International Journal of Research in Social Sciences
Vol. 7 Issue 7, July 2017,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's Directories of Publishing Opportunities, U.S.A

A STRUCTURED MODEL OF ATTITUDINAL DETERMINANTS OF GREEN PURCHASE BEHAVIOUR

Dr. Manvinder Singh Tandon*

Ms. Vaishali Sethi**

Abstract

The study aims to propose and test a model of the effects of explicit attitudinal constructs on the frequency of green purchase behavior. Environmental concern, Green advertisement and Perceived quality of green products are operationalized by a path model hypothesizing effects of these antecedents on attitude leading to purchase intention and finally the purchase behavior of green products. The measures are obtained from a survey of a representative sample of 501 people and analyzed in a structural equations model framework. The best predictor of the intention to purchase green products is attitude towards the behavior. This study shows that the intention of consumers to purchase green products is determined by having a positive attitude toward green products. The results from the structural-equation modeling show the environmental concern has the highest influence on attitude towards green products among three personal variables including environmental concern, green advertising and perceived quality of green products.

Keywords:

Green marketing, Green purchase behavior, Attitude, Environmental Concern, Green advertising, Perceived quality of green products.

* **Supervisor, IKJPTU and Director, RIMT University**

** **Research Scholar, IKJPTU and Assistant Professor, Vivekananda Institute of professional studies, GGSIPU**

1. Introduction

There has been a growing concern on environmental issues internationally. Today's customers have commenced to recognize that their purchasing behavior surely can cause a large effect on environment. Therefore, being socially accountable with the aid of presenting environmentally friendly products and services have to be a practice of any companies who want to sustain an aggressive benefit in the business world (Abdul Wahid et al., 2011). Environmental troubles as so important that many governmental agencies round the world were looking to prepare essential laws and rules to protect the environment. Meanwhile, consumers are paying more attention to purchase eco-friendly products and materials. They are more and more willing to purchase environmentally friendly or so called green products even though those merchandise are often more pricey (Sua et al., 2012).

The latest situation for the consequences of world climate exchange has sensitized the purchaser to look for the well-being of destiny generations. The required responses to the heightened environmental worries are, therefore, not sincerely limited to the environmental regulations and government tasks. Instead, organizations too want to commit to the environmental issues of their business decisions and be part of the bandwagon termed green motion. However, the motivation to adopt the concept of green motion of their businesses rests on purchasers demonstrating an excessive diploma of environmental mind-set which translates into green purchase behavior. The improved demand for green products could act as a pressure factor on enterprise corporations to turn green and start marketing green products.

This paper will focus specifically on the purchase behavior of green products. In addition, the purpose of this study is to seek to broaden the understanding of what factors influence on intentions of purchasing green products by consumers further leading to actual purchase behavior.

1.1 Review of Literature

The term ―green marketing includes the marketing sports of an enterprise wherein all marketing undertakings are taken underneath the environmental difficulty structures (Alsmadi, 2007, p.342). In addition, Green marketing is the marketing technique where entrepreneur's intention is to discover environmental responsive customers. Displaying and

positioning green merchandise in the front of the customers, is taken into account as consumer product advertising and marketing (Leigh et al., 1988, mentioned in McDaniel &Rylander, 1993, p.4). The term ―Green product is used to describe product, which aren't dangerous for the environment or merchandise which are Environment pleasant. Chemical compositions of the products are also surroundings friendly and suitable to recycle. (Alsmadi, 2007, p342).

The theory of planned behavior forms the theoretical framework of this research because it offers a clearly defined structure/model that allows the investigation of the influence that attitudes, personal and cultural determinants and volitional control have on consumers' intentions to buy green products.

Theory of Planned Behavior

The Theory of Reasoned Action propounded by Ajzen and Fishbein (1977) paved the path for the Theory of Planned Behavior by Ajzen (1991). The Theory of Planned Behavior has been used in this study for examining the purchasing behavior towards green products. The theory of planned behavior enables us with a complete framework for exploring the factors which influence the decision to engage in behavior related to environmental issues such as recycling (Chan, 2001) and the same can be applied in systematically understanding different factors affecting the purchase behavior for environmentally friendly products.

According to the Theory of Reasoned Action (TRA), intention of undertaking or not undertaking the behavior is the direct predecessor to the behavior. The intention under discussion is often a result of actions undertaken by individual to evaluate the favorable or unfavorable performance of the behavior. In many cases, it enunciates disposition of the attitude and the subjective norm wherein the subjective norm is basically the perception formed by the individual about undertaking or not undertaking that behavior due to the social pressure. One prominent assumption of TRA is that behavior under consideration is volitional in nature i.e. person can decide whether he or she performs that behavior or not (Ajzen, 1991). Although true in many cases, behavior may also depend on other factors such as availability of appropriate opportunities and resources which collectively correspond to the people's actual control over the behavior (Liska, 1984). The theory of planned behavior (TPB) is one step ahead of the theory of reasoned action in the sense that it takes care of the original model's limitation to deal with incomplete volitional control

(Ajzen, 1991). TPB includes a third variable known as perceived behavioral control (PBC) which indicates the ability of a person to undertake the behavior under consideration under the assumption that individual behaves in a rational manner considering the ramification of his or her actions (Ramayah, Lee & Lim, 2012). In fact, perceived behavioral control manifests the difficulty and controllability to execute specific behavior (Ajzen, 1985).

Symbolically, the TPB model is presented in Figure below where it is illustrated that each of the determinants of intention, i.e. attitude to behavior (AB), subjective norm (SN) and perceived control (PBC) is, in turn, determined by underlying belief structures.

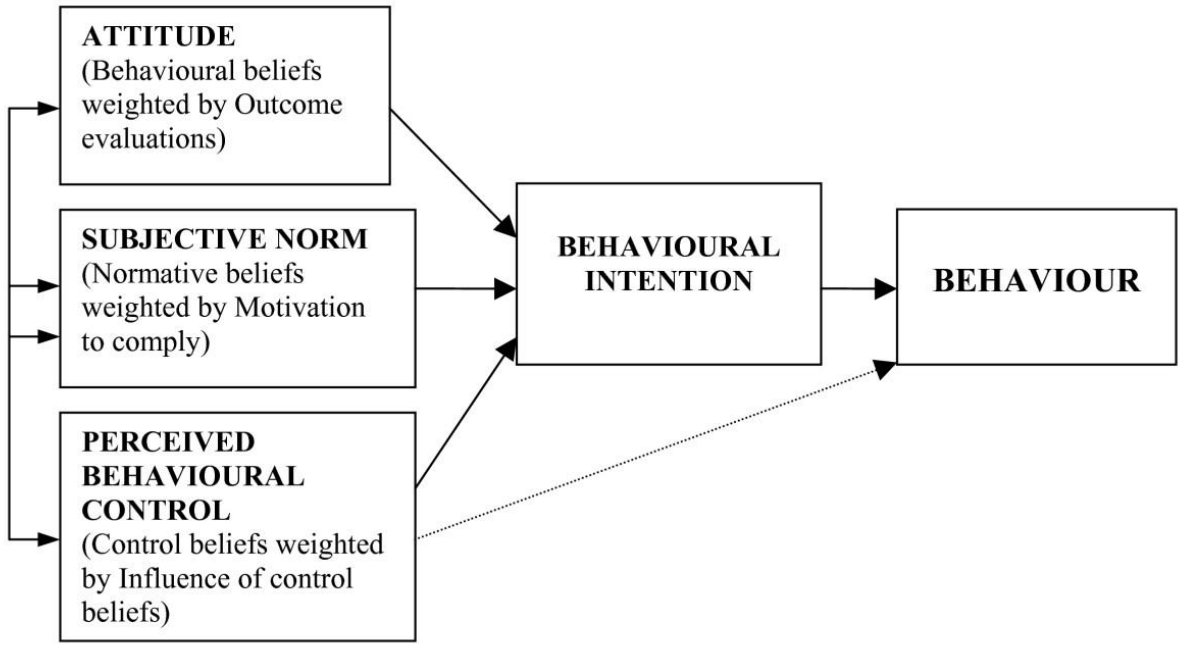

Figure 1: Theory of Planned Behaviour

Adapted from (Ajzen, 1991)

The know-how of the intention, attitudes closer to the behavior, subjective norms, perceived behavioral control and peripheral persuasion can help to exposed the special aspects of the behavior or apprehend better the conduct, if you want to then help the marketers in designing the marketing strategies to be capable of convincing the customers to make the purchases of the products.

In order to understand the purchase behavior of green products, various factors like green advertising, environmental concern, and perceived quality of green products will be studied intensively to find their impact on the attitude of consumers towards green products which leads to intent of purchasing them.

Attitude

Fishbein and Ajzen (1975) defined attitude as one's positive/negative evaluation of a specific behavior. Hoyer and Macinnis (2001) also considered attitude to be the positive or negative evaluation of an object, action, issue, or person. Attitudes are sets of beliefs about a certain object or an act, which may translate into intention to carry out the act. Intention on the other hand is a determination to act in a certain way (Ramayah et al., 2010). Attitudes are predictors of purchase intentions and consequently purchase behavior. Moreover, attitudes are necessary, as consumers require an understanding of their attitudes and motivations in order to overcome the perceived purchase barriers they face (Smith & Paladino, 2010).

There are many studies in the context of Indian consumers exploring the consumer attitude and behavior towards green practices, green buying behavior and opportunity and challenges in green consumerism (Jauhari & Manaktola, 2007; Jain & Kaur, 2004; Mishra & Sharma, 2010; Datta, 2011). Many studies show that the attitude–behavior relationship has been strengthened when attitudes towards performing specific environmentally friendly behavior (e.g., recycling), rather than towards general environmental issues. In general, empirical studies have implied a substantial positive relationship between ecological intention and behavior (Chan, 2001). The bigger the positive attitudes, the more likely the intention to buy will be and therefore, the greater the likelihood that consumer will purchase green products over conventional alternatives.

Environmental Concern

Fundamental to environmental research is an individual's concern for the environment. Based on the pioneering research of Dunlap and Van Liere, environmental concern is defined as a global attitude with indirect effects on behavior through behavioral intention. Some other researchers mentioned that environmental concern is a strong attitude towards preserving the environment (Kaufmann et al., 2012).

Grunert and Juhl define an environmentally concerned consumer as one ‘‘who knows that the production, distribution, use, and disposal of products lead to external costs, and who evaluates such external costs negatively, trying to minimize them by her/his own behavior". In general, evidence from different sectors shows that people's purchasing

behavior and attitude towards it is influenced by environmental concerns (Mayer et al., 2012).

Heightened environmental concern has been reflected in increased intention to purchase green products. More specifically it has been suggested that consumers with a higher level of environmental concern will be more likely to engage in green consumer behavior (Antil, 1984; Roberts, 1991; Sheltzer et al., 1991; Shabecoff, 1993). Among psychographic measures, environmental concern was one of the first variables to have been consistently reported as impacting on some forms of attitude towards green purchase behavior (Ellen et al., 1991) and its role was further confirmed in several studies (Ellen, 1994, Kim and Choi, 2005, Mostafa, 2007, Roberts and Bacon, 1997, Straughan and Roberts, 1999), albeit with different degrees of intensity, depending on other variables included in the explaining models.

H1: Environmental concern has a positive effect on consumer's attitudes towards green products.

Green Advertising

According to many researches being done in the past **green advertising** has emerged out to be an important factor affecting the attitude of consumers towards purchase intention of green products. "Green advertising is an advertising that claims the advertised products or services are environmental friendly or that their production process conserves resources and energy" (Chang C. 2011, p. 23) Green advertising can be varied in addressing issues from the "environmental issues, environmental friendliness of the products, corporate image campaigns and emphasis on the environmental credential of large companies, to public campaigns promoting environmental responsible behaviors" (Hartmann and Apaolaza-Ibanez, 2009, p.717).

Audience behavior towards the advertising can be indicated through consumers' favorable or unfavorable response towards a particular advertisement. According to Mehta, consumers' attitude towards advertising is one of the influential indicators of advertising effectiveness because consumer's cognitive ability towards the advertising are reflected in their thoughts and feelings and subsequently will influence their attitude towards advertising (Ling et al., 2010).

H2: Green advertising has a positive effect on consumer's attitudes towards green products.

Perceived quality of green products

Product attributes such as convenience, availability and quality play an important role in the consumers' purchasing decision process (Gan et al., 2008). A consumer's choice for or against organic products can be framed as a social dilemma, in which he or she must weigh individual motives, such as quality considerations. The perceived level of quality, which is an overall evaluative judgment of a product's items and a key dimension in product choice and attitude towards purchase intention of that product (Doorn&Verhoef, 2011).

The product quality can be a good starting point for providing customer satisfaction and producing customer loyalty. Johnson and Ettlie explained that product quality as the result of performance, which, in turn can be labeled as the degree of customization and freedom from defects or how reliably the product met customer requirements. The product quality dimension included product packaging, product design, product features, warranties, etc. Many companies can not only embody green or environmental concept in the feature, design, and package of their product to increase product differentiation, but they should also satisfy the environmental requirements of customers and further create customer loyalty as well as a competitive advantage (Chang & Fong, 2010).

H3: Quality has a positive effect on consumer's attitudes towards green products.

Purchase intention and Attitude

Intention is the likelihood that a person will engage in a specific behavior. Intention is the best predictor of behavior, and hence, to change a specific behavior, one must first change the intention to perform that behavior. Ng and Paladino (2009) described behavioral intentions as a measure of a person's relative strength of cause to execute certain conduct. Nik Abdul Rashid (2009) described green purchase intention as the opportunity and willingness of a person to provide desire to green product over traditional products in their purchasing concerns. According to Allport (1935), attitude has been described as an intellectual and neural state of readiness. This kingdom of thoughts essentially impacts the response of the target market in the direction of all objects and conditions with which the target audience is faced. One extension of this phenomenon has been aptly undertaken by

means of Schultz and Zelezny (2000), who define it with the aid of contemplating the mindset closer to environmental concerns. They describe it as the deep rooted concept in a person's self with a belief of the diploma of bonding between self and the surroundings. Irland (1993) mentions that a purchaser's purchasing intentions are dependent upon his or her environmental attitudes. A beneficial mindset towards a product which is environmental friendly ads to sustainable consumption behavior as talked about in numerous research (Chan, 2001; Verbeke &Viaene, 2006; Tanner & Kast, 2003; Vermeir, &Verbeke, 2004). The mind-set acts as a vital antecedent to the behavioral intention that is defined as the degree of favorable or unfavorable evaluation of the behavior underneath a study (Ajzen, 1991). Cheng, Lam, & Hsu (2006) concluded that a person willing to show a specific behavior may additionally adopt the cost benefit analysis due to the movement undertaken and favorable mindset is connected with advantageous evaluation of the action (Ajzen, 1991; Cheng et al., 2006). Ajzen (1991) emphasized that positive mindset toward a particular behavior strengthens the intention to carry out that behavior. Under this discussion, it's far hypothesized that:

H4: An attitude towards green products has positive relationship with the purchase intention for the products.

Green purchase behavior and Purchase Intention

Behavior can be determined from the intention with big accuracy (Ajzen, 1991). Many studies have showed the connection between intention and real behavior (Ajzen & Fishbein, 1980; Sheppard, Hartwick, &Warshaw, 1988). Historically, Intention has been assumed to be robust predictor of behavior but in a few instances it can no longer act in constant manner. In a study on the behavior bearing on the usage of information technology, Venkatesh et al. (2003) suggested a small to medium impact size of intention to use information technology on the actual behavior. This may be attributed to as intention - behavior gap and the equal has been showed in study by Grunert and Juhl (1995) also who concluded that intention may not always cause the favorable behavior. However, numerous researchers consisting of Sheppard et al. (1988) mentioned an excessive degree of correlation between intention and behavior. Researchers analyzing the buying behavior for natural food have determined significantly positive relationship between purchase intention and purchase behavior (Saba & Messina, 2003; Thøgersen, 2012). In view of the discussion, it is hypothesized that:

H5: Purchase intention is positively related to the purchase behavior for green products.

The present study attempts to fill the research gap by incorporating the theory of planned behavior (Ajzen, 1991) to understand the behavior of the consumers towards purchasing of green products in the context of Indian consumers using Structural Equation Modelling (SEM). The study looks at the relationship of purchase intention with variables like attitude which is construct dependent on factors namely, environmental concern, green attitude and perceived quality of the products finally leading to purchase behavior.

Hence, the main contribution of this study is to find out the relationship between attitude towards green products and purchase intention by incorporating other determinants also which affect the purchase intention and eventually purchase behavior in a complete framework in the context of Indian consumers.

1.2 Conceptual Framework

With reference to the foregoing literature review, a conceptual model is proposed in Fig. 2 to explain Indian consumers' green purchase behavior.

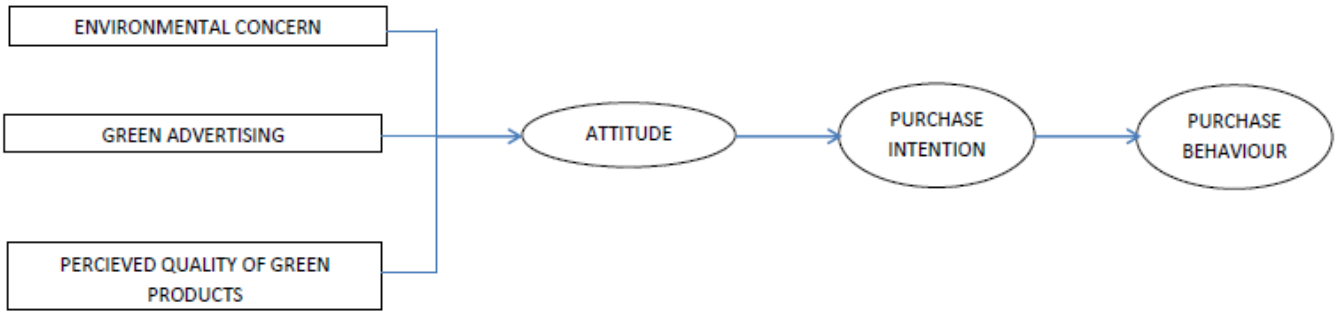

Figure 2: Conceptual Model

Source: Author

2. Research Method

Data were collected from the respondents from New Delhi with varied age groups and different annual incomes. A self administered questionnaire was given to respondents to collect the data. All items were borrowed from the existing literature of different countries with a slight modification to fit the specific context of Green purchasing behavior in India.

The questionnaire contained 9-point Likert scale items for which the respondents were required to provide their responses with values ranging from 'strongly disagree: 1' to 'strongly agree: 9'. The respondents were also required to provide the information related to their demographic profiles for the purpose of classification.

The final version of the questionnaire was an adapted version of the scale mentioned in Marketing scales handbook: A compilation of Multi-Item Measures for Consumer Behavior & Advertising Research, Robert D. Straughan & James A. Roberts(1999), Baker and Churchill (1977) and Kaman Lee, (2008). Some modifications in terms of content as well as the number of questions were done to adapt the same for consumer markets in Indian context. This paper works towards the assessment of factors that lead to attitude towards purchase intention of green FMCG products that ultimately leads to green purchase behavior.

The objectives of the research are:

1. To examine the determinants of consumer attitude towards green FMCG Products.
2. To ascertain the relationship between consumer attitude and purchase intention leading to purchase behavior of the green FMCG products.

A pilot study was done on the 24-items measurement instrument to examine the initial reliability of the instrument. Sample size for this test was kept very small (65) as this was an initial test. The modified self-administrated questionnaires consisting of 24 statements for five sub-scales was formulated that measured green advertising, environmental concern, perceived quality of green products, purchase intention and green purchase behavior were distributed in the printed form as well as online to the respondents.

A total of 501 pieces of usable questionnaire out of total sample size of 550 was collected on which Cronbach's alpha test was used to test the reliability of the data that came out to be 0.92 (Table 1).

Table 1: Reliability Statistics

Variable	Cronbach's Alpha
Environmental Concern	0.923
Green Advertising	0.901
Perceived quality of green products	0.925
Purchase Intention	0.853
Purchase Behavior	0.827

3. Results and Analysis (10pt)

The questionnaire was personally administered and monitored while collecting the data so that no field is left unanswered. Due precautions were taken while designing the same to have specific scale with options. This eliminated the discrepancies arising out of missing frequencies and outliers from the data. This further helped in getting rid of any coding errors in the data.

Most commonly used computerized statistical tools, SPSS version 20.0 and AMOS, were used for the analysis of data while the hypothesis was tested using Confirmatory Factor Analysis (CFA) and Descriptive Analysis (DA). The analysis was performed at 95% confidence level which is generally accepted level of confidence in social sciences research. The data thus collected was transformed into tabular form that is the most suitable form to present the data analysis and the same was entered in SPSS 20.0 for analysis.

Profile of Respondents

Out of 501 questionnaires collected 51% were males (256) and 49% were females (245) with 21.4% of the respondents in the age bracket of 18-25 years (107), 28.9% in 26-35 Years, 25.3% in 36-45 years and 24.4% in above 46 years. 54.3% (272) of the respondents were married and 45.7% (229) of the total respondents were unmarried. 29% of the respondents were service class and almost equal percentages of respondents were students (25.5%) and were in Business (21.4%). Majority of the respondents belonged to the income group of less than 2.5 lakhs (35.1%) with the least number of respondents in the income bracket of above 8 lakhs (20.6%). 35.5 per cent of the respondents purchase eco-friendly products once a week or more often and a comparable 36.5 per cent of the

respondents purchase online eco-friendly products at least once a month, whereas 27.9 per cent of the respondents purchase eco-friendly products less than once a month.

Confirmatory Factor Analysis

On the basis of theory or literature review, CFA is used to examine the hypothesized relationship between constructs and attitude which is the latent variable further leading to purchase intention and green purchase behavior. As per the nature of the latent variables or constructs, key model constructs are shown in the Annexure attached.

The present study used AMOS statistical software to conduct confirmatory factor analysis to test the efficiency of the 5 constructs. According to Holtzman and Leich (2014), when running CFA, there are various fit statistics which help to examine the model fitness for the data as shown in Table 2.

The ratio of goodness of fit to degrees of freedom should be no more than 3 (Carmines and MacIver, 1981), and the value of RMSEA should be less than 0.08, with the GFI, IFI, NFI, CFI exceeding 0.9 (Bagozzi and Yi, 1988). Furthermore, RMR which stands for Root Mean Residual is associated to the residual in the attitude model. The range of RMR value is zero to one where a smaller RMR shows better model fit.

Table 2: Model Fit Indices for 1st order CFA

	CMIN/DF	**GFI**	**CFI**	**IFI**	**NFI**	**RMSEA**
Desired Value	3 or lower	0.90 or higher	0.90 or higher	0.90 or higher	0.90 or higher	0.08 or lower
Values from the Model	1.954	0.927	0.969	0.969	0.938	0.044

Table 2 shows that model is fitted to the data as GFI, CFI, NFI and IFI are greater or equal to 0.90 which is considered acceptable. Moreover, value of RMSEA is equal or less than 0.08 and value of CMIN/DF should be less than 3 which are considered acceptable.

The model for first order CFA is shown in Figure3.

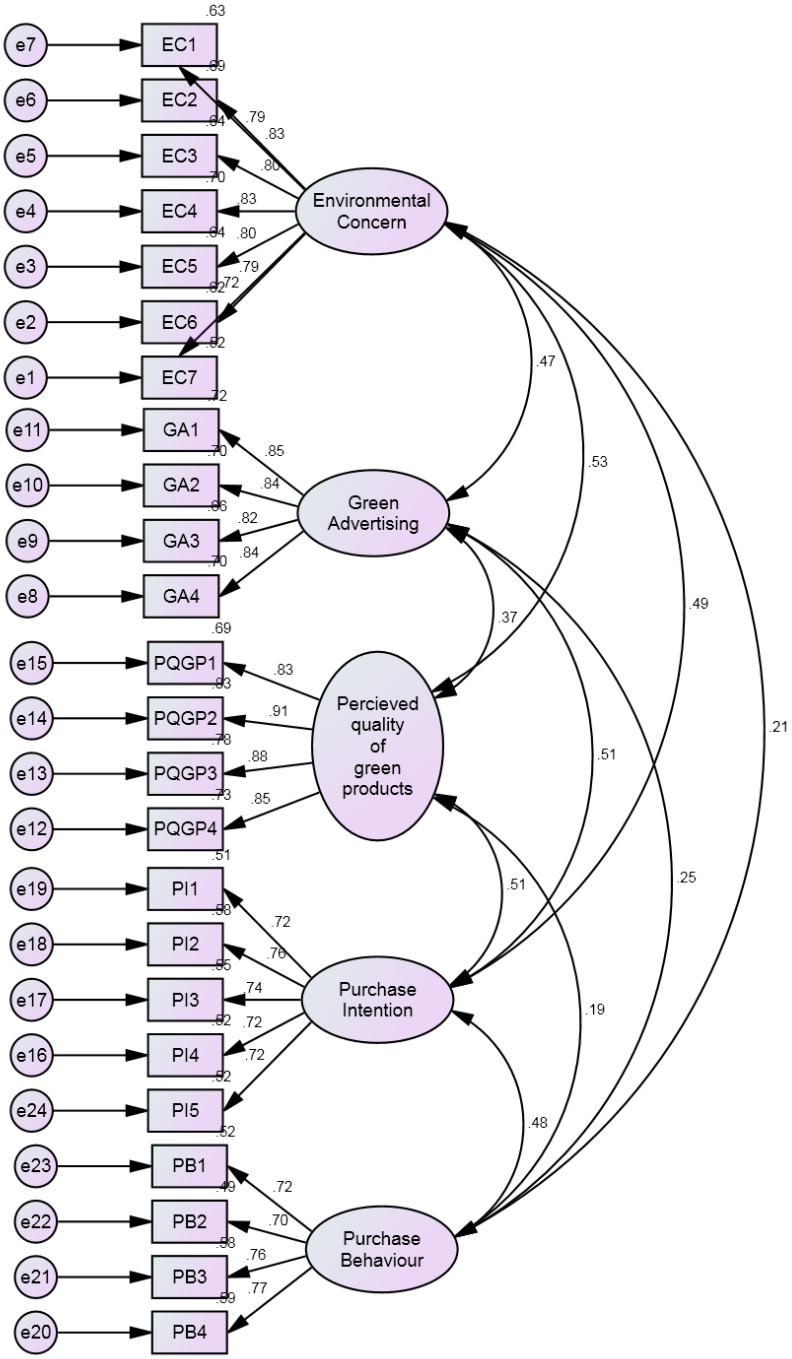

Figure 3: CFA

Source: Output of AMOS

Validity Assessment

Convergent validity assessment: (CR > 0.7; AVE < CR; 0.5 < AVE)

Validity of Discriminant: (AVE > MSV, ASV<AVE)

As per Table 3, CR is more than 0.7 and AVE is more than 0.5 for all the 5 factors. Also, the Table 4 shows that CR is higher than AVE for all factors. So, we can conclude that the

factors in the measurement model have sufficient convergent validity. As per the measurement model, MSV is less than AVE for all the factors. Also, ASV is less than AVE for all the factors. Hence, we can confirm Discriminant validity of the measurement model.

Table 3: Convergent and Discriminant Validity of the CFA model

	CR	AVE	MSV	Max R(H)	PI	EC	GA	PQGP	PB
Purchase Intention	0.853	0.536	0.261	0.853	**0.732**				
Environmental Concern	0.923	0.632	0.281	0.948	0.488	**0.795**			
Green Advertising	0.901	0.695	0.256	0.965	0.506	0.474	**0.834**		
Perceived quality of green products	0.926	0.757	0.281	0.976	0.511	0.530	0.369	**0.870**	
Purchase Behavior	0.828	0.546	0.234	0.979	0.484	0.208	0.249	0.195	**0.739**

Table 3 shows that there is convergent and Discriminant validity in the factors of the measurement model as the value of all constructs are acceptable. After conducting CFA it was found that model fitted successfully in Indian scenario.

Structural Model Analysis

The present study conducted a linear analysis of the structural relation model using AMOS statistical software to understand causality and correlation among the variables.

According to Holtzman and Leich (2014), SEM is used to examine how well the assessment predicts these measures. Also, the same fit statistics, which we discussed for the CFA should be considered when running SEM (Figure 3).

The results show that the value of $\chi 2/df$ is 1.971, the value of RMR is 0.199, the value of GFI is 0.926, the value of AGFI is 0.910, the value of NFI is 0.937, the value of RFI is 0.929, the value of CFI is 0.968, and the value of RMSEA is 0.044. The fit of the model is

therefore acceptable. In addition, the analysis showed that all the hypotheses were supported. The complete results are presented in Figure 4.

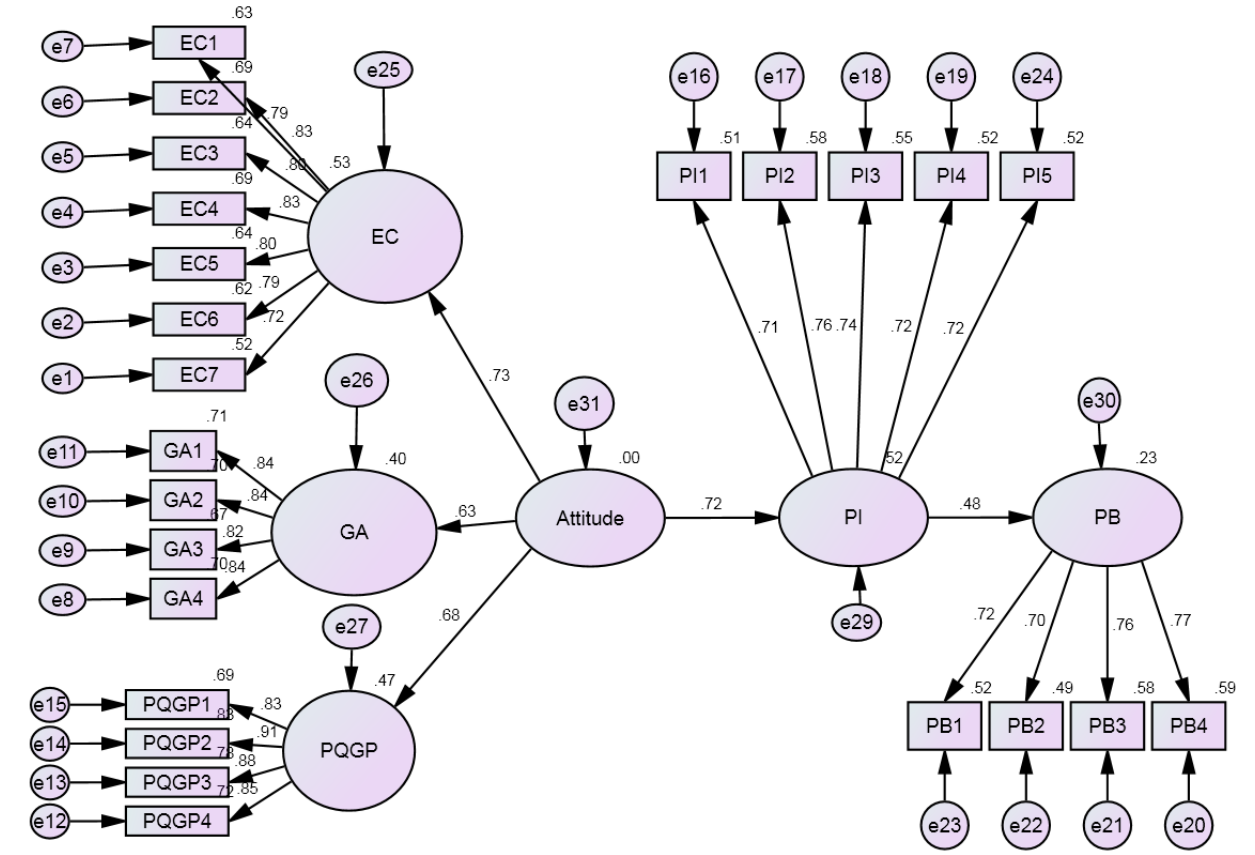

Figure 4: Results of SEM Analysis

Source: Output of AMOS

Hypothesis Testing and Inductive Analysis

Path Description	**Hypothesis**	**Unstandardized Path Estimates**	**Standardized Path estimates**	**Result**
Environmental Concern → Attitude	H1	1.028***	0.729	Supported
Green Advertising → Attitude	H2	0.889***	0.634	Supported

Perceived quality of green products → Attitude	H3	1.000***	0.682	Supported
Attitude → Purchase Intention	H4	0.879***	0.724	Supported
Purchase Intention → Purchase Behavior	H5	0.494***	0.479	Supported

The empirical results in table 4 show that (1) Environmental concern is significantly positively related to attitude; (2) green advertising is significantly positively related to attitude; (3) perceived quality of green products and attitude are significantly positively related; (4) Attitude is significantly positively related to Purchase intention of green products; (5) purchase intention is significantly positively related to actual purchase behavior.

Table 4: Summary of the Structural Model

H4 and H5 were supported at the 1% significance level, these suggest that intentions of green purchasing do influence green purchasing behavior and attitudes do influence purchase intentions. These findings are also consistent with other research conducted (Smith & Paladino, 2010). The results obtained for the some antecedents will now be investigated. The first variable examined was environmental concern, which is concerned with H1. H1, which specifies the relationship between environmental concern and attitude, was supported at the 1% level. This is consistent with past research that has found the consumers purchase green products for environmental concern (Smith & Paladino, 2010). The impact of quality on attitude (H2) was supported at 1% level and consistent with past research (Chang & Fong, 2010). H3 was supported at the 1% significant level. This hypothesis suggests that green advertising has a positive effect on consumer's attitudes.

4. Conclusion

The theory of Planned behavior (TPB) proved its applicability in explaining social behavior aimed at green products purchases. The TPB model was tested on a large representative sample of consumers from New Delhi and NCR region in India and its predictive ability corresponds with other examples. The best predictors of the intention to purchase green products are attitudes towards the behavior. This study shows that the intention of consumers to purchase green products is determined by having a positive attitude toward green products. The present study also has examined the influence of

various personal and marketing factors on the attitude toward green products of consumers from Delhi. The results from the structural-equation modeling show the environmental concern has the highest influence on attitude towards green products among three personal variables including environmental concern, green advertising and perceived quality of green products. The results of this research have implications for the marketing of these products to consumers and for researchers. Marketers of green products should link these products with concern for environmental issues within society to promote these products. These findings can help the marketers to formulate their policy with regard to actions which would enhance the purchase and usage behavior of the consumers towards green products. It is important for the policy makers working towards improvement of environment to understand the behavioral aspects of the consumption so that they could make people change and believe in certain aspect of their action leading to betterment of the environment and ecology. Marketers need to keep in mind that environmental concern, green advertising and quality of the green products have significant and positive impact on the attitude towards green products.

References

1. Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp.11-39). Springer Berlin Heidelberg.

2. Ajzen, I. (1991). The theory of planned behavior. Organizational behavior and human decision processes, 50(2), 179-211.

3. Ajzen, I., & Fishbein, M. (1975). Belief, attitude, intention and behavior: An introduction to theory and research.

4. Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior.

5. Alsmadi, S. (2007). Green marketing and the concern over the environment: measuring environmental consciousness of Jordanian consumers. *Journal of Promotion Management*, *13*(34), 339-361.

6. Antil, J. H. (1984). Socially responsible consumers: Profile and implications for public policy. *Journal of macro marketing*, *4*(2), 18-39.

7. Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. Journal of the academy of marketing science, 16(1), 74-94.

8. Baker, M. J., & Churchill Jr, G. A. (1977). The impact of physically attractive models on advertising evaluations. Journal of Marketing research, 538-555.

9. Carmines, E. G., & McIver, J. P. (1981). Analyzing models with unobserved variables: Analysis of covariance structures. Social measurement: Current issues, 65-115.

10. Chan, R. Y. K. (2001). Determinants of Chinese consumers' green purchase behavior. Psychology and Marketing, 18(4), 389-413.

11. Chan, R. Y. K. (2004). Consumer responses to environmental advertising in China. Marketing Intelligence & Planning, 22(4), 427-437.

12. Chang, C. (2011). Feeling ambivalent about going green. *Journal of Advertising*, *40*(4), 19-32.

13. Chang, N. J., & Fong, C. M. (2010). Green product quality, green corporate image, green customer satisfaction, and green customer loyalty. *African Journal of Business Management*, *4*(13), 2836.

14. Chang, N. J., & Fong, C. M. (2010). Green product quality, green corporate image, green customer satisfaction, and green customer loyalty. African Journal of Business Management, 4(13), 2836.

15. Cheng, S., Lam, T., & Hsu, C. H. (2006). Negative word-of-mouth communication intention: An application of the theory of planned behavior. *Journal of Hospitality & Tourism Research*, *30*(1), 95-116.

16. Datta, S. K. (2011). Pro-environmental concern influencing green buying: A study on Indian consumers. *International Journal of Business and management*, *6*(6), 124.

17. Dunlap, R. E., Van Liere, K. D., Mertig, A. G., & Jones, R. E. (2000). New trends in measuring environmental attitudes: measuring endorsement of the new ecological paradigm: a revised NEP scale. *Journal of social issues*, *56*(3), 425-442.

18. Ellen, P. S. (1994), Do We Know What We Need to Know? Objective and Subjective Knowledge Effects on Pro-Ecological Behaviors, *Journal of Business Research*, 30, pp. 43-52.

19. Ellen, P. S., Wiener, J. L., Cobb-Walgren, C. (1991), The Role of Perceived Consumer Effectiveness in Motivating Environmentally Conscious Behaviors, *Journal of Public Policy & Marketing*, 10, pp. 102-117.

20. Ellen, P.M. (1994). Do We Know What We Need to Know? Objective and Subjective Knowledge Effects on Pro-ecological Behaviors. Journal of Business Research, 30(1), 43-52. http://dx.doi.org/10.1016/0148-2963(94)90067-1

21. Ellen, P.S., Weiner, J.L., Cobb-Walgreen, C., 1991. The role of perceived consumer effectiveness in motivating environmentally conscious behaviors. Journal of Public Policy & Marketing 10 (2), 102–117.

22. Ettlie, J. E., & Johnson, M. D. (1994). Product development benchmarking versus customer focus in applications of quality function deployment. *Marketing Letters*, *5*(2), 107-116.

23. Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.

24. Gan, C., Wee, H. Y., Ozanne, L., & Kao, T. H. (2008). Consumers' purchasing behavior towards green products in New Zealand. *Innovative Marketing*, *4*(1), 93-102.

25. Ginsberg, J. M and Bloom P.N.(2004), Choosing the Right Green Marketing Strategy, Massachusetts Institute of Technology (MIT), Sloan management Review pp. 79-84

26. Gomon, S. (2005), The Influence of promotional brochures and pricing strategies on consumer purchase decisions for forest stewardship council certified hardwood boards in home centers. M. S. thesis, Virginia Polytechnic Institute and State University, VA.

27. Grunert, S. C., & Juhl, H. J. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of economic psychology*, *16*(1), 39-62.

28. Grunert, S. C., & Juhl, H. J. (1995). Values, environmental attitudes, and buying of organic foods. Journal of economic psychology, 16(1), 39-62.

29. Hartmann, P. & Apaolaza Ibáñez, V. (2006) "Green Value Added". Marketing Intelligence and Planning, Vol 24 Iss: 7 pp. 673-680.

30. Holtzman, S., & Leich, C. M. (2014). Wittgenstein: to follow a rule (Vol. 4). Routledge.

31. Hoyer, W. D. & MacInnis, D. J., 2001, Consumer Behavior. 2nd ed., Boston, Houghton Mifflin Company.

32. Huang, C. L. (1996). Consumer preferences and attitudes towards organically grown produce, *European Review of Agricultural Economics*, *23*(3), 331-342.

33. Irland, L. C. (1993). Wood producers face green marketing era: Environmentally Sound Products. *Wood Technology*, *120*(2), 34-36.

34. Jain, S. K., & Kaur, G. (2004). Green marketing: An attitudinal and behavioral analysis of Indian consumers. *Global Business Review*, *5*(2), 187-205.

35. Kaufmann, L., Kreft, S., Ehrgott, M., & Reimann, F. (2012). Rationality in supplier selection decisions: The effect of the buyer's national task environment. *Journal of Purchasing and Supply Management*, *18*(2), 76-91.

36. Kim, Y., & Choi, S. (2003). Antecedents of Pro-environmental Behaviors: An Examination of Cultural Values, Self-efficacy, and Environmental Attitudes. International

Communication Association, CA [Online] Available: http://www.allacademic.com/meta/p111527_index.html.

37. Kim, Y., Choi, S. M. (2005), Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE. In: Menon, G., Rao, A.R., eds. *Advances in Consumer Research*, Duluth, MN, Association for Consumer Research, pp. 592-599.

38. Kumar, A., Kumar, K., Kaushik, N., Sharma, S., & Mishra, S. (2010). Renewable energy in India: current status and future potentials. *Renewable and Sustainable Energy Reviews*, *14*(8), 2434-2442.

39. Lee, K. (2008). Opportunities for green marketing: young consumers. Marketing intelligence & planning, 26(6), 573-586.

40. Ling, K. C., Piew, T. H., & Chai, L. T. (2010). The determinants of consumers' attitude towards advertising. Canadian Social Science, 6(4), 114-126.

41. Liska, A. E. (1984), a critical examination of the causal structure of the Fishbein/Ajzen attitude behavior model, *Social psychology quarterly*, 61-74.

42. Manaktola, K., & Jauhari, V. (2007). Exploring consumer attitude and behavior towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management*, *19*(5), 364-377.

43. Mayer, R., Ryley T., & Gillingwater, D. (2012). Passenger perceptions of the green image associated with airlines. Journal of Transport Geography, 22, 179–186.

44. McDaniel, S. W., & Rylander, D. H. (1993). Strategic green marketing. Journal of Consumer Marketing, 10(3), 4-10.

45. Mostafa, M. M. (2007), a hierarchical analysis of the green consciousness of the Egyptian consumer, *Psychology & Marketing*, 24, pp. 445-473.

46. Mostafa, M.M. (2007). Gender Differences in Egyptian Consumers' Green Purchase Behavior: The Effects of Environmental Knowledge, Concern and Attitude. International Journal of Consumer Studies, 31, 220-229. http://dx.doi.org/10.1111/j.1470-6431.2006.00523.x

47. Ng, S., & Paladino, A. (2009). Examining the influences of intentions to purchase green mobile phones among young consumers: an empirical analysis. In *Conference proceedings, ANZMAC* (pp. 1-8).

48. Rahbar E. and Wahid N. A., (2011) "Investigation of green marketing tools' effect on consumers' purchases behavior". Business Strategy Series, Vol. 12 Iss: 2, pp.73 – 83.

49. Rahbar, E., & Abdul Wahid, N. (2011). Investigation of green marketing tools' effect on consumers' purchases behavior. *Business strategy series*, *12*(2), 73-83.

50. Rahman, M. (2013), Green Products: A Study on Young & Native Swedish Consumers' Purchase Intentions of Green Products.

51. Ramayah, T., Jason Wai Chow Lee, and Osman Mohamad. "Green product purchase intention: Some insights from a developing country." *Resources, Conservation and Recycling* 54, no. 12 (2010): 1419-1427.

52. Ramayah, T., Lee, J. W. C., & Lim, S. (2012). Sustaining the environment through recycling: An empirical study, *Journal of environmental management*, *102*, 141-147.

53. Rashid, N. R. N. A. (2009). Awareness of eco-label in Malaysia's green marketing initiative. *International Journal of Business and Management*, *4*(8), 132.

54. Roberts, J. A., Bacon, D. R. (1997), Exploring the Subtle Relationships between Environmental Concern and Ecologically Conscious Consumer Behavior, *Journal of Business Research*, 40, pp. 79-89.

55. Roberts, J.A. (1991), ``The development of a profile of the socially responsible consumer for the 1990s and its marketing management and public policy implications", Doctoral Thesis, Marketing Department, University of Nebraska, Lincoln, NE.

56. Roberts, J.A., & Bacon, D.R. (1997). Exploring the Subtle Relationships between Environmental Concern and Ecologically Conscious Consumer Behavior. Journal of Business Research, 40(1), 79-89. http://dx.doi.org/10.1016/S0148-2963(96)00280-9

57. Saba, A., & Messina, F. (2003). Attitudes towards organic foods and risk/benefit perception associated with pesticides. Food quality and preference, 14(8), 637-645.

58. Schultz, P. W., Zelezny, L., & Dalrymple, N. J. (2000). A multinational perspective on the relation between Judeo-Christian religious beliefs and attitudes of environmental concern. *Environment and Behavior*, *32*(4), 576-591.

59. Shabecoff, P. (1993), A Fierce Green Fire: The American Environmental Movement, Hill and Wang Publishers, New York, NY.

60. Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of consumer research*, *15*(3), 325-343.

61. Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. Journal of consumer research, 15(3), 325-343.

62. Shetzer, L., Stackman, R.W. and Moore, L.F. (1991), ``Business environment attitudes and the new environmental paradigm", Journal of Environmental Education, Vol. 22, Summer, pp. 14 21.

63. Smith, S., & Paladino, A. (2010). Eating clean and green? Investigating consumer motivations towards the purchase of organic food, Australasian *Marketing Journal (AMJ), 18*(2), 93-104.

64. Straughan, R. D., & Roberts, J. A. (1999). Environmental segmentation alternatives: a look at green consumer behavior in the new millennium. Journal of consumer marketing, 16(6), 558-575.

65. Straughan, R. D., Roberts, J. A. (1999), Environmental segmentation alternatives: a look at green consumer behavior in the new millennium, *Journal of Consumer Marketing*, 16, pp. 531-575.

66. Sua, J. C. P., Wang, L., & Ho J. C. (2012). The impacts of technology evolution on market structure for green products. *Mathematical and Computer Modelling*, 55, 1381–1400.

67. Tanner, C. and Kast, S.W. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology & Marketing*, *20(10),* 883-902.

68. Thøgersen, J., & Zhou, Y. (2012). Chinese consumers' adoption of a 'green 'innovation the case of organic food. Journal of Marketing Management, 28(3-4), 313-333.

69. Van Doorn, J., & Verhoef, P. C. (2011). Willingness to pay for organic products: Differences between virtue and vice foods. *International Journal of Research in Marketing*, *28*(3), 167-180.

70. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS quarterly, 425-478.

71. Vermeir, I., & Verbeke, W. (2004). Sustainable food consumption: Exploring the consumer attitude-behavior gap. *Ghent University, WP*, *4*, 268.

72. Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude–behavioral intention" gap. *Journal of Agricultural and Environmental ethics*, *19*(2), 169-194.

Annexure

Table: Constructs

Environmental Concern	EC1: I am worried about the worsening of the quality of India's environment.
	EC2: We are approaching the limit of the number of people the earth can support.
	EC3: To maintain a healthy economy, we will have to develop a steady-state economy where industrial growth is controlled.
	EC4: Humans need to adapt to the natural environment because they cannot remake it to suit their needs.
	EC5: When humans interfere with nature, it often produces disastrous consequences.
	EC6: India's environment is my major concern.
	EC7: I often think about how the environmental quality in India can be improved.
Green Advertising	GA1: The brands of green products stand for its promises.
	GA2: In general, statements shown in advertisements about green product are believable.
	GA3: Over time, experiences with the green brand have made me think the brand meets its promises, without exceeding my expectations but without falling below them.
	GA4: I can trust in the green brand's name of its advertising.
Perceived quality of green products	PQGP1: The green products meet or exceed the requirements of environmental regulations.
	PQGP 2: The green products consume the least amount of resources and energy.
	PQGP3: The green products are easy to

	recycle, disassemble, decompose, and reuse.
	PQGP4: The quality of the green products is superior.
Green purchase Intention	PI1: I would like to use green products.
	PI2: I would buy green products if I happen to see them in a store.
	PI3: I would actively seek out green products in a store in order to purchase it.
	PI4: I would patronize and recommend the use of green products.
	PI5: If I understand the potential damage to the environment that some products can cause, I do not intend to purchase those products.
Green purchase Behavior	PB1: I prefer green products over non-green products when their product qualities are similar.
	PB2: I buy green products even if they are more expensive than the non-green ones.
	PB3: I try to discover the environmental effects of products prior to purchase.
	PB4: I don't buy a product if the company which sells it is environmentally irresponsible.