

## **A Study on the Relationship between Consumer Attitude, Perceived Value and Green Products**

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### **Abstract**

Marketing literature reveals that perceived value is always considered to be of paramount importance when consumers purchase a product. In order to form a positive attitude towards green products resulting from a higher perceived value, the products proclaimed as green should incorporate the worth which consumers value the most while purchasing. The present study investigates whether there is any relationship between consumers' attitude, perceived value, and green products. To establish such an assumption, a sample of three hundred educated respondents has been selected to participate in the survey. All the variables in the study have been measured using a questionnaire approach, adopted from previous related research. The findings have been obtained through statistical analysis in SPSS using Correlation Coefficient, Independent Sample *t*-test and ANOVA. The study concludes that within the given context of a developing country, consumers have negligible attitude and low perceived value of green products. Hence, no significant relationship has been found between attitude, perceived value, and green products.

### **Keywords:**

Attitude, Consumers, Green products, Perceived value.

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## Introduction

The evolution of industry and business has given rise to a number of facilities and conveniences for mankind. This evolution has gone to such an extent that the world has become a global village with interconnectivity of businesses taking place across the globe. Although globalization has benefited humanity by paving the way for business to be done faster, more informed, and results oriented, multifaceted adversaries have also sprouted. One of the adversaries is the degradation of natural resources due to increased industrial activity. It is the primary concern of governments and corporations alike to curb such industrial and business practices which are becoming a cause of depletion of natural resources and at the same time to replace existing unwholesome business processes with environmentally friendly practices beneficial for the environment and human resource (Peattie, 1999).

As part of this concern, one of the earliest efforts was to introduce products which were supposed to be environmentally friendlier (recycled materials, non-toxic ingredients) and had utilitarian status for consumers (D'Souza *et al.*, 2006). Considering the benefits of green products, marketers are persistently transforming conventional making of products into invulnerable ways like adoption of recycled material and the use of organic substances in the manufacturing process. Developing countries still lag behind in the phenomenon but follow an increased pace of such practices internationally. What makes acquiring such practices out of reach is inertia possibly due to lack of knowledge, income, and the perceived cost associated with such products. Here, initiatives can be taken by the governments and organizations to develop a state of readiness between employees and end users to become proenvironmental. Special works and programs have been developed by international bodies like United Nation Environmental Programs (UNEP, 2009); Codes and Standards for product labeling, and recycling Strategies at the government level, Company strategies in terms of Corporate Social Responsibility (CSR), and adoption of recycling behavior by the households during

shopping and consumption.

According to the survey of OECD (2008b), it is forecasted that by 2030 a more environmental decline will happen due to increased air, road, and industrial pollution related to the congestion of commercial activities. In this regard, it is time to introduce and implement programs for environmental standards and alternate energy resources, both renewable and non-renewable resources. Since the concern of all such movements is to put production and consumption practices in the way of sustainability, the authorities should make the manufacturing concerns realized to make the process of manufacturing green; having recycled content with low toxicity and at the same time biodegradable, eventually improving sustainability and consumer behavior (Tukker, 2006). With regard to the consumers, product-labeling strategies, education of consumers towards green purchase, and marketing green products can be vital for modifying consumer behavior. All these strategies for green purchase would be helpful when formulating a strong perceived value for consumers.

## **Literature Review**

Understanding attitudes can help organizations better assess how consumers view green products and the consumers' willingness to purchase green products. Attitude refers to individuals' state of readiness backed by their respective experiences and influences in the adoption of objects (Allport, 1935). Also, individual's attitude towards any object is based on the knowledge he or she has acquired through certain sources (family, social, cultural, global) which is coupled with the actions of engagement. The next question that comes to mind is the attitude formation which is measurable through surveys and modifiable through marketing programs. The marketing programs and promotional tactics should aim at addressing the cognitive and emotional components of consumers' attitude. However, due to consumers' allegiance, loyalty, and particularly the income factors, they are not that compliant to be convinced; hence, a gradual persuasion approach should be followed (Moore, 2003). This

argument is proven by the fact that the inhabitants of developed countries have a better understanding and support for green products than those in the developing countries.

Perceived value refers to the value of a product to be perceived by consumers in the form of benefits and costs consumers expect to experience (Zeithaml, 1988). According to this definition, perceived value is considered as a uni-dimensional concept. In addition to the stated concept of value, a multi-dimensional approach has also been promoted (Mathwick *et al.*, 2001, 2002). Uni-dimensional approach only implies that the value may be drawn from the consumer's experience of using a product, while the multi-dimensional aspect considers inner components of product i.e. quality, reliability, durability, service, etc. Besides, Pura, 2005 embraced value in behavioral context where monetary, convenience, social, emotional, conditional, and epistemic aspects contribute to forming a perceived value of products. Since all the stated factors are completely different in the two worlds, developed and developing; thus, many of green products are thought to be costly by the consumers. This refers to the perceived cost which is derived through perceived value of products from consumers' perspective. Consumers think that in comparison to benefits, green products have higher purchase and usage costs. Eighty Nine percent of Indians are ready to spend a little more on green products by knowing their benefits. Approximately, 91 percent Australians, being pro ecological, perceive green products as comparatively costly to non-green products. The same perception is held by French consumers (Cohn & Wolfe, 2011). One study indicated that in developing countries, customer perceived value is found to be at a lower level than expected, and it has no significant impact on consumers' attitude towards green purchase (Hamid *et al.*, 2012). One way to raise consumers' perceived value should be highlighting unique selling propositions of green products and creating a tradeoff between benefits and costs associated with such products. Consumers perceiving a bare minimum tradeoff would better start favoring products (Moliner *et al.*, 2007). The other very

workable way of attitude formation would be the structural change in awareness programs like using less water during washing activities (Barr *et al.*, 2005) and acquisition of reusable materials.

In spite of constructive efforts in this field, no practical gains have yet been measured in terms of green products favoring attitude. On the other hand, considering an ever deteriorating environmental conditions of the world, the concern has concrete range for researchers to strive for a safe and conserved environment (McCarty & Shrum, 2001). The present paper attempts to identify a framework where consumers' attitude towards green purchase, based on their perceived values, can be assessed and furthermore fortify the actions of organizations in favor of attitude formation for green products.

### **Research Objectives**

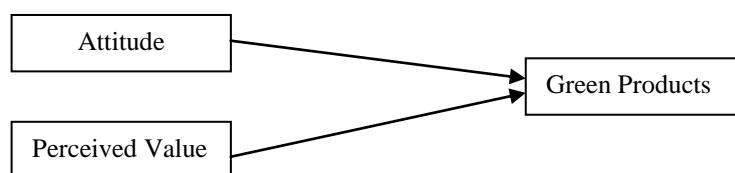
- To investigate the relationship between attitude, perceived value, and green products.
- To assess whether attitude and perceived value have some significant inter relationship.

### **Research Hypothesis**

**H<sub>1</sub>:** Green products are more likely to be purchased when there is a positive attitude.

**H<sub>2</sub>:** Higher perceived value of green products would ensure that they are indeed purchased.

### **Conceptual Framework**



**Fig.1.** Adapted from Chan (2001),  
Determinants of Chinese' Consumers' green purchase behavior

## **Research Methodology**

### **Sampling Procedure**

The present study intends to find a relationship between consumers perceived value, attitude, and green products. The stated variables framed in a questionnaire have been distributed to a sample of three hundred people who are employees of semi government and multinational organizations across two cities.

Non-probability purposive sampling was done as 300 people were supposed to be knowledgeable about the issue selected from semi government and multinational organizations across two cities of Pakistan. Out of these, 280 people responded to the questionnaire. The sample comprised both male and female respondents at the age of 21 to 70, having diverse levels of education ranging from undergraduate to PhD. The number of male and female respondents was 156 and 124, respectively. All the respondents were paid a personal visit where they were guided on how to fill the questionnaires and some of the relevant terminologies were explained to them.

### **Measurement Tool**

Since the nature of the study was attitude analysis, previous studies on green purchase and attitudes were consulted and the tool was adopted from those studies. The independent variables as perceived value and attitude were measured using some items from questionnaires developed by Tilikidou *et al.* (2006), Laroche *et al.* (2001), Nittala, (2011), Tanner *et al.* (2003), Roberts (1996), and Kim *et al.* (2005), respectively. A five-point Likert scale, ranging from 'strongly agree' to 'strongly disagree', was used to elicit the responses.

### **Statistical Analysis**

Having collected the data, SPSS version 16 was used for analysis and interpretation. Various tests like Correlation Coefficient, Independent Sample t-test, one-way ANOVA, and Regression were employed. Correlation was applied to assess whether there was a significant relationship between Ecological Awareness and Attitude towards Green Purchase. Independent Sample *t-test* was employed to analyze

differences in attitudes between male and female participants. ANOVA was used to analyze attitude with respect to age groups and levels of education.

### Data Reliability

**Table 1. Alpha Reliability of Variables**

Variables	Cronbach Alpha
Attitude towards Green Product	0.62
Perceived Value	0.65
Green Products	0.65

### Results

According to the statistical findings of the study undertaken, the presumed statements ( $H_1, H_2$ ) were supported. The research presumed that there is a relationship between attitude, perceived value, and green products. However, the results in the following table indicate that there is no relationship between the stated variables.

In Table 2, the correlation matrix assesses the degree of association between attitude, perceived value, and green products. The results show that regarding Green Products and Attitude, the value of Pearson Correlation is -0.050 which means that there is no significant correlation between these two variables. The p value ( $0.409 > \alpha (0.05)$ ) implies that there is no relationship between Green Products and Attitude. The null hypothesis is therefore accepted.

**Table 2. Correlation Matrix**

Correlations	Green Products	Attitude	Perceived Value
Green Products, Pearson Correlation	1		
Sig.(2-tailed)			
Attitude, Pearson Correlation	-0.050	1	
Sig. (2-tailed)	0.409		
Perceived Val, Pearson Correlation	0.014	0.025	1
Sig. (2-tailed)	0.809	0.678	

Correlation is significant at the 0.01 level (2-tailed).      No of Res: 300

Source: Field Data

The Correlation value between Perceived Value and Attitude is

0.025 indicating that there is no significant correlation between Perceived Value and Attitude. The p value ( $0.678 > \alpha (0.05)$ ) is too high to conclude with confidence that a relationship is observed between these two variables. Therefore, the null hypothesis is accepted. Similarly, no significant relationship is observed between the two independent variables, i.e. Attitude and Perceived Value.

### **Independent Sample *t*-test**

Independent Sample *t*-test in Table 3 is used to estimate the difference in the level of attitude and perceived value between male and female employees at 0.05 significance level. The result of *t*-test indicates that there is no significant difference among the responses of the two groups. The average value of male group (2.865) is almost equal to that of female group (2.848), indicating that both groups have not responded in favor of green products. The P value 0.801 is also  $> \alpha (0.05)$  which is too high to conclude that any one gender group has a stronger attitude towards green purchase.

**Table 3. Analysis of Attitude and Perceived Value between male and female employees  
(independent sample *t*-test)**

Group	Mean	StdDev	P-Value
Attitude Male	2.865	0.5584	0.801
Perceived Val.Female	2.848	0.5590	

Source: Field Data

### **Analysis of Variance (ANOVA)**

One – way ANOVA in Table 4 is applied to assess whether there was any mean difference in attitude and perceived value across two demographic characteristics. The result indicates that there is no significant difference in attitude and perceived value with respect to age and education among different groups as  $P > 0.05$ . It is pertinent to mention that the mean with respect to age and education is almost 3 which means that respondents irrespective of their age and education are of the same view about green products, i.e., they have no inclination towards buying green products, and there is also no variation in response among the groups. The F value in this case is less than the critical value of F; hence, Null hypothesis is to be

accepted. The means are not significantly different and no effects have been discovered. The results are not significant.

**Table 4. Analysis of Variance of Attitude and Perceived Value across demographics, i.e. Age and Education**

Groups	Mean	F	Sig.
Age			
21-30	2.869	0.889	0.471
31-40	2.912		
41-50	2.784		
51-60	2.704		
61-70	2.950		
<b>Total</b>	<b>2.858</b>		
Education			
Under Grad	2.930	1.511	0.222
Masters'	2.853		
MS/PhD	2.754		
<b>Total</b>	<b>2.858</b>		

Source: Field Data

## Regression

**Table 5. Perceived Value and Attitude with respect to Green Purchase**

Model Summary					
Model	R	R Square	Adjusted R Square	Sig.	Standardized Coefficients
Beta					
1	0.045 <sup>a</sup>	0.002	-0.002	0.454	0.045
2	0.025 <sup>a</sup>	0.001	-0.003	0.678	0.025

a. Predictors: (Constant), Perceived value & Attitude

Source: Field Data

The value of R Square is 0.002. The adjusted R Square value is -0.002, showing that Perceived value in this model accounts for 0.2% variance in the dependent variable. It is clear that the perceived value is also not a satisfactory predictor of readiness for green products. Similarly for attitude, the value of R Square is 0.001. The adjusted R Square value is -0.003, showing that attitude in this model accounts

for 0.3% variance in the dependent variable. It can be inferred that attitude is not a good predictor of readiness for green purchase.

## **Discussion**

The present research hypothesized that attitude and perceived value have a relationship with green products. The hypothesis followed the natural course of logic used by previous research, which presumed that consumers with positive attitude and perceived value are more likely to be inclined towards green products. The respondents did not display any inclination for green products.

A similar study in China produced the same kind of results. The study revealed that people in China, despite knowing the importance of green products, are not ready to develop a considerable level of involvement in such products (Chan, 2001). One of the main factors was the higher perceived cost of green products. On the contrary, Bang *et al.* (2000) are of the view that consumers in the developed world can even pay a premium for green products and their intentions strongly support them to act so. Moorthy and Srinivasan (1995) recommended marketers that price rebates are ideal on green products when they are being purchased by consumers. This is one of the strategies which could possibly form positive attitude and raise consumers' perceived value of green products. This study is analogous to a study conducted by Ahmed and Juhdi, (2005) in which they found that regulatory measures by the governments do not even support consumers' attitude favoring green products.

## **Conclusion**

The study concludes that in the given context, consumers' attitude towards green products is found to be weak. Green products are not among consumers' priorities. As green products are probably considered costly, their perceived value is low; therefore consumers have not shown a significant amount of confidence. A noteworthy point here is that consumers with higher levels of education and income have no interest in purchasing green products, and this might

be due to country's low compatibility with international development, particularly in the field of ecology and some other local economy related constraints. This study indicates that in our society, people are least bothered about environmental upheavals and they are stuck up in their day-to-day living. Thus, no significant relationship has been found between consumers' attitude, perceived value, and green products.

### **Recommendations**

Ever increasing population compression and lack of awareness among masses is giving rise to deterioration of the environment and depletion of resources such as air, water, and soil. This study indicates that in our society, people, educated or not, do not positively weigh green products as important and are not inclined towards building a better ecological understanding. In order to cope with the situation, Government and companies should corroborate activities in favor of the environment, like eco labeling, recycling by the manufacturing concerns of industries, pro environmental advertisements on media, sales promotional strategies to raise consumers' awareness. The environment as a subject should be introduced and included in curriculum at primary and secondary schools level.

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