

Antecedents of Environmental Conscious Purchase Behaviors

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Abstract: In this study we have validated theory of planned behavior while testing it for identification of antecedents of environmental conscious purchase behaviors by using consumer data from a developing country, Pakistan. Questionnaire survey was used for data collection from two major residential areas of Rawalpindi and Islamabad. Structural Equation Modelling technique has been used for data analysis. Results revealed that perceived behavioral control has significant though weak impact while environmental concern plays the most significant role in developing positive intentions.

Key words: Theory of planned behavior % Environmental concern % Developing country

INTRODUCTION

The customers feel that today's ecological problems are severe and the corporations are not acting reasonably toward these problems [1]. The environmental pro-activity by firms is associated with pressures from customer group [2, 3, 4] similarly many firms have started turning green due to green consumerism [5, 6]. Rise of environmental concern among consumers has been viewed as perhaps the biggest opportunity for enterprise and invention the industrial world has ever seen [7]. The difference in customers concern also explains the difference in industrial response toward development and implementation of environmental strategies [8]. "neo-greens" or the "LOHAS" (lifestyle of health and sustainability) consumer segments are on the rise in many countries [9]. Environmentally friendly consumer segment is growing, consumer attitude is becoming greener as their knowledge and information is improving in environmental area [10]. However, at the same time may researchers propose that purchasing environmentally friendly product is not evident from a greater proportion of the population that does not demonstrate the adequate environmental behavioral patterns [11].

Green consumer behavior has been studied by researchers from three major perspectives [12], firstly by means of demographic and socio-economic factors (which turnout to be of little significance) second

perspective focused on amount of knowledge and information about environmental issues and problems while the third perspective considered psychographic variables including values, norms, attitudes, believes etc. the third perspective is more complex and is preferred by researchers who have focus on studying environmental conscious consumer behavior [12].

Successful understanding of environmentally conscious customer behaviour (ECCB) requires a clear understanding of antecedents of this behavior. The public policy makers and marketers required to understand these antecedents for encouraging ECCB among their target markets [13]. The environmental knowledge plays a very important role in the presence of ECCB. Green consumer behavior can be determined by a number of factors depending on type of behavior and involvement with or during purchase of the product [13-15]. Contextual forces, attitudinal factors, habits or routines and personal capabilities [16] are four categories for determining of green consumer behaviors. Contextual forces indirectly affect behavior through attitudinal factors [14, 17]. Attitudinal factors are important for understanding green consumer behavior from both psychological and marketing perspectives [17, 18]. This study focuses on the normative, attitudinal and control factors for developing intentions and performance by using theory of planned behavior framework [3].

Theory of Planned Behavior framework: The Theory of Reasoned Action (TRA) [19, 20] proposes that intention of individuals to behave in a certain way is effected by their attitudes toward that specific behavior and their normative perceptions about what the important others think about performing that specific behavior i.e. the subjective norms. One of the limitations of TRA is that it does not account for situations where individuals might not identify that they have control over their behavior. The Theory of Planned Behaviour (TPB) is an extension of the TRA [19] which incorporates both the personal factors and social influences as determinants. TPB [21] is one of the most significant theory for the study of social behaviors [22]. The meta-analysis done by Ravis and Sheeran [10] identify support for both social pressure and social norms affecting behavioral intention. The TPB identifies subjective norms, attitudes about a certain behavior and perceived behavioral control (PBC) have an influence on behavioral intention, which further generates a specific behavior. Many researchers have provided analytical support of TPB [23, 24] and it has also shown to have good predictive validity [25]. For this specific research the researcher has used Theory of Planned Behavior (TPB), for studying ecologically friendly consumer behavior. There is evidence that pro-environmental behavior varies considerably across nations and cultures [9, 26, 27]. Majority of literature has arrived from developed countries of North America and Europe. For the generalizability of concepts that were largely developed in United States and Europe, new cultural contexts and non-Western settings are required [28]. It is believed that this study will address this issue and will provide a chance to examine the applicability and validity of concepts that were developed and tested in Western cultures only. In this study theory of planned behavior framework has been used to understand green consumer behavior while using developing country, Pakistan as context.

Subjective Environmental Norms: Social influences are the pressures that one perceive from the importance the other give to perform, or not to perform, a specific behavior i.e. subjective norms. Subjective norm is determined by beliefs about the extent to which others, who are important, want one to perform a specific behavior. Subjective environmental norms are the environmental norms which important other or love ones think one should have. According to Theory of Needs by McClelland's [29], individual behavior is influenced by the requirement of a desired behavior by loved ones or

referent group, individual behave in certain way for the fulfillment their need for affiliation and group identification. In this vein, individuals' intention to consume environmentally friendly products are likely to be strengthened if they believe that their loved ones expect them to do so, or they wish to be identified with other individuals who are consuming environmentally friendly products [30]. It is therefore hypothesized that:

H1: Subjective environmental norms will positively influence the consumer intentions to buy environmental friendly products.

Attitude toward the Environmental Behavior: Attitude is a psychological construct which represents an individual's readiness to act or react in a certain way [31]. An individual's attitude towards consuming a product is one of the most important factors for predicting and explaining their choices across products and services [32]. According to Ajzen [21] the more favorable the attitude with respect to behaviour, the stronger is the individual's intention to perform that behavior. Thus, if individual has positive attitude toward environmental behavior stronger is the possibility that he/she has positive intentions towards buying environmentally friendly products so it is hypothesized that

H2: Attitudes towards buying environmental friendly products will influence intention to buy them.

Perceived Behavioral Control: No one can refute the importance of actual behavioral control as the resources and opportunities available to a person can develop the likelihood of behavioral achievement [21]. However, the perception of behavioral control and its impact on intentions and actions of individuals is also important and plays a significant part in the theory of planned behavior. It is an individual's perceptions on the extent to which he/she is able to perform a given behavior [21]. Underlying these perceptions are their beliefs about the relative ease or difficulty in performing the behavior and the extent to which their performance is up to the mark [33]. Where performance of a behavior is within the means of the individual and is relatively easy, intention to perform that behavior will be higher.

H3: Perceived environmental behavior control will positively influence consumer intentions to buy environmental friendly products.

Environmental Concern: Theory of planned behavior [20] identifies the role of general attitudes like environmental concern as having a no direct but an important indirect causal impact on specific behaviors i.e. general environmental concern influence intentions and behavior via their impact on attitude, subjective norm and behavioral control. No further detailed analysis of the psychological processes through which the general attitudes might influence the perception and evaluation of situation specific beliefs is provided by TPB [34]. However, it is interesting to note that ecologically conscious consumers will score higher on a measure of environmental concern. Being conscious and being concerned are two closely related concepts. One would expect that if one is concerned about the environment, this concern may lead to positive intentions to buy environmental friendly products [35]. Lepisto [36] also found environmental concern as a significant predictor of environmental conscious purchase behavior. In the light of above findings following hypothesis is purposed:

H4: Environmental concern will positively influence intentions to buy environmental friendly products.

Intentions Toward Environmental Friendly Products: Theory of reasoned action and theory of planned behavior, both places individual’s intention to perform a given behavior in the center of nexus. Intentions are indicators which identifies the willingness of an individual to perform a specific behavior [21]. Intentions are the motivational factors that guide a behavior according to Ajzen “As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance” [21:181]. Positive intentions towards environmental friendly products will lead to the buying of environmental friendly products. Many studies have identified the relationship between intentions and performance of specific behavior [25, 37]. Ajzen [21] found that behaviors can be predicted with accuracy from intentions when no serious problems of control are being posed. As intentions have been identified as significant predictors of actual behavior, it was, thus, hypothesized that:

H5: Intention to buy environmental friendly products has a positive relationship with the buying behavior of environmental friendly products.

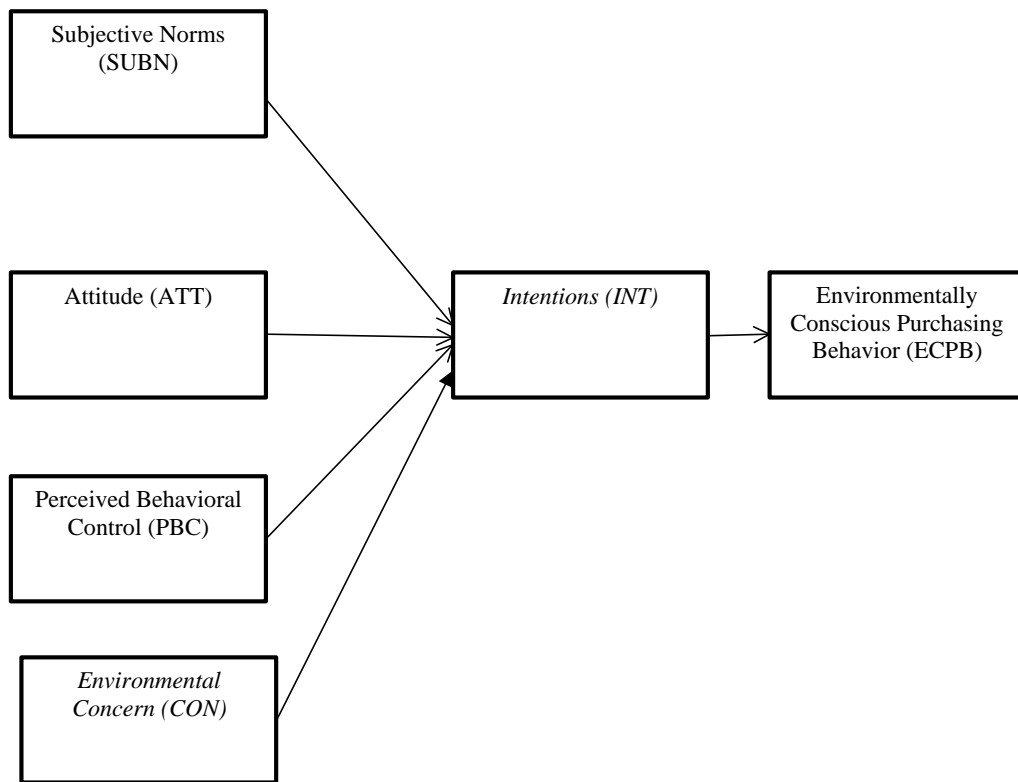


Fig. 1: Part of figure is adapted from Theory of Planned Behaviour (Ajzen, 1991) Environmental concern is added in the (TPB) model as an antecedent of ECPB.

MATERIALS AND METHODS

Procedure and Participants: A total of 500 survey questionnaire were distributed in two residential area of Rawalpindi, Pakistan. Respondents were mostly females who make major purchase decisions for their household. 255 usable questionnaires were received back.

Measures

Subjective Environmental Norms: Subjective environmental norms were measured with the help of 5 items, three of which measured the injunctive quality of subjective environmental norms and were adapted from Ajzen [38]. Sample item includes “Most people who are important to me think that I should use environmentally friendly products at home”. The descriptive norms i.e. whether the one who is important also perform the same behavior or not, was measured with the help of two items they were also adapted from Ajzen [38]. Sample item of descriptive norms is “Most people who are important to me use environmental friendly products at their homes”. All five items were measured on five point scale.

Attitude Toward the Environmental Behavior: Attitudes can be measured with the help of likert scale but due to the ease of construction, semantic differential scale is most commonly used by researchers. Five bipolar adjectives were adopted from Ajzen [38] for the measurement of attitude toward environmental behavior and semantic differential scale was employed for each category. Sample Items are harmful- beneficial and worthless-valuable.

Perceived Behavioral Control: A total of four items were adapted from Ajzen [38] for the measurement of perceived behavioral control, two items were used to measure respondent’s sense of self efficacy with respect to performing the behavior. Sample item includes “It is mostly up to me whether or not purchase ecological product in the forthcoming month”. While two items were used to measure respondent’s behavior controllability. These two items are related to respondent’s beliefs that he/she has control over the purchasing environmentally friendly products. Sample item is “If I wanted to I could use environmentally friendly product in the forthcoming month”. These items were measured on five point interval scale.

Environmental Concern: Three items adopted from Arslan *et al.* [39] have been used to measure respondent’s environmental concern. These items were measured on five point interval scale from strongly disagree to strongly agree. Sample Items includes “The fact that factories perform production without checking whether it is harmful to nature or not, scare me” and “I don’t think that the problem of environmental pollution is exaggerated”.

Intentions Toward Environmental Friendly Products: For measuring intentions toward environmentally friendly products three items recommended by Ajzen [38] were employed with some minor changes. These three items were measured on five point likert scale. Sample Items are “I plan to use ecological products in the forthcoming month” and “I intend to use ecological products in the forthcoming month”.

Environmental Conscious Buying Behaviour: Five items used to measure the buying behavior of environmentally friendly products were adapted from Ajzen [38]. These items were measured on five point likert scale from strongly disagree to strongly agree. Sample items include “I do not purchase the products of the firms that damage the environment” and “I purchase ecological products although they are more expensive than the similar products”.

Measures’ Validation: When a set of items measuring a latent construct fails to assess it in a different group or in different cultural context then there is a possibility for the occurrence of construct bias or measurement non-invariance [40]. Measures’ validation is required while using scales developed in one country or cultural context to another context or new environment/settings [40].

The first step of measures’ validation is Exploratory Factor Analyses (EFA) [41]. EFA can be conducted using SPSS 16. The application of the EFA technique was justified from the values of Kaiser-Meyer-Olkin parameters and Bartlett’s sphericity test. Items can be removed from latent construct if (a) they are not loaded in their respective latent construct (b) the total variance explained for each item is less than 50%, (c) the factor loading of observed variable is less than 0.5 and (d) the item to total correlation values is less than the 0.5 [42]. None of the item was removed at this stage as all above conditions were satisfied by the data.

Table 1: Descriptive Statistics, Correlations and shared variance for constructs.

S. No.	Variable	No. of items	Mean	S.D.**	CR***	1	2	3	4	5	6
1	SUBN	5	3.61	1.00	.94	.74					
2	ATT	4	5.31	1.53	.94	.75*					
						(.56)	.81				
3	PCB	3	3.53	0.81	.83	.79*	.77*				
						(.62)	(.59)	.62			
4	CON	3	3.49	1.16	.91	.68*	.76*	.69*			
						(.46)	(.58)	(.48)	.77		
5	INT	3	3.29	0.98	.90	.75*	.79*	.72*	.75*		
						(.56)	(.62)	(.52)	(.56)	.75	
6	ECPB	4	3.27	0.92	.90	.71*	.64*	.77*	.77*	.68*	
						(.50)	(.41)	(.59)	(.59)	(.46)	.69

Shared variance in parenthesis; AVE in diagonal
*P < 0.01, **s.d.: Standard deviation ***CR: Composite Reliability.

The next step for validation is the application of Confirmatory Factor Analysis (CFA). CFA or measurement model fit was conducted using AMOS 16. The two steps or incremental approach to structural equation modeling was used in which the first step is the fitting of the measurement model. All Items had t value greater than 2.50, factor loadings greater than 0.5 and R² greater than 0.5, so none of the item was considered for deletion from the analysis based on above criteria which had been identified by Joreskog and Sorbom [43]. The results of the measurement model analysis recommended removal of one item from Environmental conscious purchase behaviour (i.e., ECPB5) and one item from environmental attitude (i.e., ATT 5). These items were removed on the basis of modification indices, as they were loading in more than one construct. The removal of these items led to an improved measurement model fit.

The psychometric properties of the measures were examined through CFA based on the six factor structure model, namely Subjective Environmental Norms, Attitude toward the environmental Behavior, Perceived Behavioral Control, Environmental Concern, Intentions toward environmental friendly products and Environmental conscious Buying behavior.

The CFA resulted in an acceptable fit (GFI = .81, CFI = .92, TLI = .90, RMR = .06 and P2 = 620, df = 194, p < .001). Convergent validity was evident from significantly (p < .001) loaded indicators on their respective constructs. Cronbach alpha (ranges from 0.88 to 0.95)

composite reliability (range from 0.83 to 0.94) and AVE (ranges from 0.62 to 0.79) provides evidence of internal consistency [44]. Discriminant validity was assessed through Fornell and Larcker [44] criteria by comparing the average variance extracted (AVE) and the shared variance. In all cases the AVE was greater than the shared variance thus indicating that discriminant validity.

RESULTS

Structural Model and Hypothesis Testing: The dimensions which were obtained from the measurement model were used as input in causal path analysis. The SEM results appear in Table 2. All hypotheses H1, H2, H3, H4 and H5 were supported.

Environmental concern has the strongest positive and significant relationship with intentions the second significant positive relationship lies between attitude and intentions and subjective norms has significant, positive and significant relationship with intentions at third place. While the relationship between perceive behavioral control and intentions is weak though positive and significant. The result suggests that higher the environmental concern, attitude, subjective norms and perceive behavioral control more positive will consumer's intentions.

Impact of intentions on environmental conscious purchase behavior was analyzed through H5. The path of intentions leading toward ECPB was strong, positive and significant. Hence H5 was accepted.

Table 2: Structural Model.

Causal Path	Un-standardized coefficient	t-value	Hypotheses	Supported
SUBN=>INT	.186	2.87*	H1	Yes
ATT=>INT	.1.52	3.42*	H2	Yes
PCB=>INT	.185	1.75***	H3	Yes
CON=>INT	.329	4.69*	H4	Yes
INT=>ECPB	.789	10.31*	H5	Yes
Goodness of fit Indices P ² = 704 ; d.f. = 198; P ² /d.f. = 3.5; p < 0.001; CFI = 0.91; GFI = 0.80; TLI = 0.89; RMR = 0.08				
	* p < .01	**p < .05		***p < .10

DISCUSSION AND CONCLUSION

This study was aimed at determining the environmental conscious purchase behavior in Pakistani consumers. Theory of planned behavior is used for identification of antecedents of environmental conscious purchase behavior. Environmental concern has been introduced in the TPB model as an antecedent of environmental conscious purchase behavior.

First important finding of this study revolves around the validity of TPB in a developing country, Pakistan. Antecedents including subjective norms, attitude, perceive behavioral control and intentions play significant role in environmental conscious purchase behavior. These findings are consistent with the previous findings of many researchers in this area [write references here].

The effect of environmental concern on intentions was positive, significant and strongest which suggests that high levels of concern for the environment will produce positive intentions across the population, the potential benefit from enhancing concern may help in increase consumption of environmental friendly products. Many scholars have suggested that the major promotional task is to induce people to act on their concern [37, 42]. An integrated environmental advertising approach that focuses on communication and behavioral objectives at the same time appears particularly appropriate in the present situation.

The significant impact of positive attitude towards environmental products on intentions is also important. The strength of the relationship found between attitude and intentions has important advertising implications. Advertising directed toward the ecologically conscious consumer market segment would be advised to stress the ability of the individual consumer to fight environmental deterioration. The well developed and executed environmental marketing strategies targeting individual customers will help in improving attitude of consumers. Appropriate communication strategy like "Sick baby appeal approach" will be required to attract this market segment. It focuses on the severity of the need for help and the importance of the issue [46, 47]. Ellen *et al.* [48] and Fine [46] propose that for some issues for which level of concern is already high (e.g., environmental concern) this might be an appropriate social marketing strategy.

Similarly, the significant impact of subjective norms on intentions reflects the high power distance culture that characterizes Pakistani consumers. They are likely to be influenced by the advice and opinions of significant others, particularly those whom that they hold high regard

for or are important to them. Furthermore, as Pakistan is a highly collectivist society, consumers tend to conform to the consumption choices of significant others. This implies that those whom consumers hold high regard for, are able to influence the consumers both actively through their advice or opinions, as well as passively, through their own behaviors. The same results were found by Voom *et al.* [49] while studying consumption of organic food in Malaysia.

Many studies have used the TPB to predict relationships and behavior [21]. However, when behavioral components are address, attitude and norms depends upon society's experience with the behavior [21, 50, 51] while studying ECPB in Pakistani consumers one should not forget that the antecedents of ECPB that play an important role in explaining a consumer's likelihood of performing such behaviors require much more deeper understanding of the issue and society's experience with the behavior.

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