complete knowledge about environmental issues

EK2: I know how to recycle the product after use

EK3: I know how to reduce the landfill waste

EK4: I have complete knowledge about environmental phrases and symbols on product packets

### **E. Green Purchase Intention**

GPI1: I would consider buying products which are less polluting.

GPI2: I would consider switching to eco-friendly products

### **F. Green Purchasing Behavior**

GPB1: Before buying any product, I look at the ingredients label to check if it doesn't contain any things that can harm environment.

GPB2: I prefer green products over non-green products

GPB3: I buy eco-friendly products even if they are more expensive than other products

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