

# Exploring the Consumer Behavior of Intention to Purchase Green Brands & Products: An Empirical Analysis

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**Abstract**— Companies strive to reduce environmental impact through sustainable business practices. Consumers are increasingly aware of environmental issues and many companies have recognized the relevance of the green market in gaining competitive advantage. As part of the green marketing strategy, companies are developing green brands. This paper focuses on the impact of consumer care on the environment, environmental knowledge and self-expression benefits of buying a green brand. Data were collected from 270 Indian customers. The results of this research show that environmental concerns, environmental knowledge and self-expression benefits positively influence behavior and positively influence the purchase of green brands. The influence of consumers' knowledge of the environment on purchase intention was found to be insignificant. Therefore, investing in resources to promote environmental concerns, impart environmental knowledge and convey the benefits of self-expression can help increase the buying intentions of green brands.

**Index Terms**— Sustainable Business, Green Market, Green Brands & Products, Environmental Concerns

## I. INTRODUCTION

Environmental issues are becoming increasingly important in societies around the world. In the process of developing new products, climate change becomes a strategic issue because companies are considering the risks associated with climate change and opportunities in product planning. Consumer environmental knowledge and concerns and environmental regulations such as the Kyoto Protocol and the Montreal Convention are profoundly impacting world trade. In this case, many companies are turning their entire business process into eco-friendly and adopting a green marketing strategy to position their products. It shows a paradigm shift in business thinking towards the environment and society. Integrating sustainability into business practices offers a number of advantages, such as product differentiation, resource utilization, and enhanced competitive advantage. Integrating sustainability into business practices offers a number of advantages, such as product differentiation, resource utilization, and enhanced competitive advantage Corporate image. Green product and green process innovation motivates the firm's competitive advantage. The sustainability and continuity of the business depends on the way the organization faces environmental issues. In addition, environmental investments open up plenty of lucrative business opportunities. Therefore, green profit offers many benefits such as bottom line savings, brand recognition and competitive advantages for the company.

Environmental concerns and sustainability have contributed to the proliferation of green brands in product categories. Previous research suggests a positive relationship between environmental knowledge and consumer behavior. Several brand positioning strategies include green initiatives such as eco-friendly, organic and energy efficient. The benefits of the experience gained by green brand customers will influence their need Contribution to satisfaction and social well-being in terms of environmental concerns. Research suggests that consumers' inherent concerns about society and the environment motivate conservation behavior. Green consumers have more environmental concerns than the general population. Moreover, consumers also expect self-expression benefits from the consumption of environmentally friendly products. Being a psychological motive, self-expression increases the likelihood of buying a green brand. Previous research suggests that behavior toward eco-friendly products is an important difference in understanding consumers' perceptions of the green brand. Therefore, this study investigates the impact of consumer concerns on the environment, environmental knowledge and consumers' self-expression benefits and aims to acquire attitude and green brands.

## II. THEORETICAL BACKGROUND AND HYPOTHESES ENVIRONMENTAL CONCERN

Environmental concerns' refers to people's awareness of environmental problems and willingness to support efforts to solve them or to contribute personally to their solution. As suggested by general environmental attitudes, the key determinants of eco-friendly consumption are environmental concerns. Readiness to change behavior supported by emotionality and environmental knowledge defines environmental concerns. Environmental concern is represented by individual behavior assessment or collective behavior with environmental consequences. Environmental concerns indicate a strong attitude towards environmental protection. Environmental research is fundamentally based on the individual's concern for the environment, which directly affects the behavior of the environment. Consumer internal concern about society and the environment is reflected in conservation behavior. Environmental concerns are an important factor in consumer decision making. Several other studies emphasize that environmental concerns influence the purchasing behavior of environmentally friendly products. Environmental Concern refers to the willingness of people to be aware of environmental problems and support efforts to solve them, or to contribute personally to their solution. As suggested by general environmental attitudes, the key determinants of eco-friendly consumption are environmental concerns. Readiness to change behavior supported by emotionality and environmental knowledge

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defines environmental concerns. Environmental concern is represented by individual behavior assessment or collective behavior with environmental consequences. Environmental concerns indicate a strong attitude towards environmental protection. Environmental research is fundamentally based on the individual's concern for the environment, which directly affects the behavior of the environment. Consumer internal concern about society and the environment is reflected in conservation behavior. Environmental concerns are an important factor in consumer decision making. Several other studies emphasize that environmental concerns influence the purchasing behavior of environmentally friendly products. Greater environmental concerns among consumers motivate support for green products and make them easier for consumers to choose when buying. Several empirical studies suggest a strong correlation.

### III. ENVIRONMENTAL KNOWLEDGE

Environmental knowledge refers to the collective responsibilities required for sustainable development and how people are aware of the environment in relation to key relationships that lead to environmental factors or effects. Research suggests a positive relationship between environmental knowledge and consumer behavior. The level of consumer knowledge about environmental issues determines their buying behavior and actual knowledge is a prerequisite in attitude formation. Environmental knowledge changes the attitude of the environment and the environmental knowledge and the attitude of the environment affect the behavior of the consumers. A person's knowledge of environmental and green issues is usually associated with consumer buying behavior. Environmental knowledge is often considered an important motivating factor in green consumer behavior. Consumer awareness about the environment has a positive effect on the willingness to buy green products and this leads to pro-environmental behavior. Individuals who have knowledge of a particular problem and know how to best deal with it are more actively involved than individuals who are ignorant. Environmental knowledge and their research result as a predictor of green purchase intention shows that people with greater environmental knowledge in China have a stronger desire to buy green products. Moreover, in many studies, there is a significant relationship. The relationship between green knowledge and green product behavior influences consumers' green purchase intentions.

### IV. SELF-EXPRESSIVE BENEFITS

Consumers reap the benefits of self-expression beyond the functional and emotional benefits. The concept of self-expression benefits is based on signaling theory, which states that consumers are involved in the use of environmentally friendly products because they have social visibility. Signaling refers to the process of implicitly expressing information about one's preferences and personal characteristics to others. Greater opportunities for signaling make the person more receptive to society. The association of most signaling products with pro-environmental behaviors offers greater self-expression benefits, and this idea has been well supported by research on symbolic use. The product a person consumes defines the social role of the consumer and the consumer is engaged in eco-friendly use and

demonstrates a pro-environment attitude. In addition, consumers may engage in eco-friendly use in order to indicate their altruistic behavior. Clear altruism helps to gain fame because individuals demonstrate their willingness to engage in social welfare. Status and reputation objectives encourage consumers to buy green products. Therefore, self-expression benefits are positively associated with environmental use and behavior.

Based upon the literature, the following hypotheses are proposed:

H<sub>1</sub>: Environmental concern significantly influences attitude toward green brand.

H<sub>2</sub>: Environmental concern significantly influences intention to purchase green brand.

H<sub>3</sub>: Environmental knowledge significantly influences attitude toward green brand.

H<sub>4</sub>: Environmental knowledge significantly influences intention to purchase green brand.

H<sub>5</sub>: Self expressive benefits significantly influence attitude toward green brand.

H<sub>6</sub>: Self expressive benefits significantly influence intention to purchase green brand.

H<sub>7</sub>: Attitude toward green brand significantly influences intention to purchase green brand.

### V. DATA COLLECTION

Questionnaire survey was used in this study to verify the hypotheses and conceptual framework. Primary data were collected from a convenience sample of 270 respondents who had the purchase experience of electronic products. 'Consumer electronics' is one of the industries that have a strong commitment to sustainable practices in order to minimize environmental impact. This industry has taken a range of green initiatives in the areas of green manufacturing, design and energy efficiency, and clean delivery systems.

### VI. MEASUREMENTS

The respondent evaluated the constructs of environmental concern, environmental knowledge, self expressive benefits, attitude and purchase intention on the Likert scale with five points (1= strongly disagree, 5= strongly agree). Table 2 summarizes the measures and sources of constructs used in the study.

### VII. MEASUREMENT MODEL: RELIABILITY AND VALIDITY

The measurement model provides the quantitative measures regarding the reliability and validity of constructs used in the study. For assessing convergent validity of the construct, composite reliability, Factor loading, Average variance extracted (AVE) and Cronbach's were used. The reliability and validity of the constructs was tested subject to the suggestions given by Fornel & Lacker. All the constructs showed a standardized factor loading above 0.5 (ranging from 0.63 to 0.92) thus indicating good convergent validity among all the latent variables. Cronbach's was used to measure the internal consistency among items which ranged from 0.75 to 0.89 indicating a good consistency. All values of composite reliability surpass the minimum threshold of 0.60. The AVE ranges from 0.49 to 0.68, meeting the

minimum acceptable limit of 0.5. Moreover, Square Multiple Correlation (SMC) was also used to ensure discriminant validity of each item. SMC value of each item was found less than its standardized factor loading<sup>64</sup> and the value was also above the minimum criterion of 0.366. Table 3 lists all of these values. Finally discriminant validity among the constructs was also validated as the Average Variance Extracted was greater than the correlation of each construct 67. Table 4 summarizes the values of correlations and square root of Average Variance Extracted.

**VIII. THE RESULTS OF THE STRUCTURAL MODEL**

The goodness of fit statistics of the structural model was tested using measures of model fit namely: Goodness of Fit index (GFI), Adjusted Goodness of Fit Index (AGFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Incremental Fit Index (IFI) and Root Mean Square Approximation

Method (RMSEA). Table 5 shows the summary of statistical results.

On the basis of these measurements, the result of the study shows that our proposed model has a reasonable data fit ( $2=263.210$  ( $p=0.000$ ),  $2/df=2.437$ ,  $GFI=0.901$ ,  $TLI=0.915$ ,  $CFI=0.933$ ,  $IFI=0.934$ ,  $RMSEA=0.07$ ).

The finding shows that environmental concern ( $\beta=0.15$ ,  $p=0.011$ ), environmental knowledge ( $\beta=0.35$ ,  $p=0.000$ ) and self expressive benefits ( $\beta=0.55$ ,  $p=0.000$ ) significantly influence attitude toward green brand. Hence, H1, H3 and H5 are supported. Further, environmental concern ( $\beta=0.26$ ,  $p=0.000$ ) and self expressive benefits ( $\beta=0.30$ ,  $p=0.000$ ) were found having significant influence on intention to purchase green brand which supports H2 and H6 but environmental knowledge has no significant influence on purchase intention ( $\beta=0.11$ ,  $p=0.115$ ). Hence, H4 is not

supported. Finally, Attitude toward the green brand has a positive significant influence on participant’s intention to purchase ( $\beta=0.39$ ,  $p=0.000$ ) which supports H7 (See Table 6 and Figure 2).

**Table 1: Presents the demographic composition of the respondents**

	20-25	26-30	31-35	36 and above
Age	5(1.8%)	86 (31.9%)	112 (41.5%)	67 (24.8%)
Gender	Male	Female		
	148 (54.8%)	122 (45.2%)		
Education	Under Graduate	Graduate	Post Graduate	Doctoral Degree
	1(4%)	84 (31.1%)	166 (61.5)	19 (7%)
Occupation	Pvt. Services	Business	Govt. Job	Self Employed
	188 (69.6 %)	38 (14.1 %)	21 (7.8 %)	23 (8.5 %)

**IX. DISCUSSION**

The purpose of this study was to understand the effect of consumer’s environmental concern, environmental knowledge and perceived self expressive benefits on attitude and intention to purchase green brands. The results indicate that environmental concern among Indian consumers and self expressive benefits significantly influence their intention/willingness to buy the green brand. However, findings do not support the influence of environmental knowledge on purchase intention. Further, consumer’s environmental concern, environmental knowledge and self expressive benefits positively influence attitude towards green brand which in turn influences purchase intention positively. The findings of the study suggest that the more consumers are concerned for environment, the more likely they intend to purchase a green brand. Similarly, in case of self expressive benefits, the more consumers desire for status and reputation, the higher is their intention to purchase a green brand and product.

**Model Constructs, Survey Measures and Scale Source**

Construct	Survey measures	Scale adopted from
Environmental Concern	EC1: Environment is severely abused by humans Uncontrolled expansion of the industrialized society must be checked EC3: We must maintain the balance of nature for our survival EC4: The balance of nature is very delicate and easily upset.	EC2: Mostafa <sup>44</sup> Chen and _ 50
Environmental Knowledge	EK1: I know more about recycling than the average person. EK2: I understand the environmental phrases and symbols on product package. EK3: I am very knowledgeable about environmental Issues	Mostafa <sup>60</sup>
Self Expressive Benefits	SEB1: With brand X, I can express my environmental Concern SEB2: With brand X, I can demonstrate to myself and my friends that I care about environmental conservation SEB3: With brand X, my friends perceive me to be concerned about the environment	Hartmann and Apaolaza- Ibáñez <sup>20,61</sup>

Attitude	ATT1: For me, purchasing a green brand is: Good ATT2: For me, purchasing a green brand is: Desirable ATT3: For me, purchasing a green brand is: Wise ATT4: For me, purchasing a green brand is: Enjoyable	Kim and Han <sup>62</sup>
Purchase Intention	PI1: I will prefer to purchase a green brand over a non-green brand PI2: I am willing to purchase a green brand for Ecological Reasons PI3: I will make an effort to purchase a green brand	Kim et al. <sup>63</sup>

Environmental knowledge though did not influence purchase intention directly but an increase in consumer’s environmental knowledge can result in positive attitude formation which results in increased intention to purchase a green brand. Self expressive benefits are also important mainly due to psychological benefits that a consumer derives while contributing to the environmental improvement.

The results of the study exhibits direct implications for marketers of green brands.

First, the marketers must promote concern for environmental protection. The development of high concern for environment will result in consumer’s increased preference for green brands. Second, the marketers should come up with programs to impart environmental knowledge to consumers. The increase in the level of environmental knowledge will form positive attitude for green brands and consequently the consumers will be more willing to purchase a green brand. Third, the marketers should design a marketing communication program that

**Table 3: Measurement model: Reliability and Validity**

Constructs	Items	Standardized Loading	Factor Squared Multiple Correlation (SMC)	Cronbach’s	Composite Reliability	A.V.E.
Environmental Concern	EC1	0.85	0.72	0.89	0.94	0.68
	EC2	0.82	0.67			
	EC3	0.81	0.65			
	EC4	0.84	0.70			
Environmental Knowledge	EK1	0.77	0.59	0.85	0.82	0.67
	EK2	0.76	0.57			
	EK3	0.92	0.85			
Self Expressive Benefits	SEB1	0.75	0.56	0.75	0.71	0.51
	SEB2	0.68	0.46			
	SEB3	0.71	0.50			
Attitude	ATT1	0.71	0.51	0.81	0.70	0.49
	ATT2	0.73	0.53			
	ATT3	0.67	0.44			
	ATT4	0.68	0.46			
Purchase Intention	PI1	0.78	0.61	0.81	0.73	0.54
	PI2	0.63	0.39			
	PI3	0.79	0.62			

**Table 4: Correlation among the constructs**

	Mean	S.D.	EC	EK	SEB	ATT	PI
EC	3.992	0.823	0.82				
EK	3.954	0.958	0.431**	0.81			

SEB	3.874	0.857	0.542**	0.460**	0.71		
ATT	3.929	0.897	0.453**	0.514**	0.585**	0.70	
PI	3.733	0.925	0.518**	0.442**	0.560**	0.599**	0.73

Note: Diagonals (Bold and Italics) represent the square root of average variance extracted while the other entries represent the correlation, mean and S.D. (standard deviation).

\*\*p<0.01

informs the consumers of self expressive benefits involved in purchase of green brands. In this context, advertisements aimed at fulfilling desires of status and reputation through conspicuous consumption of eco-friendly products can be very helpful. While the present study serves as an addition to the existing knowledge, still the study has some limitations. First of all this study focuses on purchase experience of electronic products. Further research could consider other products and compare with this study. Second, this study takes into account the cross sectional data which cannot observe the dynamic changes in consumer’s environmental concern, knowledge and self expressive benefits. Future research could conduct a longitudinal study

**Fig. 2: Result of structural equation modeling analysis**

**Table 5: Chi-square result and goodness of fit indices of the proposed model**

Fit Indices	obtained Value	Norm*
Chi-square	263.210	N/A
Scaled $\chi^2/df$	2.437	>1 & <5
Goodness of Fit Index (GFI)	0.901	>0.90
Adjusted Goodness of Fit Index (AGFI)	0.849	>0.8**
Tucker-Lewis Index (TLI)	0.915	>0.90
Comparative Fit Index (CFI)	0.933	>0.90
Incremental Fit Index (IFI)	0.934	>0.90
Root Mean Square Approximation Method (RMSEA)	0.07	<0.08

\*Norm: Sources: Bagozzi & Yi<sup>66</sup> \*\* Norm for AGFI: Chau & Hu<sup>68</sup>

**Table 6: Path analysis of structural model**

Path	Standardized Estimates	t-statistics	p-value	Relationship
EC → ATT	0.15	2.539	0.011	Significant
EC → PI	0.26	4.249	0.000	Significant
EK → ATT	0.35	5.324	0.000	Significant
EK → PI	0.11	1.576	0.115	Not Significant
SEB → ATT	0.55	6.651	0.000	Significant
SEB → PI	0.30	3.300	0.000	Significant
ATT → PI	0.39	3.802	0.000	Significant

to observe any change over a period of time. Lastly, the participants of this study are Indian consumers. Future research could concentrate on consumers of other countries and compare with this study.

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