

## Determinants of Consumer Awareness of Green Products: A Study of Customers of Super Markets

Anusua Saha

Tomas Bata University, Zlín, Faculty of Management and Economics, anusua08@yahoo.com

Ravindra Hewa Kuruppuge

Tomas Bata University, Zlín, Faculty of Management and Economics, kuruppuge@yahoo.com

Doi:10.5901/mjss.2016.v7n6p349

### Abstract

*Conceptualization and research on transitions to a sustainable production and consumption have emerged as a new global challenge. Yet, very limited studies have conceptualized on consumers' awareness about green products. Filling this gap, the objective of this paper is to identify determinants of consumer's awareness on sustainable consumption behaviour. Two hypotheses related to social value and environmental concern of consumers over awareness of green products of customers were derived. Using a structured questionnaire, a survey was conducted interviewing 213 consumers who purchase green products from supermarkets in West Bengal in India. Data were analyzed using statistical Z-tests. Accordingly, the analysis proved that social values of consumers are positively co-related with consumer's awareness of green products while environmental concern indicated no relation. That paved the path to determine consumer's awareness of green products in India.*

**Keywords:** consumer awareness, green products, environmental awareness, social value, FMCG market

### 1. Introduction

The term green marketing is identified in different names such as green, environmental and responsible marketing. All these terms imply that there's a collective agreement on the exchange process of keeping the environment as a major point of concern. Although, it's still not clear how the environment benefit quotient is valued with the marketing exchange. It has to be determined that the marketing communication, i.e. the choices and decisions which are made with a clause that it will minimally harm to the environment suffices the actual purpose or not. It clearly states that there is a definite gap in communicating and delivering the going green idea. The reason behind the failure can be outlined to a range of marketing contexts which is in relation to the consumer awareness and the natural environment; marketing strategy (Menon and Menon, 1997) and the interface between policy makers and macro marketing players. (i.e., Kilbourne and Carlson, 2008). Therefore, conceptualization of effective consumption pattern in the event of emerging themes of sustainable development and to create a framework about awareness of consumers of green products would immensely help to maintain responsible consumption and production processes in future.

At the same time, the beginning of the 21st century is reported by a rapid increase of consumer's ecological awareness of products due to the association of consumption's negative impacts in a number of environmental problems such as global warming and pollution (Leonidou et al., 2010; Svensson and Wagner, 2012). Consumers became more oriented in purchasing environmentally sustained products due to above global crisis. The definition and measurements of sustainability concept in current research studies are not stable and disagreements amongst researchers can be seen heavily (Ottaman, 1993). Sustainability in case of products has been defined such as eco-friendly, being environmentalism, social corporate responsibility, being green or green products (OECD, 2009). However, such environmental considerations are barely understood in the literature despite the fact that the notion of sustainability is crucial for achieving a market-orientation (Crittenden et al., 2011; Hult, 2011). Fortunately, consumers are gradually changing their attitude, behaviour and approach in matters of consumption. From 1990s onwards, substantive researches have been undertaken to analyse consumers' buying behaviour of environment friendly products (Davis, 1992; Ottaman, 1993).

However, previous studies have developed theoretical frameworks to explain consumer consumption patterns. Mostly variables such as product or service quality, price of the product, real value of money, consumer interests,

pressure from civil societies and pressure from governments. Most of those studies have looked into variables in against determinants of products. Despite previous conceptualizations about credentials, a very few studies have analyzed consumer awareness of green products in the market. This has really evidence in case of different geographical locations. Accordingly, the objective of this paper is to assess determinant of consumer's awareness of sustainable consumption behaviour. Accordingly, this paper has been arranged in sequential pattern: Theoretical framework and hypotheses development, research design, data analysis with discussion, and finally, conclusion.

## **2. Theoretical Framework and Hypothesis Development**

Many theories have been developed to explain consumer awareness of green products. Previous studies are evident that several important predictor variables are used to elaborate consumer awareness of green products. Two such main dimensions are social value and environmental knowledge. This study considers these two constructs to develop a perceived value scale to assess consumer awareness for sustainable consumption behaviour across consumer segment in West Bengal.

### *2.1 Social value and consumer's awareness of green products*

Social value is defined as specific utility or behaviour derived from an unconventional association with a social group of people who become specific in terms of precise aspects (Lin & Huang, 2012). This behaviour can be further identified as subjective based on the concern which shows that at adapting and approving the style of behaviour. This behaviour lead to personal perceptions of what peers think an individual should do (Arvola et al., 2008). Accordingly, consumers tend to show how they choose to acquire green products as per societal forces, not only that they are required to know about them in order to associate and represent the society they prefer. This happens as consumers wish to avoid negative outcomes from the society not being aware of the green concept, which has become so prominent in the society they live (Aqueveque, 2006). Moreover, consumers are keen to pursue more information sources on green products to make the society happy (Kalafatis et al, 1999). Furthermore, in a competitive market context where consumers are more rational, Lane and Scott (2007) mentioned that consumers connect societal identification with individual society member's social knowledge structure. They further proposed that identification and someone's knowledge of being part of a group are relatively making the society and individual become more tighten to each other. Concerning knowledge of different brand like green products, Keller (2003) mentioned that it is important to get an aggregate conception of different dimensions of brand which consumers may be impacted. Accordingly, the following hypothesis is set for this study.

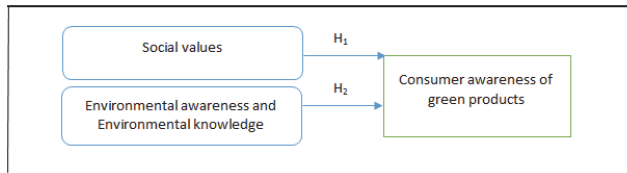
H1: Social value positively affects consumer's awareness of green products

### *2.2 Environmental concern and consumer awareness of green products*

Environmental value of consumers can be defined as the general orientation of individual consumers and their level of concern toward environmental issues (Choi and Kim, 2005). Consumers' attitudes towards acting in environmentally concerned ways are a good predictor to measure the environment value of consumers (Minton and Rose, 1997). The level of consumers concern over environment depends on many factors like cultural, educational, political, legal and economics. However, high levels of environmental activism are strongly linked to values that people rate as being of great importance in their lives (Gilg et al., 2005). In that sense, consumers are forced to educate or aware of the green products (Choi & Kim, 2005). An awareness of various environmental problems and the consequences happening in various parts of world has enabled consumers to access data in various sources (Tilikidou, I & Delistavrou, A. 2008). Consumers' awareness in green products has led consumers' behaviour to being concerned with green products, educate on green concepts, teach about environmentally sustainable products to others formally and informally and to make personal behaviour more environmentally friendly (Laroche et al, 2001). Therefore, it is clear that knowledge about ecological issues is a significant predictor of environmentally friendly behaviour and it has even been found that individuals who are highly knowledgeable about environmental issues are more willing to pay a premium price for green products. Accordingly, the following hypothesis is derived for this study.

H2: The environmental concern has a positive correlation to consumer awareness of green products

Based on the theoretical and hypothesis development, Figure 01 shows the conceptual framework for this study.



**Figure 01.** Conceptual framework

**Source:** Author's impression based on literature

### 3. Methodology

The study is basically explanatory in nature. The focus of this research is to know about consumers' awareness of green products which are available in supermarkets of West Bengal in India. The data employed in this paper come from a survey conducted among consumers in the three urban areas in West Bengal: Kolkata (being the capital), Durgapur and Bakura. Mainly, a structured questionnaire, which was developed by previous researchers based on validated questions, was used to collect data. Using convenient sampling, 213 consumers were selected from these three urban areas to participate in the survey as these areas are representatives of the major urban consumer market in West Bengal. Primary as well as secondary data from the supermarket were collected in the collection process of this study. Accordingly, primary survey was conducted in August and December 2014 targeting customers who purchased green products from supermarkets. Covering all the measurements of the study, a comprehensive questionnaire was given individually to consumers who bought green products which come under fast moving consumer goods (FMCG) from the supermarket. 13 supermarkets out of 31 main supermarkets in West Bengal were selected randomly. Consumers (respondents) were selected using systematic random sampling technique in each supermarket. It was assured that at least 12 respondents were taken randomly from each supermarket. After the tabulation of data, a normal Z-test was used to analyse the relationship variables explained in the conceptual framework.

### 4. Results and Discussion

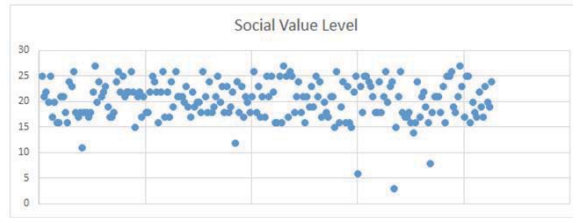
#### 4.1 Social value and consumer awareness of green products

Table 1 explains Social Value concern of consumers in relation to awareness of green products. All respondents of the survey consisted with consumers who already bought green products in their last shopping in supermarkets knowingly or unknowingly. Accordingly, the analysis of social value indicates that almost above 70 percent of consumers are concerned about social value. In the same time, the average level of social value is reported as 20.3 (with a standard deviation value of 3.71) in which 28 is reported as the maximum value. Figure 2 also clearly indicates the spread of level of social value of consumers. However, at the significance level of 0.05, we can test if the Social value is positively correlated with awareness of green products of consumers, i.e. if  $Z < 1.645$ , then  $H_0$  is accepted, in West Bengal in India. It means the social value plays an important role in consumer awareness. With the result of Z-test (normal distribution) curve, a Z value equal to 2.82 was obtained. Because Z is not less than 1.645, the null hypothesis is rejected and our alternative hypotheses is accepted, i.e., consumers are socially aware and buying green products is driven by their awareness.

**Table 1:** Calculation of Social Value (SV) through Normal Distribution

Obtained mean	20.319
Max SV Lev	28
SVL 70% (Pass)	19.6
Standard Dev	3.71908
N	213
Alpha	0.05
Z	2.8224

Since  $Z > 1.645$ ;  $H_0$  is rejected



**Figure 2:** Social Value Level (SVL) of consumers of Indian consumers (West Bengal).

**Source:** Authors' research

#### 4.2 Environmental concern and consumer awareness of green products

Table 2 explains environmental concern of consumers in relation to awareness of green products. All respondents of the survey consisted with consumers who already bought the green products in their last shopping in supermarkets. Accordingly, the analysis of environmental concern indicates that almost above 70 percent of consumers concern about the environment. In the same time, the average level of environment concern is reported as 14.18 (with a standard deviation value of 2.12) in which 20 is reported as the maximum value. Figure 2 also clearly indicates the spread of level of environmental concern of consumers. However, at the significance level of 0.05, it can be tested if environmental concern is positively correlated with awareness of green products of consumers, i.e. if the  $Z < 1.645$ ,  $H_0$  is accepted, in West Bengal in India.

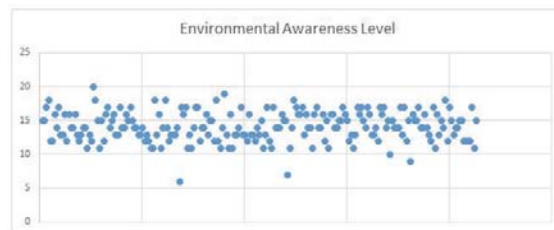
As per the result, since the value of Z is equal to 1.2584 which is less than 1.645, our null hypothesis is accepted, meaning that the consumers are not environmentally aware. Therefore, consumer awareness towards green products in India does not have a significant relationship with the environmental awareness among the consumers.

Practically, this finding brings interesting implications. The producers of green items would be much interested to know about determinants of consumer's awareness about green products. Results indicated that consumers concern over environment has no relation to awareness of green products. Accordingly, this knowledge can be used when and where possible in case of business strategy, processes and systems and specifically advertising are set by the producers. At the same time, supermarkets also, as intermediary bodies of the selling process of green items, can use this knowledge in their marketing strategies. They can also consider about the levels and determinants of awareness of green products of their customer base. Ultimately, researchers of this field would immensely get the benefit out of the finding of this study for their research studies as well.

**Table 2:** Calculation of Environmental Awareness Value (EAV) through Normal Distribution

Obtained mean	14.18309
Max Environmental Level (EAL)	20
EAL 70% (Pass)	14
Standard Dev.	2.123386
N	213
Alpha	0.05
Z	1.25847

Since  $Z < 1.645$ ;  $H_0$  is rejected



**Figure 3:** Environmental Awareness Level (EAL) of consumers of Indian consumers in West Bengal. Source: Authors' research

## 5. Conclusion

In the analysis of determinant of consumer's awareness of green products, two variable, social value and environmental concern were considered in this study. The analysis indicated that social values of customers who consume green products have positive relation to their awareness of green products. However, environmental concern of consumers had shown no relation to awareness of green products in West Bengal in India. Therefore, social values are identified as one of the strong determinants of consumer awareness of green products in India.

Yet, this study carries some limitations as well. Sample size of any research incurs limitations. This research concentrates only on customers of super markets in India which have both organic and non-organic products. At the same time, this study intends to assess the knowledge level of their green products. Therefore, the interpretations of this study will be limited to customers who purchase their products at supermarkets, not being inclusive at all of environmentally conscious consumers so that we can get a more concrete picture of the level of consumer awareness while buying the kind of the product they choose. At the same time, this study is region specific. This study is conducted with reference to West Bengal, there lies a limitation of the awareness among the consumers which might be more or may be less compared to other parts of India. Moreover, the conceptual framework consisted only of two main two factors, namely social value and environmental concern of consumers, which are related to consumer's awareness of green products. There might be other factors which might affect the consumer behavior, but our conceptual framework does adequately addressed them. Removing above limitations would open the path for further research.

This study brings several managerial implications as well. Nowadays, everyone is getting environmentally inclined towards green practices. Considering from the consumer point of view, we have studied the consumer awareness of green products in a generalized way. This research will help FMCG companies to get the insight into consumer awareness about green products; their perception and the prospect and significance of green marketing in India for future. At the same time, reviewing knowledge level of consumers who consume green products in specific geographical regions will immensely help to policy makers, suppliers, producers, marketers and other relevant parties to stimulate the demand. Moreover, reviewing knowledge level of consumers who consume green products over consumers who consume non-green products will provide a platform for future scholars to carry out their studies based on the finding of this study.

## References

- Arvola, A., Vassallo, M., Dean, M., et al., (2008). Predicting intentions to purchase organic food: the role of affective and moral attitudes in the theory of planned behaviour. *Appetite*, 50 (3), 443-454.
- Aqueveque, C., (2006). Extrinsic cues and perceived risk: the influence of consumption situation. *Journal of Consumer Marketing*, 23 (5), 237-247
- Cooper, J.C. (2002). Flexible functional form estimation of willingness to pay using dichotomous choice data'. *Journal of Environmental Economics and Management*, 43 (2): 267-279.
- Choi, M., Kim, Y. (2005). Antecedents of green purchase behavior: an examination of collectivism, environmental concern, and PCE. *Advances in Consumer Research*, 32 (1), 592-599.
- Davis, Joel, J., (1992). Ethics and Green marketing. *J. Bus. Ethics*, 11 (2), 81-87
- Kilbourne, W., Pickett, G., (2008). How materialism affects environmental beliefs, concern and environmentally responsible behaviour. *J. Bus. Res.*, 61, 885-893.
- Laroche, M., Bergeron, J & Barbaro-forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6): 503-520
- Lane, V. R. and Scott, S. G. (2007). The neural network model of organizational identification. *Organizational Behavior and Human Decision Processes*, 104 (2): 175 – 192
- Lin P. C. & Huang Y. H. (2012). The influence factors on choice behavior regarding green products based on the theory of consumption values, *Journal of Cleaner Production*, 22, 11-18
- Long, M., Schiffman, L., (2000). Consumption values and relationships: segmenting the market for frequency programs. *J. Consum. Mark.*, 17 (3), 214e232.
- Malhotra, G., Maheshwari, A., (2011). Green marketing e a study on Indian youth. *Int. J. Manag. Strategy*, 2 (3).
- Kalafatis, S., Pollard, M., East, R., Tsogas, M. (1999). Green marketing and Ajzen's theory of planned behaviour: a cross-market examination. *Journal of Consumer Marketing*, 16 (5), 441-460
- Keller, K. L. (2003) Brand synthesis: The multidimensionality of brand knowledge. *Journal of Consumer Research*, 29 (4): 595 – 600
- Menon A, Menon A. (1997). Enviropreneurial marketing strategy: the emergence of corporate environmentalism as market strategy. *J. Mark.* 61 (1):51-67.
- Minton, A., Rose, R. (1997). The effects of environmental concern on environmentally friendly consumer behavior: an exploratory study. *Journal of Business Research*, 40 (1), 37-48.

- Ohtomo, S., Hirose, Y., (2007). The dual-process of reactive and intentional decisionmaking involved in eco- friendly behaviour. *J. Environ. Psychol.*, 27 (2), 117-125.
- Ottaman, J.A., (1993). *Green Marketing: Challenges and Opportunities*. NTC, Lincolnwood
- Schlegelmilch, B.B., Bohlen, G.M., Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *Eur. J. Mark.*, 30 (5), 35-55.
- Sharma, S.C., Bagoria, H. (2012). Green marketing: a Gimmick or the Real Deal? *Int. J. Res. Finance Mark.*, 2 (2), 406-414.
- Sweeney, J., Soutar, G., (2001). Consumer perceived value: the development of a multiple item scale. *J. Retail.*, 77 (2), 203-220.
- Tilikidou, I & Delistavrou, a. (2008). Types and influential factors of consumers' nonpurchasing ecological behaviors. *Business Strategy and the Environment*, 17(1): 61-76.