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## Predicting Young Consumers' Purchase Intention towards Green Products: Extension of Theory of Planned Behaviour

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### Abstract

*Exploring the determinants of green purchase intention and behaviour among youth has been the focus of recent studies in green marketing. Among the socio psychological models predicting green behaviour, theory of planned behaviour has been the most popular and has been applied successfully to a wide variety of green and sustainable behaviours. This study uses the TPB framework to predict young consumers' intention to purchase green products in Lucknow. Further, the TPB model has been extended to include the construct of self-transcendence. Responses were collected from a sample of 145 university students using convenience sampling approach. The hypothesised relationships were tested using structural equation modelling. Findings suggest that TPB variables significantly predict green purchase intention. Besides, self-transcendence emerges as an influencer of green purchase intention as well as attitude. The proposed model also demonstrates better explanatory power than the original TPB framework. Implications for industry and academics have been discussed.*

**Keywords:** Theory of Planned Behaviour, green products, intention, self-transcendence

### 1. Introduction

The economic development across the globe has been accompanied by environmental degradation. Rapid industrialization has benefitted the societies but also given rise to the problem of environmental pollution. This has made environmental conservation a mainstream issue for policy makers. For businesses, this concern for environment is reflected in increasing production and consumption of green and sustainable products. Still, the market share of green products is pretty low as compared to conventional ones. The difference is even bigger in case of developing economies which are primarily the producers and exporters of green and organic products.

Studies in consumer behaviour have attempted to identify the causes of such consumption pattern. A number of these studies have tried to put forth a model of consumer behaviour highlighting the motivators or barriers to green consumption [e.g.,1,2]. But a majority of such studies have been conducted in the context of developed countries. Further, most researchers have relied on the model of either theory of planned behaviour or norm activation theory or value attitude behaviour hierarchy with some context specific modifications.

Through this study we aim to explain the green purchase intention of young consumers in India using the framework of theory of planned behaviour. As values have been known to influence behaviour, we

also propose to modify the existing TPB framework by incorporating the construct of self transcendence value to increase the explanatory power of TPB model.

## **2. Literature review**

### **2.1 Theory of planned behaviour**

The theory of planned behaviour (TPB) [3] is a theory on human decision making and the factors that go into it. It is an extension of the theory of reasoned action (TRA) [4]. TPB puts forth a model for prediction of intention and behaviour using attitude, subjective norm and perceived behavioural control as predictor variables. Attitude towards a behaviour refers to the extent to which the behaviour is considered to be favourable or unfavourable. Subjective norm (SN) is an individual's perception regarding the approval of significant others for the behaviour in question. Perceived behavioural control (PBC) is the perception of control over the performance of behaviour. Attitude, SN and PBC, all influence the behavioural intention [3].

TPB has been used extensively to predict a wide array of behaviours. In green marketing literature, TPB model has been applied to predict intention to purchase green and eco-friendly products, as well as perform green behaviours like visiting green hotels, improving air quality, household waste sorting etc. Hence it is proposed:

H1: Attitude will influence purchase intention

H2: SN will affect intention

H3: PBC will impact intention

### **2.2 Inclusion of additional construct in TPB**

Studies using the framework of TPB have advocated the inclusion of context specific constructs to improve the predictive power of the original model. Research studies in the area of sustainable consumption have included constructs such as environmental concern, environmental knowledge, moral attitude, awareness of consequences, perceived consumer effectiveness etc. to better explain the variation in consumption intention and behaviour. In most of these studies, it was reported that the predictive power of the TPB model increased by some percentage. These studies have also suggested that consumers prone to green purchase behaviour are the ones who not only value their interests but also attach importance to the interests of the society and environment. These consumers may often be willing to transcend their personal motives for the well-being of the community at large. Therefore, we aim to include the self transcendence value (STV) as an additional construct in the TPB framework for this research. Research on values have reported that they affect intention directly and also through attitudes. Hence it is proposed that:

H4: STV will impact attitude towards green products

H5: STV will affect behavioural intention

The proposed research framework is shown in figure 1.

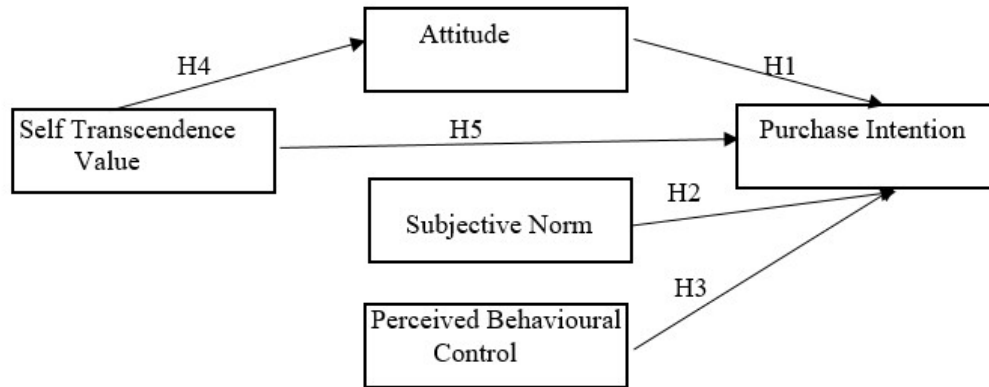


Figure 1. The Proposed Research Framework

### 3. Method

#### 3.1 Questionnaire design

The questionnaire for the study was developed by sourcing items from relevant literature. Attitude was measured using three items from Wang et al. [5] (e.g. “buying green products is a good idea”). Subjective norms was operationalized using three items from Han et al. [6] (e.g. “most people who are important to me think I should buy green products”). Perceived behavioural control was measured utilizing three items from Paul et al. [7] which included statements like “I have resources, time and willingness to purchase green products.” Purchase intention was assessed using three items from Yadav and Pathak [8] (e.g. “I am willing to purchase green products for personal use”). Self transcendence value was operationalized using two items from Jacobs et al. [2]: “An ecologically sound environment is very important to me” and “Social responsibility is important to me”. All the items were measured on a 7 point Likert scale with ‘1’ denoting strong disagreement and ‘7’ implying strong agreement.

#### 3.2 Data collection

A pilot survey was conducted with 20 research scholars to check whether the wordings of items are suitable in the current context. Next, we reached out to 200 university students in Lucknow using convenience sampling approach and received 159 responses. After eliminating incomplete responses we had 145 usable responses. According to Kline [9] there should be atleast ten responses per item. Our study has 14 variables therefore a sample size of 145 is sufficient. The sample demographics are presented in table 1.

Table 1. Sample Demographics

Demographic Variable	Frequency	Percentage
Gender		
Male	86	59.31
Female	59	40.69
Age		
17-24	107	73.79
25-30	38	26.21
Education		
Intermediate	35	24.14
Graduate	87	60.0

Post Graduate	23	15.86
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#### 4. Data Analysis

We made use of SPSS and AMOS software for analysis of data. Skewness and Kurtosis indices were calculated for checking the normality of the data. The indices were within the range suggested by Kline [9]. Next, we calculated Cronbach's alpha values to test the internal consistency of the items. All the constructs had alpha values above the recommended 0.7 threshold [10].

##### 4.1 Measurement Model

Confirmatory factor analysis for the measurement model showed an acceptable fit: CMIN/df=1.606; CFI=0.950; TLI=0.934; IFI=0.952; SRMR=0.058; RMSEA=0.065. The reliability and validity estimates for the constructs were well above the acceptable threshold. The composite reliability values were above 0.7 for all the sub scales. The factor loadings were found to be above 0.6 mark. Further, the AVE values were above 0.5 demonstrating good convergent validity. The estimates for reliability and validity are provided in table 2. The discriminant validity was assessed by comparing square root of AVE with factor correlations and the values for the former were greater than that of latter for all the constructs (see table 3) which satisfied the criterion suggest by Fornell and Larcker [11].

**Table 2. Reliability and Validity**

Constructs	Indicators	Factor Loadings	CR	AVE	Cronbach's alpha ( $\alpha$ )
Attitude	ATT1	0.756	0.855	0.664	0.842
	ATT2	0.786			
	ATT3	0.895			
Subjective Norm	SN1	0.787	0.749	0.501	0.742
	SN2	0.645			
	SN3	0.684			
Perceived Behavioural Control	PBC1	0.830	0.826	0.613	0.822
	PBC2	0.773			
	PBC3	0.743			
Purchase Intention	PI1	0.794	0.871	0.694	0.870
	PI2	0.859			
	PI3	0.843			
Self Transcendence Value	STV1	0.710	0.739	0.587	0.731
	STV2	0.819			

CR=Composite Reliability; AVE=Average Variance Extracted

**Table 3. Factor Correlations**

	SN	PI	Attitude	PBC	STV
SN	<b>0.708</b>				
PI	0.403	<b>0.833</b>			
Attitude	0.174	0.517	<b>0.815</b>		
PBC	0.147	0.366	0.099	<b>0.783</b>	
STV	0.145	0.393	0.306	0.494	<b>0.766</b>

Diagonal values represent sq. root of A.V.E.

SN = Subjective Norm; PI = Purchase Intention; PBC = Perceived Behavioural Control; STV = Self-Transcendence Value

## 4.2 Structural Model

CFA was carried out on the structural model which provided the following fit statistics: CMIN/df=1.594; CFI=0.950; TLI=0.935; IFI=0.951; SRMR=0.068; RMSEA=0.064. These measures suggest that the model fit is acceptable. The model explained 48% variance in purchase intention.

Additionally, the TPB model was also checked for fit statistics: CMIN/df= 1.780; CFI= 0.950; TLI=0.932; IFI=0.952; SRMR= 0.059; RMSEA= 0.074. The model explained 45% variance in purchase intention. Hence, the inclusion of an additional construct (STV) could be justified.

## 4.3 Path Analysis

Path analysis revealed that all the TPB factors significantly impacted behavioural intention. The effect of attitude ( $\beta=0.388$ ,  $t=4.280$ ,  $p<0.001$ ), subjective norm ( $\beta=0.269$ ,  $t=2.972$ ,  $p<0.01$ ) and perceived behavioural control ( $\beta=0.292$ ,  $t=3.446$ ,  $p<0.001$ ) on purchase intention was statistically significant. Also, self transcendence value significantly influenced both attitude ( $\beta=0.312$ ,  $t=2.996$ ,  $p<0.01$ ) and intention ( $\beta=0.231$ ,  $t=2.480$ ,  $p<0.05$ ). Thus, all the hypotheses (H1-H5) were supported.

## 5. Discussion

This study explores the antecedents of young consumers' green purchase intention using the framework of theory of planned behaviour. The predictor variables of TPB, viz., attitude, subjective norm and perceived behavioural control emerge as significant influencers of behavioural intention. This is in line with the findings of past studies [6,8]. The results suggest that a favourable disposition towards green products helps in formation of behavioural intention. The role of significant others, through the impact of subjective norms, is also established. This implies that young consumers, while purchasing green products, are conscious of social approval of their purchase decision. Lastly, the perception of ease or difficulty in purchasing, i.e., perceived behavioural control is also found to significantly impact behavioural intention. The results suggest that a perception of having sufficient resources, time and money is an important factor influencing the formation of intention.

The current research also includes the construct of self transcendence value in the original TPB model to improve its explanatory power. The results show a significant positive impact of STV on attitude towards green products and intention to purchase such products supporting the findings of Jacobs et al. [2]. This suggests that a sense of responsibility towards the environment and society motivates consumers to opt for green products over conventional ones.

## 6. Implications

The current research has some important implications for theory and practice. The study proves the robustness of the TPB model in explaining consumer behaviour, especially with reference to green and sustainable products. Since previous research has suggested that the TPB framework is open to modifications, this study includes the construct of self transcendence value in the original framework in trying to explain the green purchase intention. STV emerges as a significant predictor of attitude and intention which calls for further research into other values and their inclusion in the TPB framework to explain related green and sustainable behaviours.

For marketing managers, it is essential to align product benefits with the attitudes and values of consumers. Young consumers, who are concerned about the well being of the society and environment, should be made to understand that they can contribute towards environment protection by consuming eco friendly products. Effective communication strategies should be developed to make green products



more acceptable in the society. Companies must focus on the distribution of green products so as to offer more opportunities to consumers to buy them.

## 7. Conclusion And Directions For Future Research

This research was carried out with the objective of predicting young consumers' intention for purchasing green products. We employed the well established TPB framework and also included an additional construct viz., self transcendence, to explain the variation in behavioural intention. The results supported the hypothesized relationships.

The study has some limitations which can be addressed in future studies. The self-reported nature of study may cause it to be affected with social desirability bias. The research is limited to educated young consumers, therefore, the findings cannot be generalized. We have focussed on green products in general but the intention and behaviour may vary across different categories of green products. Hence, future studies should take into consideration different socio demographic sections and different product categories to account for such variation. Future researchers should also take into consideration the actual behaviour, along with intention, to account for a possible gap between the two.

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