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The Impact Of Ecological Consciousness On Consumer Buying Behaviour Of Green Products – An Empirical Study From India

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ABSTRACT
The crux of this research paper is to throw a light on the determinants that are associated with ecological consciousness and their impact on buying behaviors of consumers towards green products. This study was also designed to explore the driving forces that encourage the consumers to be environmentally friendly and the significant obstacles that might prevent the consumers from the intention of being environmentally friendly. This research study was performed using a structured questionnaire, which consisted of different scales in terms of the determinants of ecological consciousness and consumer buying behaviour of green products adapted from the relevant literatures of previous studies. This study was exclusively carried out to present the results of an exploratory study conducted on 400 consumers sampled from the central provinces of India on the basis of area-cum-purposive sampling technique. The findings of this study clearly revealed that the determinants of ecological consciousness have a positive impact on the behaviours of Indian consumers towards green products. This study also disclosed a high correlation existed between the research variables. The survey results of this study also confirmed that the drivers which motivate the consumers to be environmentally friendly are in the positive side and the barriers that might prevent the consumers from the intention of becoming environmentally friendly are in the negative side.

Keyword: Environmental Concern, Ecologically Consciousness Attitudes, Consumer Buying Behaviours, and Environmentally Friendly.

INTRODUCTION

Preamble

The rapid growth of economy and patterns of consumers' consumption and behaviours are the main causes of environmental deterioration. As the environment continues to worsen, it has become a persistent public concern in the both developed and developing counties and awakened the developing counties like India to the green movement. This research paper is essentially exploratory in nature and the crux of this research is to explore the impact of ecological consciousness on the buying behaviours of Indian consumers towards green products. The term Green Marketing refers to the planning, development and promotion of the products or services that satisfy the needs of the consumers without affecting the natural environment.

Green Marketing – Theoretical Framework

Green marketing, also alternatively known as environmental marketing and sustainable marketing, refers to an organisation's efforts at designing, promoting, pricing, and distributing products that will not harm the environment (Pride and Ferrell, 1993).Polonsky (1994) defines green marketing as the set of activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment. Green marketing is considered one of the major trends in modern business (Kassaye, 2001; McDaniel and Rylander, 1993; Pujari and Wright, 1996).

Other definitions of green marketing as proposed by marketing scholars include social marketing, ecological marketing or environmental marketing. Harrison (1993) proposed green marketing strategy by firms through positioning the environmental benefits of green products to consumers' mindset to influence their purchasing decision. Peatitie (1995) and Welford (2000) defined green marketing as the management process responsible for identifying, anticipating and satisfying the requirements of customers and society in a profitable and sustainable way.

Environmental Degradation

It was apparent from the previous studies that the changes in behavioural and consumption patterns of the consumers worldwide are the main causes of environmental deterioration. The consequences of environmental degradation are global warming, depletion of stratospheric ozone layer, pollution of air, sea and rivers, noise and light pollution, acid rain and desertification (Ramlogan, 1997). Grunert (1993) reported that about 40% of environmental degradation has been brought about by the consumption activities of private households. As the natural environment continues to worsen, it has paved the way to the public concern for both developed and developing countries like India. Further, it has also awakened the developing countries to the green movement for the preservation of the environment.

According to Banerjee and McKeage (1994) green consumers strongly believe that current environmental conditions are deteriorating and represent serious problems facing the

security of the world. Conversely, consumers who do not engage in environmentally friendly behaviours perceive that ecological problems will ``resolve themselves.'' Therefore, an individual's perception about the severity of ecological problems might influence his/her willingness to pay more for ecologically compatible products.

Green Products & Green Consumers

In general, green product is known as an ecological product or environmental friendly product. Shamdasami*et al.,* (1993) defined green product as the product that will not pollute the earth or deplore natural resources, and can be recycled or conserved. It is a product that has more environmentally sound content or packaging in reducing the environmental impact (Elkington and Makower, 1988; Wasik, 1996). In other words, green product refers to product that incorporates the strategies in recycling or with recycled content, reduced packaging or using less toxic materials to reduce the impact on the natural environment. Throughout this research paper, the terms eco-friendly products, environmentally friendly products, and green products mean the same and are used interchangeably.

Krause (1993) in his research found that consumers were becoming more concerned about their everyday habits and the impact on the environment. The outcome of this is that some of the consumers translated their environmental concern into actively purchasing green products commitment (Martin and Simintiras, 1995).Consumers who are aware of and interested in environmental issues are called green consumers (Soonthonsmai, 2007). These green consumers usually organized petitions, boycotted manufacturers and retailers and actively promote the preservation of the planet (Fergus, 1991). Ottman (1992) reported that consumers accepted green products when their primary need for performance, quality, convenience, and affordability were met, and when they understood how a green product could help to solve environmental problems. The knowledge gap on the uses and values of green products prevents consumers in committing themselves to any purchase decisions.

REVIEW OF LITERATURES

There is a growing body of evidence which indicates that environmental issues remain at the forefront of public concerns, at least as a social and public policy issue (Kaufman, 1999;Ottman, 1989; Polonsky, 1994).Since consumers have emerged as a force to reckon within accelerating growth of corporate environmentalism and use of green marketing, they have also become a focal point of marketing research. A wide gamut of issues concerning consumers' environmental awareness, attitudes and behaviours has been examined in the past. Views on green consumption range from the radical view emphasizing the need to reduce consumption (i.e., downshifting material and energy-intensive consumption) to a reformist view that draws on the theory of ecological modernization and emphasizes market-driven structural change in which the consumer's role is to adopt new cleaner technologies and favour greener products (Dryzek, 1997; Garner, 2000).

Environmental Concern

Environmental concern has become the most important issue for mankind in the present world. The businesses are no exception for this issue and they are responding properly to the environment through environmentally friendly products. Environmental concern can be known as affective traits that can signify an individual's worries, consideration, likes and dislikes about the environment (Yeung, 2004). Few studies were done on environmental concern (Barr *et al.,* 2003; Milfont and Duckitt, 2004). Mostafa (2007) has indicated in his study that environmental concern would be an essential factor for marketers as they can easily target environmentally conscious consumers.

High level of environmental concern is expected due to the health issues (Said *et al.,* 2003). Meanwhile, young consumer in Hong Kong believes that environmental concern is the 2nd top predictor of green purchasing behavior (Lee, 2008).Concern for the environment is likely to be a dominant social theme in the 1990s (Shetzer, Stackman, and Moore, 1991). Public concern for the environment peaked in 1991. Since then, it has stabilized at a new plateau, which is higher than in any previous decade (Stisser, 1994). Public opinion polls show overwhelming support for protection of the environment (Roperts, 1992; Ottman, 1993).

Ecological Consciousness Attitudes

According to Katona and Strumpel (1978) attitudes and perception are closely related. Both these concept tend to affect one's perceptions and shape one's behavior. In the international literature one can find a large body of research regarding consumers' willingness to pay for environmental friendliness and/or quality/safety in food production (Gil *et al.*, 2000; Corsi and Novelli, 2002; Angulo *et al.*, 2003; Baltzer, 2003; Canavari*et al.*, 2003; Smed and Jensen, 2003), as well as for non-food products (Vlosky*et al.*, 1999; Laroche*et al.*, 2001) or services (Tse, 2001). Perhaps the most convincing evidence supporting the growth of ecologically favorable consumer behaviour is the increasing number of individuals who are willing to pay more for environmentally-friendly products (Laroche*et al.,* 2001).

Ecological consciousness focuses on a specific dimension of consumer behaviours. This dimension refers to consumers` purchase intention and their willingness to pay a higher price for ecological products (Laroche*et al.,* 2001). Ecological behaviours can be generated by factors such as the desire to save money (manifested by the reduction in consumption of energy and water), and other psychological factors (when consumers feel this is the right way to behave). Empirical studies suggest that consumers are more sensitive to environmental issues and they tend to give a greater importance to them, and they are likely to choose products or services based on ecological criteria (Rahman and Haque, 2011).

Ecological Consciousness on Green Products

Consumer concerns on green products are evident in the increasingly ecologically conscious marketplace. Over the years, a majority of consumers have realized that their purchasing behavior had a direct impact on many ecological problems. The advantages for adopting green products are

energy reduction, material reduction, less packaging material, low emissions, and recyclable (Stevels, 2001). D'Souza *etal.,* (2006) had made an empirical investigation to under the green purchase intention of consumers and found that marketing mix elements like green products, product labels, packaging and product ingredients does not influence the consumer behavior but past experience with green products positively influences the green purchase intention. Efforts to identify environmentally friendly consumers can be traced back to the early 1970s. Berkowitz and Lutterman (1968), as well as Anderson and Cunningham (1972), were pioneers in studying the profile of socially responsible consumers.

A research regarding consumer ecological behaviour (Ozanne and Vlosky, 1997) outlines that ecological products are better viewed in terms of their quality, but having a higher price than traditional products. Another finding is that there is no correlation between consumers' income and consumption of ecological product, which are bought by all categories of people. Aryal*et al.,* (2009) shows in a case study of the Kathmandu Valley that consumers are willing to pay a higher price for ecological products, but the level of acceptance varies considerably with the information asymmetry, price and availability.

Ecological Consumer Behaviours

The current study is designed to understand the factors influencing purchase intention behavior of consumers while purchasing green products. Murphy*et al.,* (2010)have developed a model for understanding green purchase intentions among consumers by using four factors – green perceived value, green perceived risk, green trust and green purchase intention and stated that consumers who perceive green products are better for environment will have positive purchase intention towards green products. Consumers start to buy and consume ecological products.

Rahman and Hague (2011) research show that consumers who have a higher level of knowledge about ecological products are willing to pay a higher price for them. Researches in Pakistan suggest that people with higher education have a positive attitude towards ecological products and it is more likely for them to buy these products more often. In terms of price and quality, expectations from ecological products are similar to the ones associated with traditional products (Ali *et al.,* 2011).

The higher price and the unavailability of ecological products are the main factors which determine consumers to buy traditional products (Jamilah*et al.,* 2010). The relationship between ecological consciousness and willingness to pay a higher price for green products is sustained by Kotchen and Moore (2008) and also Yesawich (2007). A survey conducted in India and Vietnam show similar findings, according to which consumers are willing to pay 10% more for ecological products (Browman, 2007). This demonstrates that the determinants of ecological behaviour are related to dimensions of ecological consciousness.

Suchard and Polonski (1991) stipulate that ecologically conscious consumers will try to protect the environment in different ways (e.g., recycling, checking that a package is made of recycled material, purchasing only green products). However, it is not clear how consumers' willingness to spend more for green product will be correlated with other ecologically favorable behaviors. Pickett *et al*., (1993) state that marketers must exercise caution when attempting to extend environmental initiatives from one ecologically conscious behavior to another. For example, those consumers who recycle paper may not be the same consumers who purchase recycled handwriting paper.

STATEMENT OF THE PROBLEM

When seen over a time horizon of more than a century, there is a clear instance of massive surge in the protection of natural environment. As the environment continues to worsen, it has become a relentless public concern and such concern has awakened the developed and developing countries to the green movement for preservation of natural environment. Sustainable energy, organic foods, eco-friendly products, bio-degradable products, green technology and green products are the buzzwords in this modern era of green marketing. As the society becomes more concerned about the natural environment, the consumers have begun to modify their behavioural and consumption patterns as an attempt to address the society's new concerns on the preservation of natural environment. It has paved the way for this study to explore the determinants that are associated with the ecological consciousness and their impact on the buying behaviours of consumers towards green products.

Research Questions and Objectives

To explore the impact of ecological consciousness on buying behaviours of consumers towards green products, the researchers have developed four major research questions:

a) To what extent are "consumer buying behaviours" influenced by environmental concern, ecologically conscious attitudes, and ecological consciousness on green product?
b) What are the determinants associated with ecological consciousness influencing consumer buying behaviours towards green products?
c) What are the significant drivers that encourage or motivate the consumers to be environmentally friendly?
d) What are the significant obstacles that might prevent the consumers from the intention of buying green products?

These were the overall questions to be answered by the present study and defined by the following four research objectives:

a) To throw a light on the determinants which are associated with ecological consciousness and explore their impact on consumer buying behaviours towards green products.
a. To highlight the subtle correlation between the research variables such as environmental concern, ecologically conscious attitudes, ecological consciousness on green products, and consumer buying behaviours.
b. To investigate the driving forces that might positively motivate the consumers to be environmentally friendly and the stumping

challenges that might prevent the consumers from the intention of being environmentally friendly.

c. To offer humble suggestions for fostering the culture of being environmentally friendly among the minds of the consumers.

RESEARCH FRAMEWORK

As stated earlier, the main objective of this research is to throw a light on the antecedents that are associated with ecological consciousness and to analyze their effect on buying behaviours of consumers towards green products in central provinces of India. The other significant objective of this study is to explore the driving forces that might motivate the consumers to buy green products and the stumping obstacles that might prevent the consumers from the intention of buying green products. In order to realize these objectives, the research framework was developed by the researchers as shown in Figure 1.

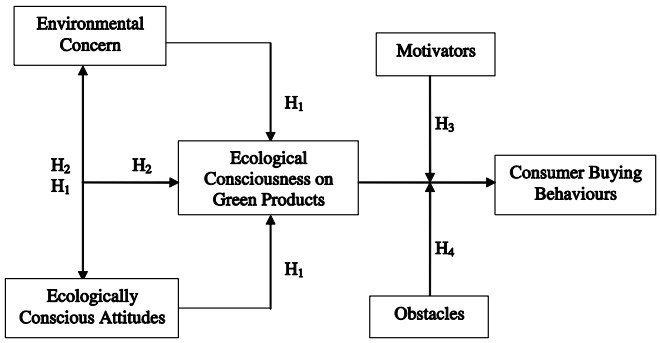

Figure 1: Environmental Concern, Ecologically Conscious Attitudes, Ecological Consciousness on Green Products, and Their Influences on "Consumer Buying Behaviours"

HYPOTHESES FORMULATION

In this study, "consumer buying behaviours" is a dependent variable and environmental concern, ecologically conscious attitudes, and ecological consciousness on green products are the independent variables. Thus, hypotheses of this study are designed to find out whether there is any significant relationship between the dependent variable and independent variables (or) either one of these independent variables or some of them may have the positive effect to influence the consumers to be ecologically conscious while purchasing products.

- H_1: The consumers, who are environmentally friendly, are likely to be oriented or associated with the antecedents that encourage and motivate them to purchase green products.
- H_2: There is a significant relationship between environmental concern, ecologically conscious attitudes, ecological consciousness on green products, and consumer buying behaviours.
- H_3: Basic drivers or motivators positively influence the consumers to be environmentally friendly.
- H_4: Basic obstacles or problems negatively affect the consumers from the intention of being environmentally friendly.

METHODOLOGY

The survey reported here was conducted at central provinces of India. The development of the research instrument was mainly based on new scales, because the researchers could not identify any past studies directly addressing all of the issues discussed in this research. However, and wherever possible, the researchers used validated measures that have been previously applied. The reliability and validity of the constructs and scale items used in the research instrument were tested through pilot survey and Cronbach's Alpha. All of the items/statements in the structured questionnaire were being asked using 5-point Likert scale. The data required for the study were purely primary data collected by the means of structured questionnaires mailed to 500 consumers. A sample size of 500 consumers was drawn on the basis of area-cum purposive sampling technique. This procedure resulted in 400 useful questionnaires or 80 % overall response rate. Thus, the sample size of the study was confined to 400 consumers only.

DATA ANALYSIS, RESULTS & DISCUSSIONS

The data analysis, survey results and conclusive discussions of the study are summarized in the following section.

Demographic Profile of Respondents

From the survey, it was observed that majority of the respondents are male (58%) and 42% are female. With respect to age groups, 35% fall in the age group of 30-40 years, 30% belong to the age group of above 40 years, 20% are in the age group of 20-30 years, and 15% belong to the age group of below 20 years. With regard to density of area, most of the respondents (36%) lived in Urban, 28% lived in metro, 24% lived in semi-urban, and 12% lived in rural areas. In terms of education, majority of the respondents (33%) were under graduates, 20%were post graduates, 17% were professionals, 12% were diploma holders, 10% have completed school education, and 8% were not being in school. With regard to marital status, the majority of the respondents (62%) were married and remaining 38% were single.

Factor Analysis of Research Variables

One of the main objectives of this research is to explore the impact of ecological consciousness on the buying behaviours of the consumers in the main provinces of India towards green products. The first hypothesis (H_1) of this study clearly indicated that the consumers, who are environmentally friendly, are likely to be oriented with the determinants that encourage and motivate them to purchase green products. For this purpose, an exploratory factor analysis was performed using SPSS Statistic 17.0.

Table 1: Statistics for Construct Validity of Research Variables

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy		0.820
Bartlett's Test of Sphericity	Approx. Chi-Square	4907.444
	Df	120
	Sig.	0.000

Table 2: Total Variance Explained for the Research Variables

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.316	26.972	26.972	4.316	26.972	26.972	3.888	24.303	24.303
2	3.178	19.862	46.834	3.178	19.862	46.834	3.2	20.001	44.304
3	2.934	18.338	65.172	2.934	18.338	65.172	3.039	18.992	63.295
4	2.393	14.954	80.126	2.393	14.954	80.126	2.693	16.831	80.126
Extraction Method: Principal Component Analysis.									

Principal component analysis with varimax rotation was used to identify the underlying factors that determine the impact of ecological consciousness on consumer buying behaviour of green products. The 35 statements, that best reflect the views of the impact of ecological consciousness on consumer buying behaviours of green products, have been subjected to a multivariate data analysis technique (Factor Analysis)to reduce them to a few uncorrelated factors. First, all the 35 items were used for the factor analysis which extracted six factors. It was observed that some items were not loaded on any of the factors and some items were duplicating. Therefore, 16 items were deleted from the original list. Another factor analysis was done with 19research items and four factors were obtained with eigenvalues greater than 1 (Table 1).

In order to test the suitability of the data for factor analysis, the correlation matrix was computed and examined. This revealed that there were enough correlations to go ahead with factor analysis. Anti-image correlations were computed. These showed that partial correlations were low, indicating that true factors existed in the data. Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) for individual variables was studied from the diagonals of partial correlation matrix. This was found to be sufficiently high for all variables. Overall MSA was calculated to find if the sample was good enough for sampling.

Table 3: Factor Loadings, Percentage of Variance Explained and Cronbach's Alpha for Extracted Factors for the Research Variables

Sl.No.	Factors	Statements	Factors Loadings	% of Variance Explained	Cronbach's Alpha
1	Environmental Concern	----------	0.810	26.972	0.928
		———			
		D2. I am highly responsible to keep the environment clean.	0.815		
		D3. I believe it is important for me to be environmental friendly.	0.769		
		D4. I usually don't harm natural world - plants, trees, animals, and insects.	0.812		
		D5. I generally use recycling center or some other way to recycle my household trash.	0.772		
		D6. I prefer to use my own bags instead of polythene carry bags supplied by vendors.	0.624		
2	Ecologically Conscious Attitudes	D7. I usually buy products made from recycled, recyclable, & biodegradable materials.	0.682	19.862	0.912
		D8. I do not purchase the products that cause potential damage to the environment.	0.676		
		D9. I ask about environmental consequences of products before buying them.	0.725		
		D10. I tend to purchase the products which are environmentally friendly.	0.730		
3	Ecological Consciousness on Green Products	D11. I am aware of green products available in the market.	0.725	18.338	0.889
		D12. I believe green products save natural resources effectively.	0.684		
		D13. I just buy eco-friendly products because they protect our environment.	0.741		
		D14. I would like to preserve the earth using green products.	0.681		
		D15. I feel eco-friendly products in the market are trustworthy/credible.	0.614		
4	Consumer Buying Behaviours	D16. I strongly recommend green products to my family, friends, neighbours, etc.	0.621	14.954	0.941
		D17. I always intent to buy eco-friendly products because they are good for the environment.	0.715		
		D18. I am willing to pay premium prices for green products or eco-friendly products.	0.641		
		D19. Green products have a better quality/performance than conventional products.	0.611		

Bartlett's Test of Sphericity was calculated to find whether the number of correlations among the variables is statistically significant or not. Overall Kaiser-Meyer-Olkin MSA was found to be 0.729 and Bartlett's Test of Sphericity was also significant (Chi-Square = 4907.444, df =120, significance = 0.000) indicating the suitability of data for factor analysis. Thus, all of these examinations revealed that data was fit for factor analysis. Principal Component Analysis was employed for extracting factors. The number of factors to be extracted was finalized on the basis of 'Latent Root Criterion' (Table 1). All factor loadings greater than 0.50 (ignoring signs) have been considered for the analysis. Guidelines for identifying significant factor loadings based on sample size suggest considering factor loading of 0.30 for sample size 350 or more. (Hair et.al., 1998. p.385). The results of Principal Component Analysis with Varimax Rotation for sample are shown in Table 4.It shows that four factors have been extracted which together accounted for 80.126 % of the variance. The last column in the table shows communalities. Communality is the amount of variance an original variable shares with all other variables included in the analysis. Large communalities indicate that a large amount of variance in the variable has been accounted for by the factor solution.

Eigenvalues for the factors 1 to 4 are 4.316, 3.178, 2.934, and 2.393 as revealed by the anti-penultimate row of the table. The percentage of the variance explained by individual factors is shown in the penultimate row of the table. It is observed

that the percentage of variance explained by factors 1 to 4 is 26.972, 19.862, 18.338 and 14.954. The reliability of the research variables was assessed by the Cronbach's α reliability coefficient. The internal consistency of the measurement scales is tested using the Cronbach's alpha for each research variable as well as for the complete construct. Internal consistency analysis was used to assess the reliability and validity of the measurements. Cronbach's alpha was calculated to analyze the internal consistency of the construct and its reliability (Table 3).

Table 4: Principal Component Analysis with Varimax Rotation of the Research Variables

Dimensions	Factor 1	Factor 2	Factor 3	Factor 4	Communality
D-2	0.815				0.823
D-4	0.812				0.833
D-1	0.810				0.737
D-5	0.772				0.780
D-3	0.769				0.739
D-6	0.624				0.823
D-10		0.730			0.783
D-9		0.725			0.780
D-7		0.682			0.777
D-8		0.676			0.643
D-13			0.741		0.775
D-11			0.725		0.793
D-12			0.684		0.817
D-14			0.681		0.802
D-15			0.614		0.907
D-17				0.715	0.908
D-18				0.641	0.869
D-16				0.621	0.885
D-19				0.611	0.698
Eigenvalue	4.316	3.178	2.934	2.393	
% of Variance	26.972	19.862	18.338	14.954	
Cumulative %	26.972	46.834	65.172	80.126	
Extraction Method: Principal Component Analysis . a. 4 Components Extracted					

The recommended minimum Cronbach's alpha coefficient reliability of 0.70 (Nunnally, 1978) was used to test the reliability and validity of each factor. The results are presented in Table3. The reliability test was satisfied as the Cronbach's α was found to be more than 0.70 for all the research variables. The alpha values for the extracted factors such as Environmental Concern, Ecological Consciousness on Green Products, Ecologically Conscious Consumer Behavior, and Consumer Intentionare 0.928, 0.912, 0.889, , and 0.941respectively.

Naming of Factors

The four extracted factors have been given appropriate names on the basis of variables represented in each case. The names of factors, the statement labels and factor loadings have been summarized in Table3.The factors representing the impact of ecological consciousness on consumer buyer behaviour of green products have been discussed below.

Factor 1: Environmental Concern

This factor has emerged as the most important factor explaining 26.972 % out of the total variance. This factor has an eigenvalue of 4.316 and Cronbach's Alpha of 0.928. In total, six statements load on to this factor. Highest loading is for the statement "I am highly responsible to keep the environment clean (0.815)". Followed by, "I usually don't harm natural world - plants, trees, animals, and insects (0.812)", "I don't buy products from companies who are blamed as environmental polluters(0.810)", "I generally use recycling center or some other way to recycle my household trash (0.772)", "I believe it is important for me to be environmental friendly (0.769)", and "I prefer to use my own bags instead of polythene carry bags supplied by vendors (0.624)"(Table3).

Factor 2: Ecologically Conscious Attitudes

The second factor explains 19.862 % out of the total variance explained. This factor has an eigenvalue of 2.934 and Cronbach's Alpha of 0.912. It is made up of four correlated statements. The highest loading is for the statement "I tend to purchase the products which are environmentally friendly (0.730)". Followed by, "I ask about environmental consequences of products before buying them (0.725)", "I usually buy products made from recycled, recyclable, & biodegradable materials (0.682), and "I do not purchase the products that cause potential damage to the environment (0.676)"(Table3).

Factor 3: Ecological Consciousness on Green Products

The third factor explains 18.338 % out of the total variance. This factor has an eigenvalue of 3.178 and Cronbach's Alpha of 0.889. It is made up of five correlated statements. Highest loading is for the statement "I just buy eco-friendly products because they protect our environment (0.741)". Linked to this, "I am aware of ecological products or green products available in the market (0.725), "I believe green products save natural resources effectively (0.684), "I would like to preserve the earth using green products (0.681)", and "I feel eco-friendly products in the market are trustworthy/credible (0.614)"(Table3).

Factor 4: Consumer Buying Behaviours

Four highly correlated statements load on to this factor and explain 14.954 % out of the total variance explained. This factor has an eigenvalue of 2.393 and Cronbach's Alpha of 0.941. Highest loading in this factor is for the statement **"**I always intent to buy eco-friendly products because they are good for the environment (0.715)", Linked to this, "I am willing to pay premium prices for green products or eco-friendly products.(0.641)", "I strongly recommend green products to my family, friends, neighbours, etc.(0.621)", and

"Green products have a better quality/performance than conventional products (0.611)" (Table3).

PEARSON CORRELATION ANALYSIS

The correlation matrix was performed to test the second hypothesis (H_2) of the research study. The second hypothesis (H_2) of this study was framed to explore whether there is a significant correlation between the research variables such as Environmental Concern, Ecologically Conscious Attitudes, Ecological Consciousness on Green Products, and Consumer Buying Behaviours. The results obtained in this regard are summarized in the following Table 5.

Research Variables	1	2	3	4
1. Environmental Concern	1			
2. Ecologically Conscious Attitudes	0.742*	1		
3. Ecological Consciousness on Green Products	0.706*	0.789*	1	
4. Consumer Buying Behaviours	0.698*	0.894*	0.803*	1

Note: *Correlation is significant at the 0.01 level (2-tailed), N = 400

One of the aims of this study was to replicate the significant correlations between the major study variables. Table5presents the correlations between all variables included. As expected, the research variable 'Consumer Buying Behaviours' was highly positively correlated with 'Ecologically Conscious Attitudes' ($r = 0.894$, $P < 0.01$), 'Ecological Consciousness on Green Products'($r = 0.803$, $P < 0.01$) and Environmental Concern($r = 0.698$, $P < 0.01$). The research variable 'Ecological Consciousness on Green Products' was also highly positively correlated with the 'Ecologically Conscious Attitudes' ($r = 0.789$, $P < 0.01$) and 'Environmental Concern'($r = 0.706$, $P < 0.01$). Further, it was clear from the Table5that the research variable 'Ecologically Conscious Attitudes' was highly positively correlated with the Environmental Concern($r = 0.742$, $P < 0.01$). These findings were absolutely consistent with the results of the factor analysis.

ONE-SAMPLE TESTS FOR MOTIVATORS AND OBSTACLES

The third and fourth hypotheses (H_3 and H_4) of this study mainly focused on the association between the driving forces that might motivate the consumers to buy the green products and the obstacles that might prevent the consumers from the intention of buying green products. In order to test these hypotheses, the one-sample test was conducted to determine whether these observed means of the motivators and obstacles are significantly different from the mid-point 3.0. The results are given in Table6. According to Table6, the results are found to be very significantly different from the mid-point 3.0 ($p < 0.01$). This confirms that all the motivators are in the positive side and obstacles are in the negative side.

Table 6: One-Sample Test for Motivators & Obstacles of Being Environmentally Friendly

Motivators & Obstacles of Buying Green Products	Test Value = 3.0					
	One-Sample Test Statistics				95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Motivators:						
1. Green products are environmentally friendly.	16.604	399	0.000*	0.675	0.755	0.595
2. They offer good value for use and money.	9.283	399	0.000*	0.443	0.536	0.349
3. They are socially responsible.	13.313	399	0.000*	0.605	0.694	0.516
4. They save costs and money.	9.898	399	0.000*	0.473	0.566	0.379
5. They save/preserve natural resources.	17.027	399	0.000*	0.685	0.764	0.606
6. They are trustworthy / reliable.	11.705	399	0.000*	0.583	0.680	0.485
7. They reduce pollutions in the environment.	11.808	399	0.000*	0.548	0.639	0.456
8. They care about the customers.	10.037	399	0.000*	0.505	0.604	0.406
9. They are innovative & creative.	11.875	399	0.000*	0.610	0.711	0.509
10. They have brand power.	5.784	399	0.000*	0.285	0.382	0.188
Obstacles:						
1. Green products are too expensive.	-17.444	399	0.000*	-0.960	-0.852	-1.068
2. They are difficult to find in a retail outlet.	-14.691	399	0.000*	-0.808	-0.699	-0.916
3. They normally do not function as expected in conventional products.	-14.347	399	0.000*	-0.755	-0.652	-0.858
4. I do not trust or believe the green labeling on every product.	-15.281	399	0.000*	-0.823	-0.717	-0.928
5. They are difficult to identify because they are poorly labeled.	-13.286	399	0.000*	-0.743	-0.633	-0.852
6. Lack of awareness about green products.	-11.849	399	0.000*	-0.693	-0.578	-0.807
7. There is a limited selection of green products from which to choose.	-15.746	399	0.000*	-0.870	-0.761	-0.979
8. Lack of access to the information on green products.	-13.908	399	0.000*	-0.803	-0.689	-0.916

*Significance at 1% (p<0.01)

Table 6shows a summary of the mean scores of the motivators that positively induce the consumers to buy green products. As can be seen from the Table 6, the mean score ranges from 5.784 to 17.027, which is obviously higher than the mid-point value 3.0. Of these 10 significant motivators, the motivator 'Green products save/preserve natural resources' secured the highest overall mean rating of 17.027 and 'Green products have brand power' (mean=5.784) the lowest. Followed by this, the other most significant motivators that might positively impel the consumers to buy green products can include 'Green products are environmentally friendly' (mean=16.604), 'Green products are socially responsible' (mean=13.313), 'Green products are innovative & creative' (mean=11.875), 'Green products reduce pollutions in the environment' (mean=11.808), 'Green products are trustworthy / reliable' (mean=11.705), 'Green products care about the customers' (mean=10.037), 'Green products save costs and money' (mean=9.898), and 'They offer good value for use and money' (mean=9.283).

On the other hand, the most significant obstacle that might prevent the consumers from the intention of buying green products was found to be 'Green products are too expensive' scoring a highest mean value of -17.444. Linked to this, the other significant obstacles faced by engineering students to become a successful entrepreneur in the future found at 5% level of significance can include 'There is a limited selection of green products from which to choose' (mean=-15.746), 'I do not trust or believe the green labeling on every product' (mean=-15.281), 'Green products are difficult to find in a retail outlet' (mean=-14.691), 'Green products normally do not function as expected in conventional products' (mean=-14.347), 'Lack of access to the information on green products'

(mean=-13.908), 'Green products are difficult to identify because they are poorly labeled' (mean = -13.286), and 'Lack of awareness about green products' (mean=-11.849).

CONCLUSION AND RESEARCH IMPLICATIONS

It was quite evident from the study that the Indian consumers consider environmental issues as an emerging concernin this modern era of the society and most of the consumers have started realizing their responsibilities towards keeping the environment clean and friendly. The survey results of this study were found to be significant and there was a higher level of concurrence found among the sample respondents for most of the dimensions concerning research variables. The study has also concluded that the ecological consciousness of Indian consumers has a positive influence on their buying behaviours toward green products as the most of the dimensions of the research variables concerning "Ecological Consciousness" and "Consumer Buying Behaviours" were observed to be significant from the factor analysis.

It was also obvious from the study that a high correlation existed between the research variables such as such as environmental concern, ecologically conscious attitudes, ecological consciousness on green products, and consumer buying behaviours. This study also clearly highlighted that the drivers which motivate the consumers to be environmentally friendly are in the positive side and the barriers that might prevent the consumers from the intention of becoming environmentally friendly are in the negative side. It was recommended that the future research must be done in other provinces of India to provide support for these findings and also educate the consumers to be more environmentally friendly.

SCOPE FOR FUTURE RESEARCH

Despite its strengths, the study has certain limitations. It is important to view this study in the context of its limitations. First, the research model developed in the study is an initial attempt in understanding the underlying factors that determine the ecological consciousness of Indian consumers and its effect on their buying behaviours toward green product. The survey is confined to few central provinces of India. Clearly, there is a need to replicate the results of the study to other parts of India and abroad as well. Another limitation worth mentioning here is that due to the paucity of resources and time, it has not been possible to explore the possibilities of changes in the opinions of the respondents over time. Furthermore, more research needed to study how the perceived importance of these proposed research variables may differ across various provinces and countries. These findings cannot be generalized to other provinces of India, which are not included in this study.

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