

## **Green Purchase Intentions, Collectivism and Materialism: An Empirical Investigation**

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### **ABSTRACT**

With the growing awareness about the harmful effects of global warming, non-bio degradable solid waste, harmful impact of pollutants etc., many companies have accepted their responsibility not to harm the environment and not to waste the natural resources. Companies are switching to eco-friendly products showcasing their environmental responsibility and are using green elements as powerful marketing tools as well. As the increase in marketing push to greening of products impacts consumer awareness and attention to environment issues, this paper attempts to explore into green purchase intentions for consumers and investigates the cultural variable 'collectivism', personality factor 'materialism' along with 'environment concern' and 'attitude' to further deepen the understanding about green consumer behaviour. Using the questionnaire-based survey method, 224 responses were collected from consumers through convenience sampling. The finding of the study suggests positive relationship between collectivism, environment concern, environment attitude and green purchase intention. Moreover, the study also revealed that collectivism acts as a moderating variable on the relationship between environment attitude and green purchase intention. This study suggests that it is important for the marketer to increase environment awareness among consumers so that they can reduce their impact on environment and make a positive difference through their purchasing decisions.

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**Keywords:** Collectivism, Environment Concern, Environment Attitude, Green Purchase Intention

## 1. INTRODUCTION

Green and sustainability trend has emerged to reflect more sustainable and green practices due to the pressure on companies from various stakeholders such as consumers, shareholders, employees, partners and governments (Singh, 2013). Green marketing as a new strategy appeals to consumers with products that are “green” or “environmentally friendly” and they satisfy the customer need for quality, reliable price and easy availability of the product without having a harmful impact on the environment (Mishra and Sharma, 2010; Polonsky, 1994 and Rakshita, 2011). Various companies, now being more environmentally responsible, have developed environmental friendly products and services, generally referred as green products, to meet the requirement of environment friendly consumers (Sachdev & Mahna, 2014). Green products are manufactured by using eco-friendly method, nontoxic chemicals which are not injurious for environment, recyclable objects, reusable features, simple packages, and also which are not tested on animals. An eco-friendly chair made of recycled cork, eco-friendly paints made of naturally derived raw materials, cotton or cloth shopping bags, LED bulbs etc., are few examples of eco-friendly products.

Studies exploring into purchase behavior for green products, however, have reported a discrepancy or “gap” between consumer favorable attitudes and actual purchasing practices (Tanner and Kast, 2003; Vermeir and Verbeke, 2006; Chen and Chai, 2010; Wheale and Hinton, 2007). Hughner (2007) affirms that although many consumers showed a positive attitude towards purchase of organic food products (67%), only a small number of consumers (4%) actually purchased these products. Defra’s (2006) study revealed that only 30% of the consumers in UK showcasing their concern towards the environment rarely translated their concern into a green purchase. The discrepancy or gap between consumer favorable attitude and actual purchase behaviour of green products is referred to as ‘green purchasing inconsistency’ or ‘green attitude-behaviour gap’.

This study brings further insights into ‘green attitude-behaviour gap’ by exploring into dynamics of individual behaviour in terms of cultural and personality traits. More specifically, the study is about an investigation into *collectivism* – the cultural trait and *materialism* – the personality trait - to find how group dynamics and individual dynamics determine green purchase intentions. The study seeks to find the intervening effects of *collectivism* and

*materialism* on relation between *attitude* and *green purchase intention*. *Environmental concern* is another important factor which suggests that consumers who have strong environmental concerns might be interested in consumption of products that reflect their concern (Mostafa, 2009). This study will explore into environmental concern as a factor influencing green purchase intention and the effect of *materialism* on the relation between environmental concern and *green purchase intention*. Figure I shows the conceptualized model for empirical investigation and uses both primary and secondary sources of information to bring interesting insights for the marketers adopting green practices, including green products. Researches investigating into factors converting consumer motivation into pro-environmental action differ in different cultural contexts and suggest that demand and environment attitude for green products is likely to vary across different cultures. Lee and Green (1999) point out that it is difficult to ascertain the validity of the studies in different cultural settings, especially in developing countries like India. It is also observed that majority of the studies in the field of environmental research have been based on developed countries particularly in US. Elham and Nabsiah (2011), Ottman (1992) and Peattie (1992) also reported that demand and environment attitude for green products is likely to vary across different cultures. Lee and Green (1999) point out that it is difficult to ascertain the validity of the studies in different cultural settings, especially in developing countries like India. This study provides direction to marketers in terms of identification of consumer segments who are more likely to have green purchase intentions and the leading factors thereof.

### 1.1 ENVIRONMENT CONCERN

Alibeli and Johnson (2009), define environmental concern as the degree to which people are conscious of the environmental issues and the motivation to solve the environmental problems. Aman et al., (2012) defined 'environmental concern' as emotional character of consumers such as the irritation toward destruction of nature. People with high level of environmental concerns tend to have a more positive attitude towards the environment than people who think they are incapable to help the environment and as a result they are less likely to contribute in environmental activities (Laskova, 2007). The finding of their study suggests that environmental concern has a significant impact on the green purchasing intention by using attitude as a mediating variable, which implies that environmental concern has positive impact on consumers' attitude and in turn this attitude will lead to the green purchase intention. The hypothesis is:

H1: Environmental concern has significant positive effect on environmental attitude.

Various studies show that environmental concerns have a positive influence on green purchase intention suggesting that consumers who have strong environmental concern might be interested in consumption of products that reflect their concern. Therefore, it suggests positive effect of environment concern on consumer purchase intentions (Mostafa, 2009).

Andres, Salinas and Vallejo (2009) stated that consumers are becoming more concerned about the environmental issues and if the organizations do not take any action relating to environment issues by offering green products they may lose credibility in their customers. Hence, organizations tend to participate in environmental issues and fulfill the customer's expectation. Therefore, this study seeks to further determine the relationship between environment concern and green purchase intention in Indian context. The hypothesis is:

H2: Environmental concern positively influences green purchase intention.

### *1.2 ENVIRONMENT ATTITUDE*

Environmental attitude is defined as a learned predisposition to form a favorable or unfavorable response with respect to the environment (Nik Abdul Rashid, 2010). Environmental attitudes are found in a person's self-concept and can be defined as the level to which individuals distinguishes themselves to be an integral part of environment (Schultz and Zelenzy, 2000). According to Lyon and Maxwell (2004) consumers are ready to change their purchase behavior and become more aware about environment issues such as pollution and global warming and form a positive attitude towards green products. There are various researches which show the positive and significant association between the environmental attitude and green purchase behavior. Laroche et al., (2001) showed that environment attitude is an important determinant of an individual motivation to pay higher price for green products and contribute toward sustainable consumption.

Researchers also argue that even though environment awareness and concern about environment have increased among people, but still there exists a gap between people's attitudes and their actual purchasing behaviour (Jansson et al., 2011; Kim & Chung, 2011; Barker & Ozaki, 2008; Mostafa, 2007; Garling et al., 2003). In spite of the motivation of the consumers to behave in an eco-friendly manner their actual participation in green purchasing is very less. Therefore, this study aims to bring more clarity about the relationships between environment attitude and green purchase intention in Indian context and the hypothesis is:

H3: Environment attitude positively influences green purchase intention.

### 1.3 COLLECTIVISM

Hofstede's individualism vs. collectivism orientations has turned out to be key variables or descriptive features in a wide range of environmental research (Kim & Choi, 2005; Sarigollu, 2009; Leonidou & Lulea, 2010). Kim and Choi (2005) identified three factors, viz., collectivism, environment concern and perceived consumer effectiveness that generally affect consumer environmental behaviour. Samarasinghe (2012) also discovered collectivism as a good predictor for formation of environment attitudes. According to McCarty & Shrum (1994) collectivism is about people who think collectively and likely to protect the environment so that the whole society can enjoy prosperity. People in collectivistic society are more likely to engage in green purchase behavior as they tend to be more cooperative, be more willing to help others, and give emphasis to group goals over personal ones than individualistic people. People under collectivistic culture consider adhering to social norm as an important part of decision making and thus, give more emphasis to emotional aspects rather than rational cost benefit decisions. *Collectivism* as a cultural value tends to have positive influence on green purchase intention (Chan, 2001; Ling-yee, 1997; McCarty and Shrum, 1994; Sinha, 1990) and people in individualistic societies give less emphasis to recycling behavior (Li, 1997). People in an individualistic society promote their own goals and desires, give importance to independence and self-reliance as well as ignore external interference by society or institutions (Gagnier, 2010). Thus, it appears that people from individualistic cultures tend to be independent and self-oriented whereas those from collectivistic cultures are more interdependent and group-oriented.

Handique, (2014), on the other hand, suggests that collectivistic people tend to retain traditional ideas and be rigid in modifying their behaviors and habits, thus reflecting the negative effect of collectivism on green purchase intention. Therefore, there is a need to further explore into the effect of the cultural value of collectivism on green purchase intention, particularly in Indian context that has a collectivist culture. Sinha et al. (2001) and Sinha (1990) point out that Indian people prefer to follow the particular group and develop their identity from the group membership as well as looking for guidance for suitable behavior from the group itself. The hypothesis, therefore, is:

H4: *Collectivism* positively influences green purchase intention.

McCarty and Shrum (1994, 2001) in their study found a significant impact of collectivism on consumer attitudes about green purchase behavior implying that people in a collectivistic

society are more likely to engage in green purchase behavior because they tend to be more cooperative, be more willing to help others, and give emphasis to group goals over personal ones than individualistic people. Collectivistic persons who give importance to group goals and cooperation might be extremely motivated to make pro-environmental choices by having stronger beliefs that their behaviour would make a difference in mitigating environmental problems (Kim and Choi, 2005). According to Schultz et al. (2007) people generally use their existing attitude while interpreting environment problems which might be influenced by their culture. The study will thus further explore into the linkage between environmental attitude and green purchase intention within the context of collectivist cultural values and the hypothesis is:

H5: Higher the level of *collectivism* as a cultural trait, stronger is the linkage between *environment attitude* and *green purchase intention*.

#### 1.4 MATERIALISM

Belk (1985) define materialism as “the importance associated with material goods by the consumer.” It includes various qualities such as envy, possessiveness, goal and stinginess. Thus, material goods that are owned by the people represent the important part of their life. Materialism promotes ineffective consumption i.e., more than essential or may be consumption even when it is not required (Good, 2007). Consumption, therefore, is considered as the major reason of environment degradation that can affect both the society and environment. Environment is being used and destroyed for consumption (Brown & Kasser, 2005). Consumption by materialistic individuals can be harmful for the environment, signifying a negative relationship between materialism and green purchase intention. Materialist consumers believe that they need to be wealthy to be happy and consequently they are more demanding and feel more pressurised as compared to less materialistic consumers (Muncy and Eastman, 1998). Thus, they behave more unethically with the intention of having the thing they desire. Materialism is dominantly examined and viewed as a variable of dark side of consumer behavior (Mick, 1996).

Strizhakova and Coulter (2013) also found that individuals with highly materialistic values are less aware about the environment and concentrate on activities that are not intended to protect the environment. Bredemeier and Toby (1960) showed that materialism results in many social problems. Various researchers argue that it affects the level of joy and self-esteem of the individual and as a result materialistic individuals want to associate themselves with the brand while ignoring their negative effect on environment.

On the contrary, various researches have shown the positive relationship between materialism and green purchase intention (Hye-Jung Park, Leslie Davis Burns and Nancy J. Rabolt, 1996). As environment friendly consumers are ready to give extra money for green products thus materialistic values for them would include possession of products that are eco-friendly (Strizhakova & Coulter, 2013). Similar results are also found in the study of Alston & P. Roberts (1999). '*Green materialism*' is therefore a recently coined term which reveals the optimistic side of envious desires. The effect of material wants on environment friendly behavior has not received much attention of researchers in the past. The investigation into materialism as a personality trait will further allows this study to explore green purchase intentions. The hypothesis here is:

H6: Materialism negatively effects green purchase intention.

Kilbourne and Pickett (2007) investigated the relationship between materialism, environmental beliefs, environmental concern and environmental behaviors. It shows that materialism has a negative effect on environmental beliefs and consequently these beliefs significantly affect environmental concern and environmentally responsible behaviors. Environment concern is found to be negatively affected by materialism (Manchanda, 2014). Tilikidou and Delistavrou, (2004) showed that materialism and environment concern is negatively related to environmental purchasing behavior i.e. lower the level of materialistic values and environment concern, higher will be the environment purchasing behavior. Consumers, who achieve satisfaction and happiness by material possessions have greater tendency to be self-centered and are less unlikely to acquire satisfaction by getting involved in environmental activities. It can be interpreted that people who hold higher level of environment concern towards eco-friendly behaviour mainly hold lower level of materialistic values and are more likely to enhance green purchase behaviour. Materialism, hence, tends to moderate the relationship between environment concern and green purchase intention and the related hypothesis is:

H7: Lower the level of materialistic values, stronger is the relationship between environment concern and green purchase intention.

H8: Lower the level of materialistic values, stronger is the relationship between environment attitude and green purchase intention.

By reviewing the related literature, the conceptual model is developed and it is presented in the Figure I.

## 2. METHODOLOGY

Multi-item scales were used to measure *collectivism*, *materialism*, *environment concern*, *environment attitude*, and *green purchase intention* and scale items were adapted from past researches to suit the Indian context (Table I). *Materialism* was measured in terms of three dimensions, viz. *centrality*, *success* and *happiness* (Richins and Dawson, 1992). The *centrality* scale describes how many possessions and acquisitions are likely to be the centre of one's life. The *success* scale measures the degree to which people have a tendency to judge themselves and others by the quality and number of possessions accumulated. *Happiness* scale measures the degree to which possessions and acquisitions become necessary to attain satisfaction and happiness in one's life (Richins and Dawson, 1992). A structured questionnaire was developed and administered through drop-off method in Delhi and Gurgaon region and also through online Google.doc survey. Using convenience sampling the responses were obtained on 7-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. After initial round of pilot testing, 240 responses were collected during the month of September 2015 to May 2016, and 226 responses were found usable for the purpose of analysis. Majority of the sample respondents were young (less than 35 years of age) and highly educated (44.2%) working (71%) females (58.9%). They are married (52.7%) and live in a nuclear family (52%). They are either pursuing their career in service (26.8%) or are professionals (28.1%).

## 3. ANALYSIS

*Descriptive Analysis:* Reliability analysis using Cronbach alpha suggests internal consistency for all measurement scales as Cronbach alpha value is more than 0.60 (Table II).

Mean value scores suggest that sample carries higher levels of collectivists traits and is highly concerned about environment and carries strong environmental attitude. In regard to materialistic traits, the sample holds weak opinion about linkage of centrality, success and happiness to material possessions in life.

*Regression Analysis:* The results of liner regression support hypothesis H1, which suggests that *environmental concern* has significant positive effect on environmental attitude (Table III). In regard to *green purchase intentions*, the results of multiple regression analysis support hypotheses H2, H3 and H4 and thus *environmental attitude*, *environmental concern* and *collectivism* positively affect *green purchase intentions* and explains 46% of variation for

*green purchase intentions*(Table III).The study does not support the hypothesized negative effect of *materialism* on *green purchase intentions*(H6).

*Hierarchical regression analysis* was used to test the moderating effect of *collectivism* on *green purchase intention* and therefore interaction term was introduced in the regression model. In order to eliminate multicollinearity with the interaction term, according to Aiken & West (1991), the variables were first centered and an interaction term between the independent variable and moderator was created.

The introduction of interaction effect of *collectivism* on relation between *environment attitude* with *green purchase intention* brings significant change in the regression model (R square change of 2.4%), where model 2 is significant with F value 41.71. Further, there is moderating effect of *collectivism* on *environment attitude* and *green purchase intentions* as the interaction term is significant at  $p < .05$  level.

Simple slopes test using Process by Andrew F. Hayes (2012) provides z value of *collectivism* significant at  $p < .05$  level in all the three cases, i.e., one standard deviation below the mean, at the mean, and one standard deviation above the mean (Table V). Conditional effect of *environment attitude* on *green purchase intention* is shown through simple slope diagram plotted through excel sheet developed by James Gaskin (Fig.II). *Environment attitude*, although, is positively related to *green purchase intention* for both low and high levels of *collectivism*, the relationship is more pronounced at high level of *collectivism* and it supports the hypothesis H5.

The results of hierarchical regression analysis (Table IV) does not support the hypothesized effect of *materialism* on relation between *environmental concern* and *green purchase intention* (H7) and *environmental attitude* and *green purchase intention* (H8). The interaction term, although, is found insignificant at  $p < .05$  level in both the cases, the effect of *materialism* on *green purchase intention* is significantly positive while testing its moderating effect relation between *environmental concern* and *green purchase intention*. The results need further investigation for the reason that the part of the literature also suggests positive effect of *materialism* on GPI.

#### 4. DISCUSSION & IMPLICATIONS

Awareness about degrading environment results into a new tendency among people to adopt the products that are less detrimental to the environment and it is very important to have a clear

understanding about the factors that influence their purchase behavior and motivate them to buy green products. The study supports the role of cultural values in explaining green purchase behavior of consumer. Collectivist values as against individualistic values tend to make people friendlier to the environment (Chan, 2001; Triandis, 1993; Ling-yee, 1997). The study also found positive influence of environment attitude on green purchase intention which supported the Laroche et al., (2001) study. Thus, people with positive environment attitude, in particular those with strong collectivist values can contribute more towards sustainable consumption by buying green products. Consistent with Laskova (2007), since the study also suggest significant positive effect of environment concern on green purchase intentions, the marketer should increase awareness regarding availability of eco-friendly products among the people and educate them about the features and benefits of eco-friendly products.

This study is limited in its scope as factors like perceived consumer effectiveness, environmental knowledge also need to be investigated to clearly understand consumer green purchase intentions. The insight into role of *collectivism* in shaping green purchase intention is indeed encouraging and further studies in cross-cultural context will help in shaping green marketing strategies. Though, the results are not significant either for the direct or indirect effect model for materialism, the positive beta values suggest the need to further explore the linkage with green purchase intention, particularly in view of rise in green materialism.

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**Tables:****Table I: Measurement Scales**

| No | Variable            | Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Source                                                    |
|----|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| 1  | Collectivism        | <ul style="list-style-type: none"> <li>• I respect the majority's wish.</li> <li>• Whatever be the circumstances, I always support my group.</li> <li>• I respect decisions made by my group.</li> <li>• I maintain harmony in my group.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Kim and Choi (2005)                                       |
| 2  | Materialism         | <ul style="list-style-type: none"> <li>• I admire people who own expensive homes, cars, and clothes.</li> <li>• Some of the most important achievements in life include acquiring material possessions.</li> <li>• The things I own say a lot about how well I'm doing in life.</li> <li>• I like to own things that impress people.</li> <li>• I enjoy spending money on things that aren't practical.</li> <li>• Buying things gives me a lot of pleasure.</li> <li>• I like a lot of luxury in my life.</li> <li>• My life would be better if I owned certain things I don't have.</li> <li>• I'd be happier if I could afford to buy more things.</li> <li>• It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.</li> </ul> | Richins and Dawson (1992)                                 |
| 4  | Environment Concern | <ul style="list-style-type: none"> <li>• I am very concerned about the environment.</li> <li>• Humans are severely abusing the environment.</li> <li>• I would be willing to reduce my consumption to help protect the environment.</li> <li>• When human interfere with nature it often produces disastrous consequences.</li> <li>• The balance of nature is very delicate and easily upset.</li> <li>• Human must live in harmony with nature in order to survive.</li> <li>• I am emotionally involved in environmentally protection issues in country.</li> <li>• I often think about how the environmental quality of country can be improved.</li> </ul>                                                                                                     | Kilbourne et al. (2008) and (Dunlap and Van L, iere 1978) |

| No | Variable                 | Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Source                          |
|----|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 5  | Environment Attitude     | <ul style="list-style-type: none"> <li>• I believe that use of green products by me will help in reducing pollution and also help in improving the environment.</li> <li>• I believe that use of green products by me will help in reducing wasteful use of natural resources.</li> <li>• I believe that use of green products by me will help in conserving natural resources.</li> <li>• I feel good about myself when I use green products.</li> </ul>                                                                                                                    | Do Valle et al. (2005)          |
| 6  | Green Purchase Intention | <ul style="list-style-type: none"> <li>• I will consider buying products because they are less polluting.</li> <li>• I will consider switching to other brands for ecological reasons.</li> <li>• Over the next one month, I plan to switch to a green version of a product.</li> <li>• I like to purchase green product</li> <li>• I will pay more money for a green product</li> <li>• I will take green product as a first consideration</li> <li>• I will repeat purchasing green product</li> <li>• I will recommend other people to purchase green product.</li> </ul> | Mostafa's (2007) and Lee (2008) |

**Table II: Descriptive Statistics and Reliability Scores**

| Particulars              | Grand mean | S.D.  | No. of items | Cronbach's alpha |
|--------------------------|------------|-------|--------------|------------------|
| Collectivism             | 5.5        | 0.837 | 4            | 0.602            |
| Environment Concern      | 6.2        | 0.633 | 8            | 0.830            |
| Environment Attitude     | 6.01       | 0.657 | 4            | 0.813            |
| Materialism              | 4.57       | 1.31  | 10           | 0.913            |
| Green Purchase Intention | 5.76       | 0.782 | 8            | 0.898            |

**Table III: Regression Results**

Note: \*level of significance at  $p < 0.05$  level

R Square = .0.461; Adjusted R Square = 0 .448; F = 37.049; Significance p value = 0.00

EA=Environment attitude, EC=Environment concern and GPI=Green Purchase Intention

**Table IV: Results of Hierarchical Regression Analysis**

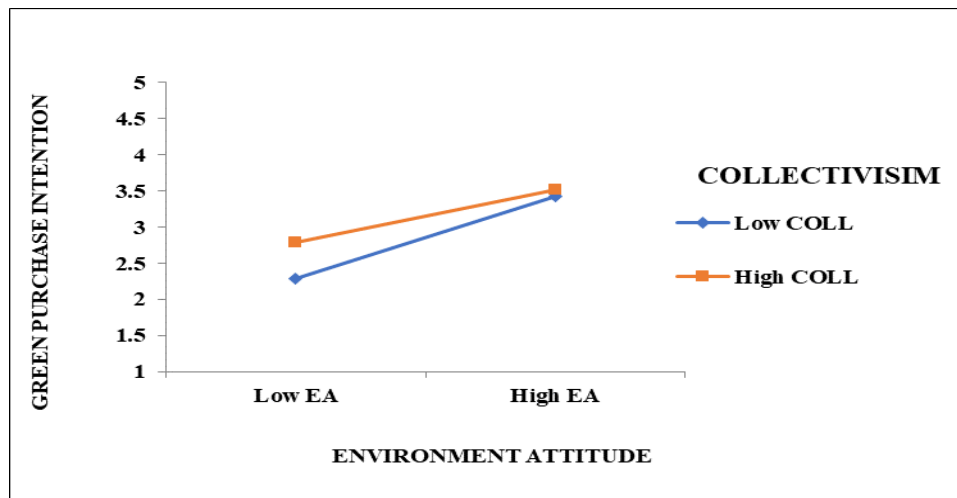
| Hypotheses             | Model                           | R Square | Adjusted R Square | R Square Change | Sig. F Change | F      | p-value * |
|------------------------|---------------------------------|----------|-------------------|-----------------|---------------|--------|-----------|
| EA, Collectivism & GPI | Without interaction term        | 0.339    | 0.333             | 0.339           | 56.679        | 56.679 | 0.000 *   |
|                        | With Interaction term- EA*Coll. | 0.363    | 0.354             | 0.024           | 8.122         | 41.711 | 0.005 *   |
| EC, Materialism & GPI  | Without interaction term        | 0.312    | 0.306             | 0.312           | 50.196        | 50.196 | 0.000     |
|                        | With Interaction term- EC*Mate. | 0.317    | 0.307             | 0.005           | 1.390         | 33.986 | 0.240     |
| EA, Materialism & GPI  | Without interaction term        | 0.321    | 0.315             | 0.321           | 52.244        | 52.244 | 0.000     |
|                        | With Interaction term- EA*Mate. | 0.322    | 0.313             | 0.001           | 0.238         | 34.788 | 0.626     |

Note: \*level of significance at  $p < 0.05$  level

**Table V: Conditional Effect of Environment Attitude on Green Purchase Intention**

| Z Value of Collectivism | Effect | Std. Error | t-value | p-value* |
|-------------------------|--------|------------|---------|----------|
| One SD below mean       | 0.569  | 0.0566     | 10.06   | 0.000    |
| At the mean             | 0.469  | 0.0586     | 8.00    | 0.000    |
| One SD above mean       | 0.367  | 0.0786     | 4.67    | 0.000    |

Note: \* $p \leq 0.05$

**Figure:****Figure II: Moderating Effect of Collectivism**