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Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior

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ABSTRACT

The green consumption among individuals can be an effective way to minimize the negative impact of consumption on the environment. The research related to green consumption behavior in developing nations such as India is few and far between. Considering this, researchers in the present study have attempted to understand the consumer behavior to buy green products in context of a developing nation; India. The study has used the Theory of Planned Behavior (TPB) and further extended the TPB including additional constructs namely; perceived value and willingness to pay premium (WPP) and measured its appropriateness in determining consumer green purchase intention and behavior. A total of 620 usable responses were collected with the help of a questionnaire survey using the convenience sampling approach. Structural Equation Modeling (SEM) was used to evaluate the strength of relationships among constructs. The findings reported that TPB fully supported the consumers' intention to buy green products which in turn influences their green purchase behavior. Inclusion of additional constructs was supported in the TPB as it has improved the predicted power of the TPB framework in predicting consumer green purchase intention and behavior. At the end, discussion and implications have been discussed.

1. Introduction

Today the environmental ethics has become an important issue among organizations as well as consumers. The continuous deterioration of the natural environment has raised the issue of protecting the natural environment which in turn resulted in ethical consumption known as green consumerism (Moisander, 2007). The concept of ethical consumption is gaining increasing attention among academicians as well as practitioners (Papaoikonomou et al., 2011). The increasing attention towards protection of the natural environment and environmental ethics has also changed the consumer buying preferences (Kim and Chung, 2011). With time the consumers have started showing ethical behavior by choosing eco- friendly products (Nimse et al., 2007) and preferring eco-conscious organizations (Han and Kim, 2010; Kim et al., 2013). Green consumption is considered as one of the broad categories of ethical consumption (Carrington et al., 2010).

The green consumerism has expanded rapidly in the developed nations, but with time this concept is also getting its foothold in the developing nations such as India (Raghavan and Vahanti, 2009). Therefore, understanding the consumers' perspective towards intention to purchase green products is very crucial for the marketers (Chan and Lau, 2002) as it helps to formulate suitable strategies for developing markets for green products. Understanding the determinants of consumer's green/eco-friendly purchase behavior may also help in eliminating the obstacles in green consumption (Welsch and Kühling, 2009). Earlier studies relating to consumers' green purchase intention/behavior have been mostly done in the context of developed nations and show their attitude and perspective towards purchasing green products. Whereas in the Indian context; a developing nation, there are very few studies that have focused on the consumers' behavior towards buying green products (Khare, 2015; Paul et al., 2016). Considering this the present research attempts to understand the consumers' behavior towards buying green products in context of a developing nation, i.e. India.

The present research has used the theory of planned behavior (TPB) framework to understand the consumers' behavior towards purchasing green products. TPB is considered as one of the most useful framework in explaining human behavior in the wide range of fields and more specifically it has great applicability in the field of environmental psychology (Stern, 2005). This paper is one of the initial attempts to understand the consumers' green purchase behavior using the TPB framework (including belief constructs) in the Indian context. Along with this, the present research has extended the TPB framework by including constructs (perceived value and willingness to pay a premium) in the TPB for measuring its impact on consumer green purchase intention and behavior.

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2. Theoretical Framework & Review of Literature

2.1. Theory of Planned Behavior (TPB)

The theory of planned behavior was proposed by Icek Ajzen in the year 1985. TPB model states that human behavior is guided by three kinds of consideration: behavioral beliefs, normative beliefs, and control beliefs which further result into certain outcomes such as attitude towards the behavior, subjective norm, and perceived behavioral control respectively (see, Fig. 1). In combination, attitude towards the behavior, subjective norm, and perceived behavioral control all together lead to the formation of behavioral intention.

2.1.1. Attitude

Attitude can be defined as an individual's positive/negative evaluation of performance of the particular behavior (Ajzen and Fishbein, 1980). Attitude is the result of behavioral beliefs (BB) and outcome evaluations (OE). Behavioral belief refers to the individual belief about the consequences of engaging in a particular behavior whereas outcome evaluation refers to the corresponding favorable or unfavorable judgment about the possible consequences of the behavior (Ajzen, 1991).

2.1.2. Subjective Norm

It is defined as social pressure exerted on an individual to engage in a particular behavior (Ajzen and Fishbein, 1980). Subjective Norm is believed to be a social factor in nature (Ajzen and Driver, 1992). Subjective norm is an outcome of normative belief (NB) and motivation to comply (MC). Normative belief comply refers as an individual perception about how others (those who are significant to the individual) would like one to behave in a certain situation, whereas motivation to comply refers as the individual desire to comply with opinion of significant others (Ajzen, 1991).

2.1.3. Perceived Behavioral Control

An individual's perceived ease or difficulty of performing the particular behavior (Ajzen and Fishbein, 1980). Perceived Behavioral Control is an outcome of control beliefs (CB) and perceived power (PP). Control belief can be defined as belief of the individual towards the presence of certain factors that may facilitate or impede the performance of a particular behavior (e.g. time, money & opportunity) whereas perceived power refer to personal evaluation of the impact of these factors in facilitating or impeding the particular behavior (Ajzen, 1991).

2.1.4. Behavioral Intention

It is an indication of individual's readiness to perform a given behavior. It is assumed to be an immediate antecedent of behavior (Ajzen, 2002). More favorable the attitude towards behavior, more favorable the subjective norm, and greater the perceived behavioral control, the stronger will be the individual's intention to perform the behavior.

The TPB model has been used in several studies to measure the pro-environmental intention as well as behavior. Steg and Vlek (2009) define pro-environmental behavior as '*behavior that harms the environment as little as possible or even benefits the environment*'. Pro-environmental behaviors include the behavior towards the activities such as the use of green/environmental friendly products, the use of environmentally related goods and services, organic products and waste disposal management or recycling etc. (Park and Ha, 2012). The present study deals with consumer intention and behavior towards purchasing green products. The past literature shows that TPB has been used in the wide range of eco-friendly products and services such as energy efficiency products (Ha and Jhanda, 2012), green hotels and restaurants (Chen and Tung, 2014; Chou et al., 2012; Han et al., 2010; Han and Kim, 2010; Kim et al., 2013; Kim and Han, 2010; Kun- Shan and Teng, 2011) and green products (Chan and Lau, 2002; Liobikienė et al. 2016; Yadav and Pathak 2016a) and proved its robustness and predictability for measuring eco-friendly purchase intention and behavior. In most of the cases TPB fully supported (i.e. all the TPB variables; attitude, subjective norm and perceived behavioral control significantly influences consumers' green purchase intention) the consumer intention and behavior to opt for eco-friendly products and services. However, in a few cases (Chou et al., 2012; Kim et al., 2013) TPB variables partially supported the consumers' intention and behavior. This shows that attitude, subjective norm and perceived behavioral control can play significant role in determining the consumers' green purchase intention to purchase eco-friendly products.

2.2. Inclusion of Constructs in the TPB

Although it is well known that TPB is based on the assumption that intention to perform the behavior is determined by attitude, subjective norm and perceived behavioral control (PBC), however, researches in the past advocates for domain specific factors which are not included in this model (Armitage and Conner, 2001; Donald et al., 2014). The recent psychological literature has noticed an increasing evidence of including new constructs in the TPB (Read et al., 2013; Yadav and Pathak, 2016b) specific to various domains. The present research has also included two constructs: perceived value and willingness to pay premium (WPP) along with the TPB constructs for measuring consumers' green purchase intention. The authors have considered perceived value as it plays a very important role in green purchase decision as consumers will not compromise on the functional benefit of the product just for the sake of the environment. Therefore, understanding the how consumers value the green products is very important. Further, willingness to pay premium was considered as high price of eco-friendly product is still an issue for price sensitive Indian consumers.

2.2.1. Perceived Value: Theoretical and Empirical Support for Inclusion

Zeithmal (1988) defined perceived value as '*an overall assessment of the utility of the product based on the perception of what is received and what is given*'. Generally, green products are costlier than their alternative and consumers are not going to compromise on excellent functionality of traditional product (Chen and Chang, 2012). When consumers have option to choose between product attributes and greenness of the product, most probably they will choose the product attributes

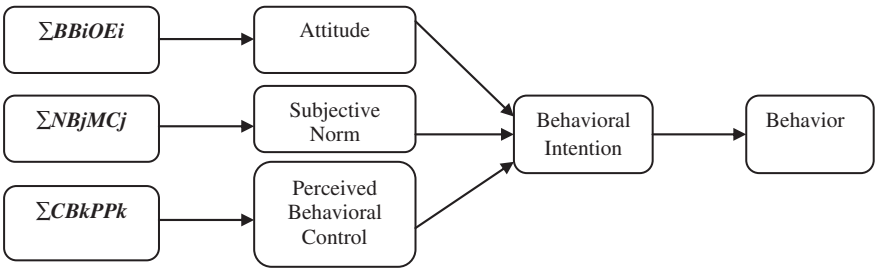

Fig. 1. TPB Model (source: Ajzen, 1985). Note: $\sum BBiOEi$ = behavioral belief (BB) * outcome evaluation (OE), $\sum NBjMCj$ = normative belief (NB) * motivation to comply (MC), $\sum CBkPPk$ = control belief (CB) * perceived power (PP).

rather than choosing it greenness (Ginsberg and Bloom, 2004), so suitable green marketing strategies should be incorporated by the firms to enhance the perceived value of their products with respect to consideration for the environment (Chen and Chang, 2012). Companies can enhance the purchase intention of consumers by improving product values, because of this perceived value is getting much importance (Steenkamp and Geyskens, 2006) as it is a significant predictor of customer purchase intention (Zhuang et al., 2010). Perceived value plays a vital role in the consumer purchase decision process; the consumer will go for a particular product with a higher perceived value (Dodds et al., 1991). Perceived green value is positively associated with purchase intention of green and environmentally friendly products (Rizwan et al., 2013; Chen and Chang, 2012; Chen et al., 2012). Chiu et al. (2014) studied the environmentally responsible behavior in ecotourism and found that perceived value positively influence the environmentally responsible behavior.

2.2.2. Willingness to Pay Premium (WPP): Theoretical and Empirical Support for Inclusion

Price is always considered as one of the most important factors that determines the consumer decision process. Understanding the consumers' willingness to pay premium for socially responsible products is important for the organizations as price is the most important barriers to green consumption (Gleim et al., 2013) and willingness to pay premium prices for green products may be considered as pro-environmental behavior (Ajzen, 1991). Regarding the price, green products/environmentally friendly products are generally priced higher as the high cost is incurred in the process (from material to certification) of green products (Ling, 2013). Ling (2013) findings reported that willingness to pay more was negatively correlated with the intention to purchase green personal care products. Manaktola and Jauhari (2007) conducted a study in lodging industry in India & found that although most of the consumers have a concern for green practices & prefer the hotels that are actively engaging in green activities, but they are not willing to pay extra for the green initiatives & similar finding were also reported by Choi and Parsa (2007) that most of the consumers are hesitant towards paying a premium for green products. The consumer who regards environmental conservation & favor environment more than life convenience are willing to pay extra for green products & services (Shen, 2012). A positive association has been found between the environmental concern and willingness to pay for green products in few studies such as eco-labeled appliances and furniture (Shen, 2008), environmentally friendly food products (Moon and Balasubramanian, 2002) and green hotels (Kang et al., 2012) which further influence the consumer's intention to buy green products.

On the basis of TPB assumptions and above discussed literature the following hypotheses were proposed:

H1. Behavioral beliefs ($\sum$ ***BBiOEi***) positively influence the consumer's attitude towards the green products.

H2. Normative beliefs ($\sum$ ***NBjMCj***) positively influence the subjective norm of the consumers.

H3. Control beliefs ($\sum$ ***CBkPPk***) positively influence the perceived behavioral control.

H4. Attitude significantly influences the consumer's intention to buy green products.

H5. Subjective norm positively influences the consumer's intention to buy green products.

H6. Perceived behavioral control significantly influences the consumer's intention to buy green products.

H7. Perceived value positively influences the intention to buy green products.

H8. Consumer's willingness to pay premium (WPP) positively influence their intention to buy green products.

H9. Intention to buy green products significantly influences the consumer's actual buying behavior.

On the basis of discussed hypotheses, a theoretical framework (see, Fig. 2) was proposed.

3. Research Methodology

3.1. Measures

The questionnaire was developed in two parts: a) elicitation study for belief constructs and, b) adopted question for other construct such as attitude, subjective norm, perceived behavioral control, perceived value, willingness to pay premium, purchase intention, and actual behavior.

3.1.1. Elicitation Study for Belief Constructs

Using the elicitation study and review of the literature, items for belief constructs and referents were developed. Ajzen and Fishbein (1980) suggested using the elicitation method of study for salient belief and referents in the new context and new population. The study is among one of the initial attempt in India for measuring green purchase behavior using TPB model, thus using the elicitation method a focus group approach was used (Han et al., 2010). Two focus groups were conducted with an aim to get a new set of items for belief and referents in context to the Indian population. The first focus group continues for 1 h 15 min in which consist of professional students (12). The second focus group took 1 h consisting of 10 working executives. In the discussion, the participants were asked to discuss and their views on behavioral belief (*buying green products would help me to*:), normative belief (*the referents who generally influence your buying decisions*) and control belief (*the requirement needed to buy eco-friendly/green products*). Finally, the discussion with the group and open ended questionnaires resulted into 11 items for beliefs (behavioral belief: BB, normative belief: NB, and control belief: CB) and 11 items for evaluative components (outcome evaluation: OE, motivation to comply: MC, and perceived power: PP). The referents identified were family, friends and colleagues. Once the items of belief constructs were identified from the focus group study, these items were also measured on a seven point scale with the help of the questionnaire survey.

The measuring items for belief constructs are mentioned in Appendix 1. The five items with 7 point Likert's scales (strongly disagree (1)/strongly agree (7)) was used to behavioral belief. Further, their consequent outcome evaluations were also measured (for e.g. "*To me helping to save environment is*") on 7-point scale (not at all important (1)/extremely important (7)). To measure normative belief 3 items (one item for each referent) using 7-point scale (strongly disagree (1)/strongly agree (7)) was used. Further, respondents were asked for their motivation to comply with each referent (for e.g. "*How important it is for you to do what your family thinks you should do*?") using a 7 point scale (extremely unlikely (1/extremely likely (7)). At the end, control belief was also measured using 3 items on a 7 point scale (strongly disagree (1)/strongly agree (7)) and its consequent perceived power was using 3 items (for e.g. "*Location is a critical factor while taking the decision to buy green products*") on 7-point scale (strongly disagree (1)/strongly agree (7)). While doing statistical analysis the suggestion of Ajzen (1991) was followed all items of each belief were multiplied by their evaluative components (behavioral beliefs = behavioral belief (BB)* outcome evaluation (OE), normative belief = normative belief (NB)* motivation to comply (MC), control belief) = control belief (CB)* perceived power (PP)).

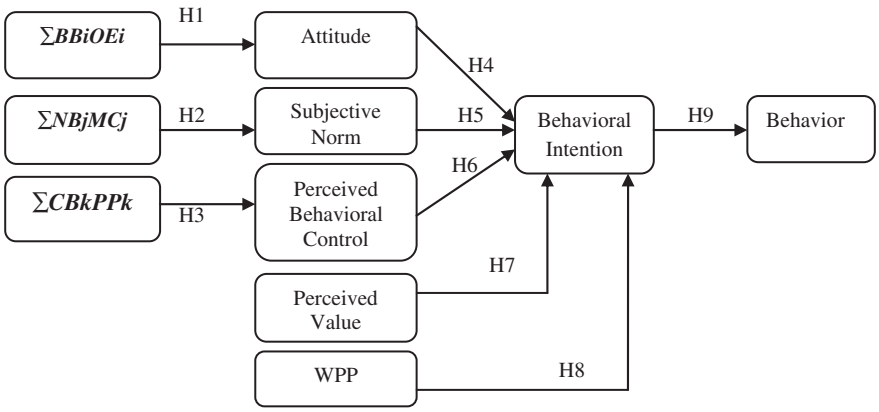

Fig. 2. Theoretical framework used in the present study. Note* - $\sum BBiOEi$ = *behavioral belief,* $\sum NBjMCj$ = *normative belief,* $\sum CBkPPk$ = *control belief.*

3.1.2. Measure for Other Constructs

The measure for other construct used in the study: attitude, subjective norm, perceived behavioral control, perceived value, willingness to pay premium (WPP), purchase intention and actual behavior were based on the validated measure of previous literature available in the field of pro-environmental behavior. Attitude was measured on the seven point semantic differential scale adopting six items from Kim and Han (2010), for e.g. Buying green products is: extremely bad (1)/extremely good (7). The other items were measured on 7-point Likert's scale from strongly disagree (1) to strongly agree (7). Subjective norm was measured using two items adopted from Chan and Lau (2002), for e.g. (most people who are important to me would want me to purchase eco-friendly products). PBC was measured using three items adopted from Kim and Han (2010), for e.g. (whether or not I buy green product in place of conventional non-green product is completely up to me). Perceived value was assessed using five items of (Chen and Chang, 2012), for e.g. (the green product's environmental functions provide good value to me). Willingness to pay premium (WPP) was measured with two items adopted from Kang et al. (2012), for e.g. (I would pay more for a green product that is making efforts to be environmentally sustainable). Purchase intention was measured adopting items from Kim et al. (2013), for e.g. (I will purchase green products for personal use). The purchase behavior was measured using three items (for e.g. I have been purchasing green products at regular basis) adopted from Wan et al. (2012). The details of measuring items, scales used and their sources are mentioned in Appendix 1.

3.2. Data Collection

The data were collected with the help of a questionnaire survey approach using the convenience sampling method. A pilot study was conducted to check the understandability and the validity of the questionnaire before data collection. Considering the suggestion from the pilot survey, some wordings were refined in the questionnaire to make it more understandable from the consumer perspective. The target population of the study were educated consumers of the urban area as they can easily respond to the survey. Further, the concept of green products and its consumption is getting acceptance in urban areass. Initially, the population was brief about the survey's topic. Finally, a total of 1300 questionnaires were distributed among the target population using group administration approach. The benefit of using group administration approach is that it allows rapid data collection with high response rate (Adler and Clark, 2006). A total of 660 responses was returned, but only 620 valid responses (47.7% response rate) were considered in the study excluding incomplete responses and extreme outliers. Regarding the sample size, Kline (2011) has advocated for 10 sample/item. The study consists of 46 items in total, so the final sample of 620 meets the priori condition. The demographic composition of the respondents is mentioned in Table 1.

3.3. Statistical Analysis

The data were analyzed using SPSS 20 and AMOS 21. Following the guidelines of Anderson and Ginberg (1988) two step model was used: measurement model (to perform confirmatory factor analysis and check the reliability and validity among items and constructs) and structural model (for evaluating the model fit and hypothesis testing).

3.3.1. Data Screening and Measurement Model

Prior to applying the measurement model, the data were screened for outliers and normality to fulfill the assumption of the general linear model. Cook's distance value was calculated to identify the outliers. Considering the suggestion of Steven (1992) that responses showing Cook's value higher than 1 should be eliminated, a total of 8 outliers were eliminated from the final study. Regarding the normality, the data were normal as deviation of data from normality was not severe. The skewness and kurtosis value was below ± 3 and ± 10 respectively (Kline, 2011).

Fulfilling the assumption of the general linear model paves the way for measurement model. Measurement model was accessed using confirmatory factor analysis (CFA). At initial the CFA result fits the data well ($\chi^2 = 1525.571$, $\chi^2/df = 2.962$, GFI = 0.861, TLI = 0.902, CFI = 0.915, IFI = 0.915, RMSEA = 0.058). However, two items (PV2 and CB3*PP3) were deleted due to low standardized factor loadings (<0.6). Deletion of such items and covariance suggested applying between the items, decreases the measurement error and increases reliability among item (Ford et al., 1986) which in turn also improved the model fit of CFA ($\chi^2 = 978.695$, $\chi^2/df = 2.194$, GFI = 0.912, TLI = 0.947, CFI = 0.9155, IFI = 0.956, RMSEA = 0.044). Cronbach's α was used to measure the reliability among items of each construct. Cronbach's α value ranges from 0.71 to 0.93 which meets the cutoff value of 0.7 (Nunnally, 1978). Further convergent and discriminant validity were also assessed. Convergent validity was assessed using: factor loading (standardized estimates), Average Variance Extracted (AVE) and Composite Reliability (C.R). The factor loading (standardized loading) of all constructs (0.60 to 0.94) were above the recommended level of 0.6 (Chin et al., 1997). Composite reliability (C.R) ranges from 0.666 to 0.900 that meets the suggested criterion of 0.6 and higher (Bagozzi and Yi, 1988). The AVE of each construct (0.51 to 0.83) also meets the suggested criterion of 0.5 (Fornell and Larcker, 1981). Table 2 provides the detail of convergent validity.

To ensure the discriminant validity, the square root of AVE of each construct was compared with the correlation value of each construct. The square root of AVE of each construct was higher than its correlation's value which ensures the discriminant validity (Chin et al.,

Table 1
Demographics of the respondents.

Gender	Male	Female		
	343 (55.3%)	277 (44.7%)		
Age	18–25	26–35	36–45	46 & above
	264 (42.6%)	150 (24.2%)	117 (18.9%)	89 (14.3%)
Educational qualification	Intermediate	Graduate	Post graduate	Doctoral
	84(13.5%)	390 (63%)	134 (21.6%)	12 (1.9%)
Family monthly income (in Rs)	Below 25,000	25,001–45,000	45,001–65,000	65,000 & above
	144 (23.2%)	239 (38.5%)	140 (22.6%)	97 (15.7%)

65 Rs (Indian rupee) is equivalent to 1 USD.

1997). Table 3 provides the details about discriminant validity and descriptive statistics.

3.3.2. Structural Model: Model Fit and Hypothesis Testing

The criteria of reliability and validity were justified by measurement model which paves the way for analyzing the structural model. The goodness of fit indices of theoretical framework was assessed using the structural model. The output of SEM showed that the proposed theoretical framework represents a good data fit ($\chi^2 = 1308.493$, $\chi^2/df = 2.761$, GFI = 0.890, TLI = 0.922, CFI = 0.930, IFI = 0.930, RMSEA = 0.053). The observed value of Root Mean Square Error Approximation (RMSEA) was 0.053 which justify the criterion of <0.08 (Browne and Cudeck, 1993). The other fit indices (such as GFI, TLI, CFI, IFI) were above the recommended criteria of close to 0.9 and higher (Bagozzi and Yi, 1988).

Moving ahead, the proposed theoretical framework was also compared with the TPB framework regarding the explanatory power the consumer's intention to buy green products. TPB framework represented an acceptable data fit ($\chi^2 = 1034.398$, $\chi^2/df = 3.326$, GFI = 0.894, TLI = 0.919, CFI = 0.929, IFI = 0.928, RMSEA = 0.061). From the comparison it became evident that the proposed theoretical framework represented a better model fit than TPB in predicting the consumer intention and behavior towards the green products. Along with this the proposed theoretical framework showed a better explanatory power in predicting consumer green purchase intention (i.e. $R^2 = 0.619$ from i.e. $R^2 = 0.540$) as well as green purchase behavior (i.e. $R^2 = 0.317$ from i.e. $R^2 = 0.278$) in comparison to TPB. The increased predictive power advocates the applicability of added constructs in the TPB framework. Further, the result from model comparison also shows that the proposed theoretical framework has higher PGFI and PNFI value than the TPB framework on the basis of complexity and fit (Malhotra and Dash, 2014). The improved explained variance supports and justifies the inclusion of new constructs (perceived value and willingness to pay products) in TPB for measuring consumer's green purchase intention. The goodness of fit indices and explanatory power are mentioned in Table 4.

Table 2
Measurement model: reliability and validity.

Construct and Items	Standardized loading	SMC	Cronbach's α	C.R	AVE
Behavioral belief = (BB*OE)					
BB1*OE1	0.80	0.64			
BB2*OE2	0.79	0.63	0.87	0.873	0.58
BB3*OE3	0.75	0.56			
BB4*OE4	0.78	0.61			
BB5*OE5	0.68	0.46			
Normative belief = (NB*MC)					
NB1*MC1	0.62	0.38			
NB2*MC2	0.82	0.67	0.80	0.790	0.56
NB3*MC3	0.79	0.63			
Control belief = (CB*PP)					
CB1*PP1	0.65	0.43	0.71	0.666	0.51
CB2*PP2	0.76	0.59			
Attitude (ATT)					
ATT1	0.72	0.52			
ATT2	0.82	0.67			
ATT3	0.81	0.65	0.87	0.866	0.52
ATT4	0.60	0.36			
ATT5	0.65	0.41			
ATT6	0.71	0.51			
Subjective norm (SN)					
SN1	0.90	0.81	0.89	0.900	0.82
SN2	0.91	0.83			
Perceived behavioral control (PBC)					
PBC1	0.80	0.64			
PBC2	0.88	0.88	0.83	0.844	0.64
PBC3	0.72	0.50			
Perceived value (PV)					
PV1	0.60	0.36			
PV3	0.71	0.49	0.83	0.845	0.58
PV4	0.89	0.79			
PV5	0.82	0.68			
Willingness to pay premium (WPP)					
WPP1	0.85	0.72	0.76	0.770	0.62
WPP2	0.73	0.53			
Purchase intention (PI)					
PI1	0.85	0.72			
PI2	0.88	0.77	0.88	0.884	0.71
PI3	0.81	0.65			
Purchase behavior (PB)					
PB1	0.91	0.82			
PB2	0.94	0.88	0.93	0.870	0.83
PB3	0.89	0.79			

Note: two items (CB2*PP2 and PV2) were deleted due to low factor loadings.

3.4. Hypotheses Testing

Table 5 outlines the hypothesis testing. All of the belief components were found to have significant impact on their outcome. The regression path of behavioral belief to attitude, normative belief to subjective norm and control belief to perceived behavioral control were significant which supported the hypotheses H1, H2, and H3. The hypotheses H4, H5, and H6 were also supported as attitude, subjective norm, and perceived behavioral control were found to have significant positive influence on consumer's green purchase intention. Among the new constructs, perceived value significantly influenced the consumer green purchase intention which supported the hypotheses H7. The hypothesis H8 was not supported as willingness to pay premium (WPP) was not found to have significant influence on green purchase intention. Finally the hypothesis H9 was supported as consumers' green purchase intention significantly influenced their green purchase behavior.

4. Discussion & Implications

The present research has used TPB and further attempted to incorporate important constructs such as perceived value and willingness to pay premium (WPP) in the TPB model for understanding consumer behavior towards green products. The salient belief constructs of the TPB (behavioral belief, normative belief, and control belief) identified from the focus group were found to have significant positive influence on their respective predictor construct (attitude, subjective norm, and perceived behavioral control). Further, all the predictor constructs significantly influenced the consumer's intention to purchase a green product which in turn influences their purchase behavior. The findings

Table 3
Correlation among the constructs and descriptive statistics.

	1	2	3	4	5	6	7	8	9	10
1. Behavioral belief	***0.761***									
2. Normative belief	0.20**	***0.748***								
3. Control belief	0.09*	0.39**	***0.714***							
4. Attitude	0.15**	0.42**	0.23**	***0.721***						
5. Subjective norms	-0.09*	0.49**	0.36**	0.55**	***0.905***					
6. PBC	-0.06	0.34**	0.24**	0.51**	0.64**	***0.800***				
7. Perceived Value	0.36**	0.24**	0.20**	0.47**	0.33**	0.30**	***0.768***			
8. WPP	0.22**	0.26**	0.10*	0.26**	0.22**	0.16**	0.31**	***0.747***		
9. Purchase intention	0.08*	0.36**	0.24**	0.59**	0.61**	0.61**	0.39**	0.21**	***0.842***	
10. Purchase behavior	0.16**	0.41**	0.22**	0.42**	0.39**	0.36**	0.43**	0.34**	0.51**	***0.905***
Mean	33.14	25.48	26.30	5.73	5.69	5.85	5.42	4.82	6.15	4.42
(S.D)	(6.6)	(7.0)	(8.9)	(0.72)	(1.0)	(0.75)	(0.73)	(0.85)	(0.84)	(1.1)

The bold diagonal values in italics represent the square root of AVE; PBC = perceived behavioral control, WPP = willingness to pay premium.
* $\rho < 0.05$.
** $\rho < 0.01$.

supported the earlier research of Han et al. (2010) and Han and Kim (2010) related to the consumer's intention to visit green hotels. The findings fully supported the role of TPB variables in determining the consumers' intention and behavior towards the green products. This shows the applicability of TPB in determining the consumers' intention and behavior to purchase green products in context of a developing nation; India. Among the added constructs perceived value was reported to have a significant positive influence on the consumer green purchase intention which supported the findings of Chen and Chang (2012) and Rizwan et al. (2013) that emphasizes that role of perceived value of green products in making decisions. Willingness to pay premium (WPP) was not reported to have any significant impact on consumer's green purchase intention which contradicted the findings of Choi and Parsa (2007), Kang et al. (2012), Shen (2008). This may be because price is still an issue for Indian consumers as they are price sensitive in nature (Manaktola and Jauhari, 2007).

The present research makes significant contributions from a theoretical as well as managerial view point. The research has supported the well established socio-psychological model, i.e. TPB and its extension in determining the consumers' green purchase intention in the context of a developing nation; India. The research can help academicians to further look at the other constructs which may influence the consumers' green purchase behavior.

The research has also augmented the marketers' understanding and knowledge about the consumers' intention to buy green products in the Indian context. The findings indicated that Indian consumers cope up relatively well with the disabling factor during the green purchasing as the perceived behavioral control emerged as the most significant determinant of green product purchase intention among all TPB constructs. This highlights the importance of creating favorable conditions in terms of availability which may facilitate and ease the consumers' decision of buying of green products (de Leeuw, 2015). Further, the marketers need to focus on the consumers' attitude as it plays a significant role in influencing the consumers' green purchase intention. Consumers' attitude towards green can be enhanced by creating awareness in the society, which in turn may create a favorable image of the green products among the people. Schiffman and Kanuk (2010) stated that attitude of an individual can be changed by creating a favorable image of that act among the people. Along with this, the marketers should inform consumers how the green products offered by them will benefit the environment as well as consumers. Proper communication about the benefit of their green product among the consumers should be the main concern for the marketers, as communication is considered as a very important tool for the success of any green/eco-friendly products (Picket et al., 1995). Information to the consumers is very crucial, as most of the time consumers are reluctant to go for extensive information search (Petty and Caccioppo, 1986). For e.g. most of the consumers see high priced associated with star rated (energy efficient) electronic appliances, but do not consider the future cost savings. The price of green products should be an important concern for the marketers, as Indian consumers are price sensitive (Manaktola and Jauhari, 2007). Therefore, for the price sensitive consumers, other credentials of the products should be disseminated such as safety benefits, health benefits, long term cost saving, etc. (Gilg et al. 2005). In such condition, a proper communication of firms' green values and their product can act as an effective marketing strategy for green products, as it may increase the perceived value of green products and enhancing the green trust among the consumers (Chen and Chang, 2012) which may further influence the consumers' green purchase intention as well as willingness to pay more for green products. The marketers should focus on the information based promotion of green products in The Indian context.

Table 4
Structural model - Chi-square result and goodness of fit indices.

Fit Indices	Proposed theoretical framework	TPB framework
χ^2	1308.493	1034.398
Scaled χ^2/df	2.761	3.326
Goodness of fit index (GFI)	0.890	0.894
Tucker-Lewis index (TLI)	0.922	0.919
Comparative fit index (CFI)	0.930	0.929
Incremental fit index (IFI)	0.930	0.928
Root Mean Square Approximation Method (RMSEA)	0.053	0.061
Adjusted R^2		
Purchase intention (PI)	0.619	0.540
Purchase behavior (PB)	0.317	0.278
Model comparison		
Parsimony goodness of fit index (PGFI)	0.745	0.733
Parsimony normed fit index (PNFI)	0.803	0.797

All fit indices are acceptable as per Bagozzi and Yi (1988).

Table 5
Path relationship among the constructs.

Path	β value	t-value	ρ value	Relationship
BBiOEi→ATT (H1)	0.241	6.214	0.001	Supported
NBjMCj→SN (H2)	0.343	8.643	0.001	Supported
CBkPPk→PBC (H3)	0.091	2.148	0.041	Supported
ATT→PI (H4)	0.350	7.009	0.001	Supported
SN→PI (H5)	0.233	4. 770	0.001	Supported
PBC→PI (H6)	0.315	6.071	0.001	Supported
PV→PI (H7)	0.115	3.403	0.001	Supported
WPP→PI (H8)	-0.004	-0.124	0.901	Not supported
PI→PB (H9)	0.563	13.635	0.001	Supported

5. Conclusion, Limitations and Scope for Future Research

The present research has proved the usefulness and applicability of TPB in determining the consumers' intention as well as behavior towards purchasing green products in the Indian context. Attitude towards the green products emerged as the most significant determinant of consumers' green purchase intention followed by perceived behavioral control and subjective norm. Further, the findings have also supported the inclusion of additional constructs, i.e. perceived value and willingness to pay premium in TPB as inclusion of these constructs have improved the predictive power of the theoretical framework in determining the consumers green purchase intention and behavior. Perceived value was found to have significant positive influence on the consumers' intention to purchase green products which show the importance the perceived value in decision making in the case of green products.

The study has certain limitations that should be addressed in the future studies. The study has used self reported behavior for measuring consumer's green purchase behavior, instead of actual behavior. The behavioral studies commonly use self reported behaviors, as behavioral information can be easily collected through it and helps the researchers to investigate such behaviors which may not be possible to observe otherwise (Kormos and Gifford, 2014). In the future the researchers may consider actual behavior instead of using self reported behavior. Further, the present research has measured the green products in general, whereas the past studies have reported that consumer behavioral intention differ across various ranges of green products such as energy saving appliances, organic food, organic care products, green hotels and restaurants etc. which limits the generalizations of the findings. The future studies may compare the consumer intention and behavior towards various ranges of green products. The self-selection biases of the respondents may be another limitation to the present research as the respondents who are comparatively more pro-environmental may have motivated to participate in the research. This may result in the over-representation of such people in the sample which may bias the result (Hage et al., 2009). Further, the study is limited to the educated respondents which may result in biased findings as educated people may be more prone to socially desirable response (Kaiser et al., 2008). Considering this the future studies may opt for random sampling approach among population to get a generalized reporting of consumer's green purchase behavior.

Appendix 1. Measurement Items

Constructs and scale items	Sources
Belief constructs and their consequent referents	Elicitation method (focus group approach was used).
Behavioral belief (BB): (strongly disagree (1)/strongly agree (7))	
Buying a green product would enable me to	
BB1: help save the environment.	
BB2: be a responsible citizen.	
BB3: stay in a clean & better environment.	
BB4: perform eco- friendly practices.	
BB5: implement green initiatives in my life.	
Outcome evaluation (OE): (not at all important (1)/extremely important (7))	
OE1: to me helping to save the environment is	
OE2: to me being responsible towards society is	
OE3: to me staying in clean and better environment is	
OE4: to me performing eco-friendly practices is	
OE5: to me implementing green initiatives in my life is	
Normative belief (NB): (strongly disagree (1)/strongly agree (7))	
NB1: my family thinks I should purchase green products in place of conventional non-green products.	
NB2: my friends think I should purchase green products in place of conventional non-green products.	
NB3: my colleagues think I should purchase green products in place of conventional non-green products.	
Motivation to comply (MC) (extremely unlikely (1/extremely likely (7)).	
MC1: how likely it is for you to do what your family thinks you should do?	
MC2: how likely it is for you to do what your friends think you should do?	
MC3: how likely it is for you to do what your colleagues think you should do?	
Control belief (CB): (strongly disagree (1)/strongly agree (7))	
CB1: while buying the green products, the location needs to be convenient.	
CB2: buying green products requires time and effort.	
CB3: my company/school/others that pay(s) for my expenses encourage(s) me to use green products.	
Perceived power (PP): (strongly disagree (1)/strongly agree (7)	
PP1: location is a critical factor while making decision to buy green products.	
PP2: time and effort needed to buy is very important while making decision to buy green products.	
PP3: the expenses available to me is very critical while making decision to buy green products.	
Attitude: buying green product is:	Kim and Han (2010)
ATT1: extremely bad (1)/extremely good (7)	
ATT2: extremely undesirable (1)/extremely desirable (7)	
ATT3: extremely unenjoyable (1)/extremely enjoyable (7)	
ATT4: extremely foolish (1)/extremely wise (7)	
ATT5: extremely unfavorable (1)/extremely favorable (7)	
ATT6: extremely unpleasant (1)/extremely pleasant (7)	
Subjective norm	Chan and Lau (2002)
SN1: most people who are important to me would want me to purchase eco-friendly products.	
SN2: most people who are important to me would think I should purchase green products.	
Perceived behavioral control	Kim and Han (2010)
PBC1: whether or not I buy green product at place of conventional non-green product is completely up to me.	
PBC2: I have resources, time and opportunities to buy green product.	
PBC3: I am confident that if I want to, I can buy green product at place of conventional non-green product.	
Perceived value	Chen and Chang (2012)

Appendix 1 (*continued*)

Constructs and scale items	Sources
PV1: the green product's environmental functions provide good value to me.	
PV2: the green product's environmental performance meets my expectations.	
PV3: I purchase green product because it has more environmental concern than non-green products.	
PV4: I purchase green product because it is environmental friendly.	
PV5: I purchase green product because it has more environmental benefit than non-green products.	
Willingness to pay premium	Kang et al. (2012)
WPP1: I would pay more for a green product that is making efforts to be environmentally sustainable.	
WPP2: I would be willing to pay this extra percentage on the green products to support the organization's/product efforts to be environmentally sustainable.	
1----------2----------3----------4----------5----------6----------7	
0% 1–2%, 2–5%, 6–10%, 11–15% 16–20% >20%	
Purchase intention	
PI1: I will purchase green products for personal use.	Kim et al. (2013)
PI2: I am willing to purchase green products for personal use.	
PI3: I will make an effort to purchase green products.	
Purchase behavior	Wan et al. (2012)
PB1: I have been purchasing green products at regular basis.	
PB2: I have green purchasing behavior for my daily needs products.	
PB3: I have green purchasing behavior over the past six months.	

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