



Review of the green consumers' perception formation about the environmentally safe products

AUTHOR(S)

C D`Souza, P Lamb, Mehdi Taghian

PUBLICATION DATE

01-01-2004

HANDLE

[10536/DRO/DU:30009664](https://hdl.handle.net/10536/DRO/DU:30009664)

Downloaded from Deakin University's Figshare repository

Deakin University CRICOS Provider Code: 00113B

A Review of the Green Customers' Perception Formation about Environmentally Safe Products

Clare D'Souza, La Trobe University, Melbourne

Peter Lamb, La Trobe University, Albury-Wodonga

Mehdi Taghian, Deakin University, Melbourne

Abstract

This study examines the influence of various factors on the green purchase intention of customers in Australia. A conceptual model has been proposed and was subjected to empirical verification with the use of a survey of metropolitan and regional households in Victoria. The results indicate that corporate perception with respect of companies not placing higher priority on reducing pollution than increasing profitability was the significant predictor of customers' negative overall perception toward environmentally safe products. The only positive contribution to customers' perceptions was their past experience with the product. Other factors including the perception of environmentally safe products, product labels, and regulatory protection did not appear to influence customers' perceptions. The results also suggest that customers are not tolerant of lower quality and higher prices of environmentally safe products. The present findings provide an understanding of the antecedents of green purchasing and highlight that green customers rely more on personal experience with the product rather than the information provided by the marketer.

Keywords: Green 1, Perception 2, Environment 3, Safe 4, Product 5, Labels 6, Price 7, Price 8, Quality 9.

Introduction

The growing global public concern for preservation of the environment has given rise to a perception that customer purchases may be somewhat influenced by their attitude toward environmentally safe products. This perception has motivated some companies to introduce changes in both the quality of their products and their production processes to meet their customers' sentiments. Despite these changes, the underlying assumptions for the extent of customers' perception towards environmentally safe products have not been empirically investigated in Australia.

Environmental concerns that permeated the market place in the early eighties had stimulated researchers to profile corporations that demonstrated environmental concerns and characterised them as being socially responsible (Wasik, 1996; Sheth and Parvartiyar, 1995). Some researchers have suggested that this environmental responsiveness would help organisations to remain competitive and even increase market share and profitability (Saunders and McGovern, 1993; Chan, 2001). These suggestions resulted in an influx of environmentally safe consumer products. Yet, few studies have investigated the magnitude of household consumption and their contribution to environmental pollution. McGougall (1993) contends that around 30-40% of environmental degradation has been brought about by consumption activities of private households (Grunert, 1993). Therefore, the understanding of

customers' overall perception formation (Koch, 2002) about environmentally safe products and their intentions (Malhotra and McCort, 2001; Lickliter, 2000) to purchase them would be fundamental in the process of formulating the appropriate marketing strategies in the green market segment. Consequently, marketing strategies have been adopted to modify products and to communicate to the customer, through the media and the use of product labels, the claim of environmentally safe product attributes in order to assist with their informed product choices. However, in some cases, customers may be generally unaware of regulations or the implications that permit businesses to place such labels on their products (Iyer, 1999). Therefore, concern over misrepresentation about products' environmental attributes, not being very transparent, truthful, discriminatory, or being based on sound and substantiated scientific evidence, and misleading were some of the customer responses found by researchers with respect to product labels (Gray-Lee, Scammon and Mayer, 1994; Polonsky, Bailey, Baker and Basche, 1998). It may, therefore, be argued that perhaps customer skepticism about questionable product claims may be the result of some inadequate, inaccurate, and even difficult to comprehend information provided on product labels.

While it is possible that green appeals have been powerful in changing organisational directions, it has been suggested that the use of demographic and psychographic variables in isolation from the interaction of other environmental influences may be inadequate predictors of customers' green products preferences (Van Liere and Dunlap, 1980; Bohlen, Schlegelmilch and Diamantopolous, 1993). An important aspect of the demand function for environmentally safe products would be the trade-off in product attributes that customers might use when making product choices. As it appears price, quality, convenience and the overall value of the product are important buying criteria (Roberts, 1996). At the same time, customers have displayed a willingness to purchase green products if they do not have to compromise on product performance, convenience and price (Berger, 1993; D'Astous, Sadrudin, and Houde, 1997).

Based on the foregoing literature findings it is being suggested that the customers' mind set with regards to their extent of concerns about the environment may be reflected in a general measure of "perception about environmentally safe products". This perception, in part, may be formed consequent to the interaction (Lickliter, 2000) of the following determining factors:

- a. Product perception
Customers' perception about environmentally safe products, in terms of price and quality.
- b. Regulatory protection
Customers' beliefs in the role and responsibility of government in legislating and managing the concerns of the citizens about environmental issues.
- c. Corporate perception
Customers' perception about the corporate strategy of placing higher priority on reducing environmental pollution than maximising profit.
- d. Product labels
Availability, accuracy, and understandability of product labels in assisting customers' selection of products, and the extent to which these labels are used.

This research attempts to test the following propositions:

1. There is a positive relationship between customers' overall perception about environmentally safe products and measures of intention to purchase them even if they

were somewhat (a) more expensive and (2) lower in quality, in comparison to other alternatives.

2. There are perceptive moderators that differently influence the extent and characteristics of customers' perception about green products.

Methodology

The random sample for this study was derived from the residential telephone directory of Victoria including both metropolitan and regional areas. Questionnaires were administered over a weekend using Quantum Research data collection services. The respondents were the main buyers of food from supermarkets irrespective of gender. A total of 155 questionnaires were completed and were used for data analysis.

The research instrument used in this study was structured based on prior qualitative research and the literature review. It was pre-tested and modified to include variables contributing to the customers' formation of the overall perception about environmentally safe products. The resulting instrument included items to measure customers' product perception, perception of government responsibility in regulating and protecting the environment, functionality of product labels, and perceptions of corporate responsibilities, as well as customers' purchase intentions. All measurements were subjective assessments by the respondents using a seven-point Likert-type scale (Wrenn, 1997). The sample selection was based on random telephone dialing and is expected to be representative of the supermarket shoppers' population. Non-response rate has not been reported as the automatic telephone dialing would select the next call to replace the unsuccessful calls.

The selected sample's main characteristics were female (79%), 35-54 years old (49%), married (65%) with children (47%), secondary school educated (60%), and employed (50%).

The data were analysed using both descriptive measures and exploratory factor analysis to identify and validate the items contributing to each component in the model.

AMOS structural modeling was used to estimate the measure of respondents' overall perception of environmentally safe products and their intention to purchase (Figure 1).

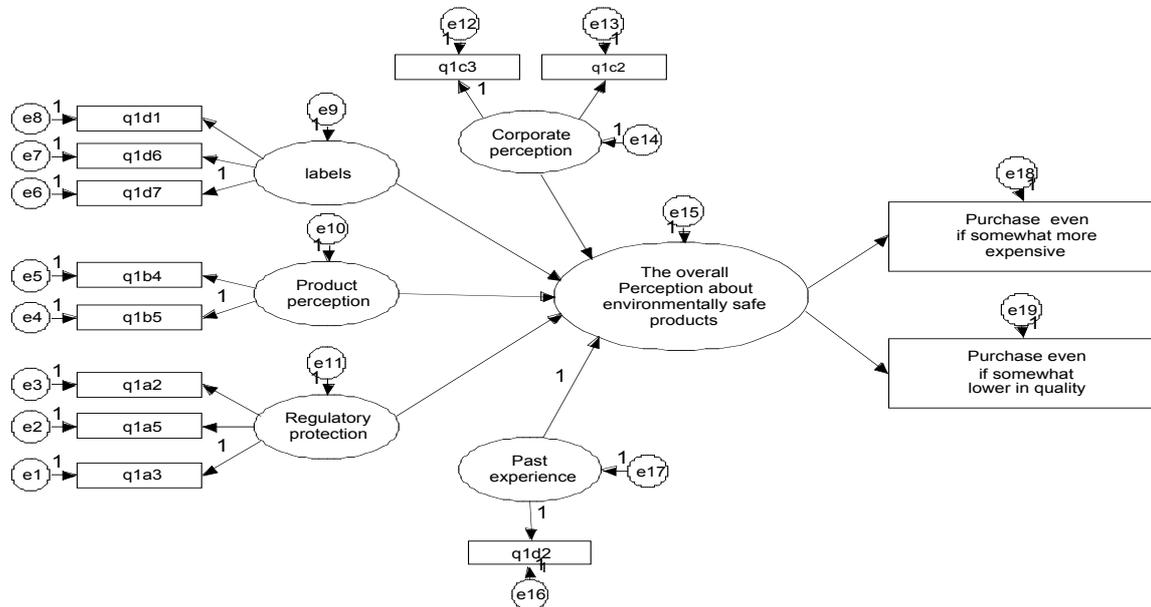
Results

The results indicate that:

- a. The components of the model collectively account for 84 per cent of the variance of the construct of perception about environmentally safe products.
- b. The contribution of corporate perception to the construct of perception about environmentally safe products is negative ($R = -0.80$, $p < .01$).
- c. The contribution of past experience to the construct of perception about environmentally safe products is positive ($R = 0.40$, $p < .01$).
- d. The influence of perception about environmentally safe products on purchase even if the product is more expensive ($R = -0.78$, $p < .01$) is negative and stronger than its negative influence on purchase even if product is of lower quality ($R = -0.39$, $p < .05$).

- e. Product perception ($R = -.04, p >.05$), Product labels ($R = .17, p >.05$), and regulatory protection ($R = .10, p >.05$), appear to have no significant contribution to the overall perception of environmentally safe products.

Figure 1: Conceptual model of customers' perception formation of environmentally safe products



Model fit measures: $\chi^2 = 66.05, df = 58, p >.05, CMIN/df = 1.14, RMR = 0.26, GFI = 0.94, AGFI = 0.91, TLI = 0.98, CFI = 0.99, \text{ and } RMSEA = 0.03$ (Homburg and Rudolph, 2001; Garver and Mentzer, 2000).

Discussion

There appears to be a fundamental skepticism on the part of the customer about environmentally safe products. This attitude appears to be based on a general perception that corporate policies will not support lower profitability in implementing environmentally safe product strategies. At the same time, respondents did not consider that the current government legislation is adequately protecting the environment. However, the government has not been identified as having the ultimate responsibility for safeguarding the environment. That responsibility is assumed to be more for companies and that corporate culture should change toward the protection of the environment rather than maximisation of profit even if it is at the expense of risking jobs. Additionally, the respondents' appear to rely on their past experience in the purchase of environmentally safe products. This, arguably, offers an opportunity to management to formulate the strategy of providing for customer trial and positive experience with the product in motivating purchase. At the same time, although customers read product labels, they do not seem to consider the information given on labels to be accurate and/or easy to understand.

The results also indicate that respondents are not likely to give preference to environmentally safe products if they are of lower quality and higher prices in comparison to alternative

products. Consequently, it may be argued that there is an expectation on the part of customers that all products offered should be environmentally safe without a need to sacrifice quality and/or having to pay higher prices for the privilege.

Managerial Implications

Customers appear to expect self-regulation by marketers more strongly than the imposition of control by the government. At the same time, since customers expect all products to be environmentally safe, it is fundamental that this expectation is satisfied without compromising product quality or setting their prices at levels that may be perceived by customers as being higher than the alternative products available. The knowledge of the overall perception formation and its predictors provides management with the facility to identify and implement strategies that may better influence the change of attitude by customers. Management can also benefit from the identification of the types of information required to enable the management of this perception formation, the types and format of information to be provided to the customer, and the credible methods of the presentation of the claim of environmentally safe products to assist the customers' decisions process.

Product labels do not appear to be effectively communicating the information on product safety customers need so they can make purchase decisions. The type and format of information provided would need to be understandable by customers if it is going to benefit them in terms of product selection. This does not generally seem to be the case at the present time. This may require avoiding the use of chemical code names and technology based terms with respect to the environmental safety of the product. A suggestion may be that a part of the product label would be graphically identified and dedicated to the environmental safe aspects of the product, distinct from other mandatory information provided on product labels.

The corporate strategy being suggested based on the findings of this study is that of organisational cultural reorientation toward the unconditional provision of environmentally safe products. In summary, the understanding of the environmentally safe products perception formation, potentially, has a number of applications. The motivations for management to support such a corporate cultural transformation are (1) to build a strong competitive advantage for the product, (2) to develop and project a positive and ethical corporate image, (3) to gain and benefit from the support of the employees, and (4) to meet customers' expectations, improve market share and achieve longer-term profit potentials. In order to minimize or eliminate profit sacrifices in this fundamental change to environmentally safe product corporate culture it would be useful to revisit the effectiveness and efficiency of production and the internal work processes and to review and search for the possibility of achieving a lower cost based operation.

Limitation of the study and suggestions for future research

In this study customers' environmental concerns are manifested in their intentions to purchase rather than in their actual purchase behaviour. These may not always be the same (Schlegelmilch and Bohlen, 1996). Therefore, until the results are generalized through more comprehensive studies they need to be tentatively accepted. This is a cross-sectional study and does not reflect customers' change of perception overtime. Longitudinal studies could be conducted to enable investigation of the resulting variation in the relative strength and

influence of individual predictors to the construct of the overall perception about environmentally safe products overtime. It would also be beneficial to investigate the influence of demographic and cultural influences on the perception formation of customers about environmentally safe products.

References:

Berger, I., 1993. The Relationship between Environmental Attitudes and Behaviour. *Canadian Journal of Marketing Research*. 12, 36-43.

Bohlen, Greg, Schlegelmilch, Bodo, and Diamantopolous, Adamantios, 1993. Measuring Ecological Concern: A Multi-Construct Perspective. *Journal of Marketing Management*. 9(2), 415 – 430.

Chan, R. Y., 2001. Determinants of Chinese Consumers' Green Purchase Behaviour. *Psychology and Marketing*. 18(4), 389-413.

D'Astous, Alain, Gilles, Sadrudin, and Houde, Francois, 1997. Proceedings of the European Marketing Academy Conference. University of Warwick. 287-301.

Garver, Michael S., and Mentzer, John T., 2000. Logistics Research Methods: Employing Structural Equation Modelling to Test for Construct validity. *Journal of Business Logistics*. 20(1), 33-56.

Gray-Lee, Jason, Scammon, Debra, and Mayer, Robert, 1994. Review of Legal Standards for Environmental Marketing Claims. *Journal of Public Policy and Marketing*. 13(1), 155-159.

Grunert, S. C., 1993. Everybody Seems Concerned about the Environment but is this Concern Reflected in Consumers' Food Choice? *European Advances in Consumer Research*. 1, 428-433. Issue is not available.

Homburg, Christian, and Rudolph, Bettina, 2001. Customer Satisfaction in Industrial Markets: Dimensional and Multiple Role Issues. *Journal of Business Research*. 52, 15-33. Issue is not available.

Iyer, G., 1999. Business, Consumers and Sustainable Living in an Interconnected World: A Multilateral Ecocentric Approach. *Journal of Business Ethics*. 20(4), 273-288.

Koch, Jeffrey, 2002. Gender Stereotypes and Citizens' Impressions of House Candidates' Ideological Orientations. *American Journal of Political Science*. 46(2), 453-463.

Lickliter, Robert, 2000. An Ecological Approach to Behavioral Development: Insights from Comparative Psychology. *Ecological Psychology*. 12(4), 320-328.

McGougall, Gordon, 1993. The Green Movement in Canada: Implications for Marketing Strategy. *Journal of International Consumer Marketing*. 5(3), 69-87.

Malhotra, Naresh, and McCort, Daniel, 2001. A cross-cultural comparison of behavioral intention models - Theoretical consideration and an empirical investigation. *International Marketing Review*. 18(3), 235-269.

Polonsky, Michael, Bailey, Judith, Baker, Helen, and Basche, C., 1998. Communicating Environmental Information: Are Marketing Claims on Packaging Misleading? *Journal of Business Ethics*. 17(3), 281-294.

Roberts, J., 1996. Green Consumers in the 1990s: Profile and Implications for Advertising. *Journal of Business Research*. 36(2), 217-231.

Saunders T., and McGovern, L., 1993. *The Bottom Line of Green is Black: Strategies for Creating Profitable and Environmentally Sound Business*. Harper Collins Publishers.

Schlegelmilch, B., And Bohlen, B., 1996. The Link between Green Purchasing Decisions and Measures of Environmental Consciousness. *European Journal of Marketing*. 30(5), 35-55.

Sheth, Jagdish and Parvartiyar, Atoll, 1995. Ecological Imperatives and the Role of Marketing. Cited in Polansky, M., and Mintu-Wilmsatt, Alma. *Environmental Marketing: Strategies, Practice, Theory and Research*. Eds. New York: Haworth Press, 3-20.

Van Liere, Kent, and Dunlap, Riley, 1980. The Social Bases of Environmental Concern: A Review of Hypothesis, Explanations and Empirical Evidence. *Public Opinion Quarterly*. 44, 181-107.

Wasik. J., 1996. *Green Marketing and Management: A Global Perspective*, Blackwell Publishers Ltd. Oxford, UK.

Wrenn, Bruce, 1997. The Market Orientation Construct: Measurement and Scaling Issues. *Journal of Marketing Theory and Practice*. 5(3), 31-54.