

FACTORS AFFECTING GREEN PURCHASE INTENTION AND THE ROLE OF CONSUMER SKEPTICISM

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ABSTRACT

Environmental conservation behaviors are now considered the responsibility of all citizens, individuals and institutions alike. Societies require both consumers and producers to protect the environment and adopt green strategies. Therefore, it is important to know the dynamics of conservation behaviors and green initiatives. This study approaches this philosophy from consumer behavior perspective and measures the influence of environmental knowledge, environmental concern and conservation behavior on green purchase intention of consumers in Pakistan. Moreover, the study also investigates the moderating role of consumer skepticism towards environmental claims between the independent and dependent variables. Employing a survey methodology, a sample of 300 students completed a structured questionnaire. Findings from Pearson correlation matrix and hierarchical multiple regressions revealed that environmental knowledge, environmental concern and conservation behavior are positively related to green purchase intention. Moreover, consumer skepticism towards environmental claim moderates the relationship between environmental knowledge and green purchase intention, whereas, it does not significantly moderate the relationship between environmental concern and purchase intention, neither does it moderate the relationship between conservation behavior and green purchase intention. Hence it implies that the marketing managers should consider green concerns while developing an advertisement and should run marketing campaigns to inculcate environmental awareness among consumers in order to increase consumer intention to purchase green products.

Keywords: *Conservation Behavior, Environmental Knowledge, Environmental Concern, Green Purchase Intention, Consumer Skepticism*

1) INTRODUCTION

During the past few decades environmental degradation and its preservation has emerged as an important topic for governments, societies and businesses. Increased worsening of the environment such as depletion of natural resources, global warming and pollution has made this topic significant than ever before (Eltayeb, Zailani & Jayaraman, 2010).

Intensive media coverage, rising knowledge about ecological problems and steps taken by environmental activist has sketched the graph of environmental concern ascending (Kalafatis, Pollard, East, & Tsogas, 1999). Consequently, customers have started to recognize the significance of environmental protection in terms of their buying decisions. Customers now realize that the responsibility of environment protection is not only the responsibility of government or business enterprises but each and every citizen is liable for it (Fraj & Martinez, 2006).

Having said that people now consider green concept while making purchase decisions and these customers are known as green consumer. Consumers notice that the product they are buying do not possess ingredient harmful for the environment or that ingredient used to produce the product is not extracted from a natural resource which is about to extinct. This awareness has given companies a new horizon to work upon.

This study aims to explore the green purchase intentions of consumers. Environmental friendly products are those products which can be conserved as well as have very little damaging effect on the environment (Shamdasani, Chon-Lin, & Richmond, 1993). Moreover, consumption of environment-friendly products is termed as green consumerism. Concern for preservation of the environment has made green consumers to emerge as a significant market segment (Solomon, 2010). To study green purchase intention is rational from the point that it is a key determinant of purchase behavior (Ramayah, Lee, & Mohamad, 2010).

In the present study the influence of environmental knowledge, environmental concern and conservation behavior is observed on green purchase intention and the moderating effect of consumer skepticism towards environmental claim (CSEP) is measured as well.

2) LITERATURE REVIEW

2.1) Environmental Knowledge

Environmental knowledge is defined as “a general knowledge of facts, concepts, and relationships concerning the natural environment and its major ecosystems” (Fryxell & Lo, 2003, p. 45). Abstract and concrete are two domains of environmental knowledge given by Hines, Hungerford and Tomera (1987) while studying environmental action. Abstract knowledge is related to knowledge about environmental problems and their solutions whereas concrete knowledge is behavioral knowledge which has a physical impact on the environment.

In consume research, knowledge is a construct which significantly affect all the phases of decision making process, an individual’s gathering and organizing of information is considerably dependent upon the knowledge he/she possess (Alba & Hutchinson, 1987). Knowledge of a consumer also determines that how he/she will perceive a product or a service (Murray & Schlacter, 1990) and what amount of information is to be used while making a purchase decision (Brucks, 1985).

2.2) Environmental Concern

There have been numerous definitions given by researches in the past few decades. Gill et al. (1986) defined environmental concern as a general attitude which indirectly influences the behavioral intention of the consumer. Dunlap and Jones (2002) define it as the amount to which an individual is aware of environmental issues and ready to solve them.

Environmental concern can also be thought as an emotional feeling of a person that how emotional someone is about environmental problems. It can also be described as the extent to which consumers recognize the threats faced by natural resources of the planet (Ali et al., 2011). Environmental concern is also known as a psychological factor urging people to involve in more environment friendly behaviors (Lafuente, 2010).

Schultz (2000) emphasized that environmental concern has three dimensions: concern for one’s own self (egoistic), concern for others (altruistic), and concern for the planet (biosphere).

2.3) Conservation behavior

Conservation behavior is one the behavior that comes under the head of green consumer behavior and this behavior has been investigated by number of researchers. It is defined as a set of activities that stems from the ecological conscious thinking of an individual. These activities may include use of energy efficient appliances, recycling of fast moving consumer goods, dispositional activity, using products having less packaging, responsibly dumping the waste, preservation of natural resources and so forth (Pickett, Kangun & Grove, 1995).

2.4) Consumer Skepticism

Skepticism towards environmental claim refers to the distrust or disbelief a consumer shows towards a green claim made in an advertisement (Mohr et al.,1998). Calfee and Ringold (1988) emphasized that individuals having skeptical nature does not believe any environmental claims unless evidence contradicting to their belief is demonstrated. Thus the skeptical nature of a consumer plays an important role in lowering the intention to purchase a green product. On the other hand, a false or exaggerated green claim also creates a backlash for environmental marketing (Carlson, Grove, & Kangun, 1993).

How consumer could fall into skepticism, could be explained through persuasion knowledge theory. Persuasion knowledge theory states that consumers have their own perception of how marketer is trying to influence their decision they then try to analyze, interpret and recognize each persuasion attempt with the persuasion knowledge they possess and develop an attitude and intention according to their evaluation (Friestad & Wright, 1994).

2.5) Green purchase intention

When an individual decides to purchase a product merely to fulfill his or her environmental needs then this is known as green purchase intention (Chen & Chang, 2012). Green purchase intention is a key determinant of actual purchase behavior. Beckford, Jacobs, Williams, and Nahdee (2010) states that green purchase intention is an important predictor of green buying behavior. Furthermore, Researchers elucidate that green purchase intention of consumers cannot be generalized across the globe hence it

demands more attention (Peattie, 2001; Chan & Lau, 2002; Rahbar & Wahid, 2011). Green purchase behavior is invariably followed by green purchase intention and this strong dependency is rationalized by the theory of planned behavior and theory of reasoned action (Kalafatis et al., 1999). Both the theories indicate some factors that influence the intention to perform any behavior namely attitude towards the behavior and subjective norm where perceived behavioral control act as an additional factor forming the intention to perform a behavior in theory of planned behavior (Fishbein, 1979). Theories are profound predictor of green purchase intention as reinforced by many researchers and is proven in the literature of consumer behavior (Kalafatis et al., 1999).

3) SIGNIFICANCE OF THE STUDY

This study has contributed to the body of knowledge about the green purchase intentions of Pakistani consumers as green consumerism is an emerging research area in Pakistan and not much work exist on this topic.

Analysis of literature review suggests that various studies have been conducted to see the influence of environmental knowledge and environmental concern on green purchase intention (Mostafa, 2006; Ali & Ahmed, 2012; Kim & Choi, 2005; Saeed et al., 2013) but the moderating effect of skepticism towards environmental claim on these relationships is lacking.

Literature reveals that a research gap exists regarding the relationship of conservation behavior and green purchase intention. This study fills this gap and tells about the direction of relationship between conservation behavior and green purchase intention.

Moreover, the moderating role of skepticism towards environmental claim on the relationship of conservation behavior and green purchase intention is also observed in this study.

Fraj-Andrés, Martínez-Salinas, and Matute-Vallejo (2009) argued that in spite of being environmentally concerned and having environmental knowledge people still don't have green shopping habits. Moderating role of skepticism towards environmental claim may help to understand what hinders consumers from intending to purchase green products which also make this study valuable.

Present study is also significant from the stand point that a separate market segment known as green consumers has emerged as a result of environmental degradation (Ali & Ahmad, 2012) and in order to fulfill the demand of such consumers it is important to know that what motivates them.

4) RESEARCH OBJECTIVES

This study aims to;

- 1) To measure environmental knowledge, environmental concern, conservation behavior, green purchase intention and consumer skepticism towards environmental claims.
- 2) To evaluate the effect of environmental knowledge, environmental concern and conservation behavior on green purchase intention.
- 3) To explore the moderating role of consumer skepticism on the relationship between;
 - a) Environmental knowledge with green purchase intention
 - b) Environmental concern with green purchase intention
 - c) Conservation behavior with green purchase intention

5) THEORETICAL FRAMEWORK

Literature suggests that there is a positive relationship of environmental knowledge and environmental concern with green purchase intention (Mostafa, 2006; Ali & Ahmed, 2012; Kim & Choi, 2005; Saeed et al., 2013; Rehman & Dost, 2013). However, this relationship has not been tested by any researcher taking consumer skepticism towards environmental claim as a moderating variable. The present study in addition to examine the direct effect of environmental knowledge and environmental concern on green purchase intention also seeks to explore the moderating effect of skepticism towards environmental claim.

It is observed that conservation behavior has been measured by various researchers (Do Paco, Alves, Shiel & Filho, 2013; Do Paco & Reis, 2012) but a few studies shows the direction of relationship between conservation behavior and green purchase intention. Present study in addition to examining the influence of conservation behavior on green purchase intention it also seeks to explore the moderating effect of skepticism towards environmental knowledge on this relationship.

The study of green purchase intention is supported by the theory of reasoned action and theory of planned behavior. Theory of reasoned action describes that in order to perform a behavior, intention is necessary and behavioral intention is a product of subjective norm and attitude towards the behavior (Fishbein, 1979).

Theory of planned behavior is an extension to the theory of reasoned action. Theory of planned behavior posits that the behavior of human is dependent upon the intention to perform the behavior in question. Moreover, level of intention is determined by three antecedents of intention namely subjective norm, attitude toward the behavior and perceived behavioral control.

The persuasion knowledge model given by Friestad and Wright (1994) also supports the study of skepticism towards environmental claim as a moderator. It describes that how individuals use persuasion knowledge to respond to the persuasion attempts of an advertiser.

The first hypothesis of this study examines the relationship between environmental knowledge and green purchase intention. Empirical results of several previous studies show a positive relationship between environmental knowledge and green purchase intention (Maloney & Ward, 1973; Vining & Ebreo, 1990; Mostafa, 2006 ; Saeed et al., 2013). Few amounts of studies show a negative relationship between ecological knowledge and environmental friendly acts (Rokicka & Słomczyńska, 2002). Thus, it is proposed that:

H1: Environmental knowledge is positively related to consumer's intention to purchase green products.

The second hypothesis examines the relationship between environmental concern and green purchase intention. Laskova (2007) revealed that people who have environmental concern exhibit more positive attitude toward environment. Similarly, Kim and Choi (2005) stated that there is a positive relationship between environmental concern and green purchase intention. Thus, we propose:

H2: There is a positive relationship between consumer environmental concern and consumers green purchase intention.

In third hypothesis the relationship of conservation behavior and green purchase intention is scrutinized. There is found to be very few studies testing this relationship. Thus we hypothesize that:

H3: Conservation behavior is positively related to green purchase intention.

The last three hypothesis of this study presents the moderating effect of skepticism towards environmental claim upon the above proposed relationships. Skepticism towards environmental claim and its impact on green purchase intention has been studied multiple times suggesting that consumer who are skeptical about green claims have lesser intention purchase a green product (Do Paço & Reis 2012 ;Mostafa, 2006; Saeed et al., 2013; Ali & Ahmed, 2012) but lack of work is available on the moderating effect of skepticism towards environmental claim on green purchase intention in order to fill this gap it is hypothesized that:

H4: Consumer Skepticism towards environmental claims of a green product moderates the relationship of environmental knowledge with green purchase intention.

H5: Consumer Skepticism towards environmental claims of a green product moderates the relationship of environmental concern with green purchase intention.

H6: Consumer Skepticism towards environmental claims of a green product moderates the relationship of conservation behavior with green purchase intention.

The schematic diagram is as follows;

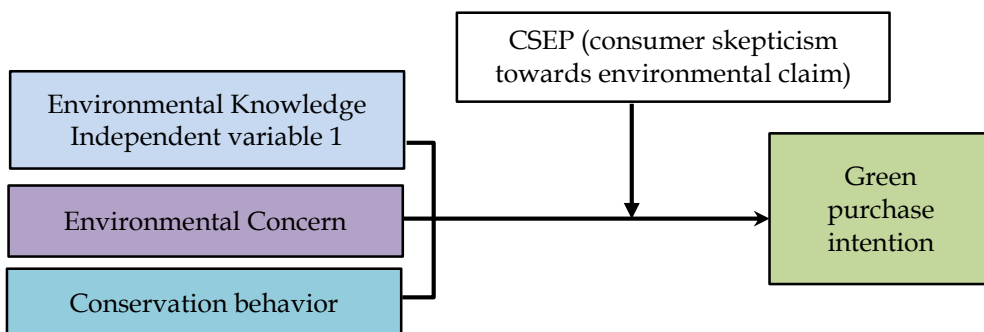


Figure 1: Schematic Diagram

6) METHOD

6.1) Sample

This study was conducted on the students of Pakistan. For this population, sample from students of the University of the Punjab was taken through convenience sampling technique. Convenience sampling is commonly practiced in marketing discipline, however, to a large sample has to be collected to overcome the limitations of convenience sampling. Therefore, data was collected from a sample of 300 students. Respondents had to provide their age bracket, department name, qualification and gender. Among the respondents most of the students belonged to the age bracket of 18-20. Female participants in the study were 60% percent whereas male members were 40%. Moreover, undergraduate students mostly participated in the study.

6.2) Instrument

Questionnaire was used to collect data for this research. Five- point Likert scale was used for measuring the concepts of the study ranging from 1 which means strongly disagree to 5 which means strongly agree. Questionnaire comprised of total 23 questions. Slight modification was made in the scale of environmental knowledge, skepticism towards environmental claim and conservation behavior to make it more comprehensive for the respondents.

Environmental knowledge: Perceived environmental knowledge scale developed by Ellen et al. (1997) consisting of five items is used to measure the concept with reported reliability coefficient as 0.87 (Mohr, EroGLu, & Ellen, 1998).

Environmental concern: The scale consists of four statements and was developed by Rehman and Dost (2013). It meets the reliability requirement as the reliability coefficient is 0.758.

Conservation behavior: Questionnaire measures the conservation behavior with the help of a scale developed by Pickett, Kangun, and Grove (1995), it consists of seven statements. The Cronbach Alpha value is 0.712, which is acceptable as recommended by Nunnally et al. (1967).

Consumer Skepticism towards environmental claims: The scale used to measure skepticism towards environmental claim was developed by Mohr et al. (1998) consisting of four statements with reliability coefficient as 0.79.

Green purchase intention: Green purchase intention was measured with a scale developed by Rehman and Dost (2013) which comprised of three items. The Cronbach Alphas value for this scale is 0.75.

6.3) Procedure

Sample was taken from students of different departments of the University of the Punjab. Total 350 questionnaires were distributed among different students belonging to different departments of the University of the Punjab from which 34 questionnaires were returned blank and 16 questionnaires had many unanswered statements. Hence 300 questionnaires were procured successfully. Questionnaires were distributed personally to the students and to avoid any ambiguity, topic was explained to the respondents who asked for any help.

7) DATA ANALYSIS

7.1) Reliability Analysis

The scores in Table 1 ensures the internal consistency of the instrument as the value of Cronbach Alpha is greater than 0.7 for environmental knowledge, environmental concern and conservation behavior which is good and the score for green purchase intention and skepticism is less than 0.7 but greater than 0.5 which makes the values acceptable (Nunnally, 1967). Consequently, instrument used in this study is reliable.

Table 1: Internal Consistency Reliability of each Construct

Construct	Cronbach Alpha
Environmental Knowledge	0.716
Environmental Concern	0.75
Conservation Behavior	0.70
Green Purchase intention	0.61
Consumer Skepticism	0.50

7.2) Descriptive Statistics

Table 2 gives the descriptive statistics and correlation between the variables of interest. It can be seen that environmental knowledge and GPI ($r = .45$, $p < .05$) indicate a positive relationship, whereas, consumer skepticism and GPI indicate a negative relationship ($r = -.37$, $p < .05$). Similarly, environmental concern and GPI ($r = .46$, $p < .05$) are positively related, while consumer skepticism and environmental concern are negatively related ($r = -.32$, $p < .05$). Conservation behavior and GPI ($r = .48$, $p < .05$) also depicts a positive relationship, whereas conservation behavior has a negative relationship with consumer skepticism ($r = -.37$, $p < .05$). These interpretations are based on Cohen et al. (2013).

Table 2: Correlation coefficients and descriptive statistics

	1	2	3	4	5	Mean	s.d.
Green Purchase Intention	1	.45*	.46*	.48*	-.37*	3.33	.790
Environmental Knowledge		1	-.54*	-.49*	.38*	3.32	.759
Environmental Concern			1	.51*	-.32*	3.63	.870
Conservation Behavior				1	-.37*	3.42	.701
Consumer Skepticism					1	3.12	.712

7.3) Regression Analysis

Hierarchical multiple regression is used to test the hypothesis of this study. In the first step all the control variables are entered and then in the next step all three independent variables namely EK, EC and CB are entered. In the second step the value of ΔR^2 is 0.332 which means that 34% variance in dependent variable can be explained significantly by all the three independent variables in the model ($p < 0.05$).

After controlling for variables like age, gender and qualification, it is deduced that environmental knowledge is positively related to GPI ($b = .229$, $p < 0.05$) which provides support to H1. Similarly, environmental concern is also positively related ($b = .199$, $p < 0.05$) to GPI, hence H2 is supported. The third hypothesis which states that conservation behavior and GPI are related is also accepted as they are positively related ($b = .264$, $p < 0.05$).

Table 3: Model Summary for Hypotheses 1, 2, 3

Model	β	R²	ΔR^2
CV		.018	.018
CV + IVs		.340	.322
Environmental Knowledge	.229*		
Environmental Concern	.199*		
Conservation Behavior	.264*		
*: Significant at .05 level of significance, Dependent Variable: Green Purchase Intention CV: Control Variables (Age, Gender, Education) IV: Independent Variables (Environmental Knowledge, Environmental Concern, Conservation Behavior)			

7.4) Tests for moderation

In order to check the moderation in the first step environmental knowledge and CSKP is entered and then the interaction term is added in the next block. Interaction term is the product of the moderator and the independent variable. According to the results of hierarchical multiple regressions, Skepticism towards environmental claim moderate the relationship of environmental knowledge and GPI ($p < 0.05$, $\Delta R^2 = 0.012$) as with the addition of interaction term in the second step ΔR^2 is significant. Beta value of interaction term is also significant ($b = 0.812$, $p < 0.05$) which provides supports to H4 of the study.

Table 5: Model summary for Hypothesis 4

Model	β	R²	ΔR^2
Environmental Knowledge + Consumer Skepticism	.356* -.240*	.250	.250*
Environmental Knowledge + Consumer Skepticism + Interaction	.753* .063 .411*	.262	.012*
*: Significant at .05 level of significance, Dependent Variable: Green Purchase Intention			

In order to test hypothesis 5, in the first step environmental concern and CSEP is entered and then the interaction term is added in the next block. R² for model 1 indicates that 27.2 % variance in GPI is due to environmental knowledge and CSEP ($p < 0.05$) however, model 2 with the interaction term

is not significant ($p > 0.05$). As the model with the interaction term added is not significant moderation is not occurring on that account H5 is rejected.

Table 6: Model Summary for Hypothesis 5

Model	B	R2	ΔR2
Environmental Concern + Consumer Skepticism	.381* -.256*	.272	.272*
Environmental Concern + Consumer Skepticism + Interaction	.593* -.144 .214	.276	.004*
*: Significant at .05 level of significance, Dependent Variable: Green Purchase Intention			

Similarly, to test hypothesis 6 in the first step conservation behavior and SKEP is entered and then the interaction term is added in the next block. R² for model 1 indicates that 27.9 % variance in GPI due to conservation behavior and CSEP ($p < 0.05$) however, model 2 with the interaction term added is not significant ($p > 0.05$). As the model with the interaction term added is not statistically significant moderation cannot be confirmed. Thus H6 is also not supported.

Table 7: Model Summary for Hypothesis 6

Model	B	R2	ΔR2
Conservation Behavior + Consumer Skepticism	.399* -.228*	.279*	.279*
Conservation Behavior + Consumer Skepticism + Interaction	.676* -.012 .292	.284*	.006
*: Significant at .05 level of significance, Dependent Variable: Green Purchase Intention			

8) DISCUSSION

Findings of the study shed some light on the green purchase intention of Pakistani consumers by examining the influence of three important predictors and one moderator (SKEP) to see if it could hinder the green purchase intention of consumers. The correlation coefficient for the relationship between environmental knowledge and green purchase intention is 0.448 implying a positive relationship between the variables moreover; the results for the first hypothesis is supported and confirmed

by many studies (Ali & Ahmad, 2012; Mostafa, 2006; Saeed et al., 2013). The second hypothesis regarding the relationship between environmental concern and green purchase intention also came out to be true with the correlation coefficient of 0.462 exhibiting a positive relationship between the variables conforming to various previous researches (Ali & Ahmad, 2012; Mostafa, 2006; Rehman & Dost, 2013; Saeed et al., 2013).

The third hypothesis is also accepted as the results of the relationship between conservation behavior and green purchase intention shows the value of correlation coefficient as 0.484 depicting a positive relationship between the variables.

The last three hypotheses of the study are related to the moderating effect of skepticism towards environmental claim; results suggest that among three relationships proposed in the model only the relationship of environmental knowledge and green purchase intention is found to be moderated by skepticism towards environmental claim. The relationship of environmental concern and conservation behavior with green purchase intention is not moderated by skepticism towards environmental claim. Hypothesis 4 showed a significant ΔR^2 of 0.012 with the interaction term showing the moderating effect of skepticism towards environmental claim. Hierarchical multiple regression for Hypothesis 5 and 6 shows no significant ΔR^2 resulting in no moderating effect of Skepticism towards environmental claim on the relationship of environmental concern and conservation behavior with green purchase intention. These results are consistent with previous findings since moderating effect of CSEP has not been observed significantly. There is a lack of research regarding the moderating effects of skepticism towards environmental claim and the relationship of conservation behavior with green purchase intention.

8.1) Practical implications

Firstly, results emphasize that consumers are becoming environmentally conscious. Consumers of Pakistan possess good knowledge about environmental problems, they are concerned about the natural resources and observe conservation behavior in their daily conduct which indicates that a big segment of green consumers are imminent to emerge in recent times and firms direly need to engage themselves in the production of eco-friendly products which could prove as a lucrative market.

Secondly, those firms and corporations who are already in the business of green products, in order to increase their market share they should try to enhance the environmental consciousness among consumers by running campaigns or any other marketing technique so that their intention to purchase green products is increased. Study is also helpful for the managers of green firms to get a better understanding of prospective green consumers and for those foreign countries who want to introduce their green products in developing countries like Pakistan.

Results of the study emphasized that consumers with environmental knowledge have intention to purchase an eco-friendly product but only if the claims made in green advertisements are not misleading. If a consumer becomes skeptical about an advertisement no matter how much knowledge he/she possess about the environment it is difficult for him/her to purchase a green product. This implies that the marketing managers should be cautious while making an advertisement and make sure that it is not misleading. Moreover, companies can also educate their prospective consumers so that they could recognize authentic green claims.

Further results suggests that no matter how much a consumer is skeptical about the claims made in green advertisement as long as the consumer is environmentally concerned and observe conservation behavior he/she will intend to purchase a green product. Governmental regulations regarding false and exaggerated claims in advertisements push consumers away. Government can also play a vital role in promoting green products by taking several steps for example green businesses may be exempted from import and export duties.

8.2) Limitations and Future Recommendations

There are some limitations of this study. The study was based on a small the sample, limited only to the University of the Punjab hence the research is not generalizable for all the population of Pakistan. Future researchers could expand the geographical area of the research so that the results are generalizable for the population of Pakistan.

Future research could include respondents from different ages, belonging to various professions and wider geographical area.

It is noteworthy that in the present research only the intention to buy a green product is measured however the results may be different if the actual buying behavior of green products is measured. Future research may take actual buying behavior as the dependent variable and examine the results drawn with actual buying behavior.

Future study could segregate the environmental claims depending upon the medium of communication (print media or electronic media) and then see the moderating impact of both or one of communication medium on the relationship of environmental knowledge with green purchase intention

9) CONCLUSION

In Pakistan the topic of green purchasing is still in its initial stages and literature on this topic is lacking. Results of this study could help to understand the green purchase intentions of the consumers of a developing country like Pakistan. This study has not taken any specific green product into consideration; it could be generalized to any eco-friendly product.

Findings of the study reveals that environmental knowledge, environmental concern and conservation behavior are important predictors of green purchase intention and students of Pakistan are willing to purchase green products since they are concerned about the environment of Pakistan, they care about the diminishing natural resources of the country and possess enough knowledge about ecological problems being faced by the country.

Furthermore it can be deduced from the results that if people have enough knowledge about environmental problems, only then they will be skeptical about green advertisement and consequently may not intend to buy a green product. People will not be skeptical about green claims made in advertisement if they are environmentally concerned and observe conservation behavior. It can also be said that people who are concerned about the ecological environment and who observe conservation behavior are not going to pay any heed to the green advertisements or going to judge its authenticity, they anyhow will intend to purchase the green product.

REFERENCES

- Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of consumer research*, 13(4), 411-454.
- Ali, A., Khan, A. A., Ahmed, I., & Shahzad, W. (2011). Determinants of Pakistani consumers' green purchase behavior: Some insights from a developing country. *International Journal of Business and Social Science*, 2(3), 217-226.
- Beckford, C. L., Jacobs, C., Williams, N., & Nahdee, R. (2010). Aboriginal Environmental Wisdom, Stewardship, and Sustainability: Lessons from the Walpole Island First Nations, Ontario, Canada. *The Journal of Environmental Education*, 41(4), 239-248.
- Brucks, M. (1985). The effects of product class knowledge on information search behavior. *Journal of consumer research*, 12(1), 1-16.
- Calfee, J. E., & Ringold, D. J. (1988). Consumer skepticism and advertising regulation: what do the polls show? *Advances in Consumer Research*, 15(1), 244-248.
- Carlson, L., Grove, S. J., & Kangun, N. (1993). A Content Analysis of Environmental Advertising Claims: A Matrix Method Approach. *Journal of advertising*, 22(3), 27-39.
- Chan, R. Y. K., & Lau, L. B. Y. (2002). Explaining Green Purchasing Behavior. *Journal of International Consumer Marketing*, 14(2-3), 9-40.
- Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions. *Management Decision*, 50(3), 502-520.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*: Routledge.
- Do Paço, A., Alves, H., Shiel, C., & Leal Filho, W. (2013). Conserving Behaviour: A Replication of the ENVIROCON Scale in Four Countries. *APCBEE Procedia*, 5(2013), 44-49.
- Do Paço, A. M. F., & Reis, R. (2012). Factors affecting skepticism toward green advertising. *Journal of advertising*, 41(4), 147-155.
- Dunlap, R. J., R. (2002). *Environmental Concern: Conceptual and Measurement Issues* (In Dunlap and Michelson. London: Greenwood Press.
- Ellen, P., Eroglu, D., & Webb, D. (1997). Consumer Judgments in a Changing Information Environment: How Consumers Respond to 'Green Marketing' Claims. *Georgia State University*.

- Eltayeb, T. K., Zailani, S. & Jayaraman, K. (2010). The examination on the drivers for green purchasing adoption among EMS 14001 certified companies in Malaysia. *Journal of Manufacturing Technology Management*, 21(2), 206-225.
- Fishbein, M. (1979). A theory of reasoned action: some applications and implications. 27, 65-116.
- Fraj-Andrés, E., Martínez-Salinas, E., & Matute-Vallejo, J. (2009). A Multidimensional Approach to the Influence of Environmental Marketing and Orientation on the Firm's Organizational Performance. *Journal of Business Ethics*, 88(2), 263-286.
- Friestad, M., & Wright, P. (1994). The Persuasion Knowledge Model: How People Cope with Persuasion Attempts. *Journal of consumer research*, 21(1), 1-31.
- Fryxell, G. E., & Lo, C. W. (2003). The influence of environmental knowledge and values on managerial behaviours on behalf of the environment: An empirical examination of managers in China. *Journal of Business Ethics*, 46(1), 45-69.
- Gill, J. D., Crosby, L. A., & Taylor, J. R. (1986). Ecological concern, attitudes, and social norms in voting behavior. *Public Opinion Quarterly*, 50(4), 537-554.
- Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and Synthesis of Research on Responsible Environmental Behavior: A Meta-Analysis. *The Journal of Environmental Education*, 18(2), 1-8.
- Kalafatis, S. P., Pollard, M., East, R., & Tsogas, M. H. (1999). Green marketing and Ajzen's theory of planned behaviour: a cross-market examination. *Journal of consumer marketing*, 16(5), 441-460.
- Kim, Y., & Choi, S. M. (2005). Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE. *Advances in Consumer Research*, 32(2005), 592-592.
- Lafuente, R. (2010). Defining and measuring environmental consciousness. *Revista Internacional de Sociología (RIS)*, 68(3), 731-755.
- Maloney, M. P., & Ward, M. P. (1973). Ecology: Let's hear from the people: An objective scale for the measurement of ecological attitudes and knowledge. *American psychologist*, 28(7), 583.
- Mohr, L. A., EroĖLu, D., & Ellen, P. S. (1998). The Development and Testing of a Measure of Skepticism toward Environmental Claims in Marketers' Communications. *Journal of Consumer Affairs*, 32(1), 30-55.

- Mostafa, M. M. (2006). Antecedents of Egyptian consumers' green purchase intentions: a hierarchical multivariate regression model. *Journal of International Consumer Marketing*, 19(2), 97-126.
- Murray, K. B., & Schlacter, J. L. (1990). The impact of services versus goods on consumers' assessment of perceived risk and variability. *Journal of the Academy of Marketing Science*, 18(1), 51-65.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Peattie, K. (2001). Towards Sustainability: The Third Age of Green Marketing. *The Marketing Review*, 2(2), 129-146.
- Pickett, G. M., Kangun, N. and Grove, S. J. (1995). *An examination of the conservative consumer: implications for public formation policy in promoting conservation behaviour*. New York: The Haworth Press.
- Rahbar, E., & Wahid, N. A. (2011). Investigation of green marketing tools' effect on consumers' purchase behavior. *Business Strategy Series*, 12(2), 73-83.
- Ramayah, T., Lee, J. W. C., & Mohamad, O. (2010). Green product purchase intention: Some insights from a developing country. *Resources, Conservation and Recycling*, 54(12), 1419-1427.
- Rehman, Z., & Dost, M. (2013). *Conceptualizing green purchase intention in Emerging markets: An empirical analysis on Pakistan*. Paper presented at The 2013 WEI International Academic Conference Proceedings.
- Rokicka, E., & Słomczyńska, J. (2002). Attitudes toward Natural Environment: A Study of Local Community Dwellers. *International Journal of Sociology*, 32(3), 78-90.
- Saeed, R., Lodhi, R. N., Khan, A. K., Khurshid, N., Dustgeer, F., Sami, A., Ahmad, M. (2013). Measuring Impact of Factors Influencing Purchase Intention towards Green Products: Sahiwal Clothing Industry Perspective. *World Applied Sciences Journal*, 26(10), 1371-1379.
- Schultz, P. (2000). New Environmental Theories: Empathizing With Nature: The Effects of Perspective taking on Concern for Environmental Issues. *Journal of Social Issues*, 56(3), 391-406.
- Shamdasani, P., Chon-Lin, G. O., & Richmond, D. (1993). Exploring green consumers in an oriental culture: Role of personal and marketing mix factors. *Advances in Consumer Research*, 20(1), 488-493.
- Vining, J., & Ebreo, A. (1990). What makes a recycler? A comparison of recyclers and non recyclers. *Environment and behavior*, 22(1), 55-73.