

## Concern for Mother Nature. A women's issue?

### Abstract

Some authors claim that concern for the environment is a post-material value, a set of attitudes that appears in affluent consumers who have met their basic and safety needs. This line of reasoning leads to the assumption that consumers in emerging economies should show patterns of buying behavior that are less reflective of environmental concerns than those of developed country consumers. However, evidence suggests that consumers in developing countries such as in Latin America give environmental issues similar consideration as consumers in economies like the United States (Schultz and Zelezny, 1999). In addition, the literature clearly documents a gender effect reflected in women being more prone than men to express concern about the impact of their consumption patterns on the environment (Berenger, Corraliza and Martin, 2005).

This study aims at exploring whether concern about the impact of consumption on the environment results in environmentally-friendly attitudes and whether gender plays a role in relation to these attitudes among Mexican consumers, the Mexican economy being considered as an emerging economy.

Key words: environmentally-friendly attitudes, gender

### Introduction

Increasing evidence points to consumers' concern about the impact of their consumption patterns on the environment. There is also growing concern among public policy makers, marketers and academics to understand the underlying mechanisms through which consumers make decisions about socially or environmentally responsible

Concern for Mother Nature. A women's issue?

responses (Schrader and Thøgersen, 2011, Murphy, 2010; Gonzalez and Merino, 2006). The *Journal of Consumer Policy*, *Journal of Consumer Psychology*, and the *Journal of Marketing Management* have devoted special issues to topics such as sustainable consumption, decision making and green marketing in recent years.

Various terms have been used to refer to consumer behaviors related to the environment. Some authors use the term "sustainable consumption" (Luchs, 2010; Schafer, 2011; Wolf and Schonherr, 2011) to describe the behavior of environmentally-concerned consumers. Others like Antil (1984) talk about "socially responsible consumption" and Fisk (1973) speaks of "responsible consumption." They include not only environmental but also social concerns, for example, labor and community conditions. In this paper we use the term "responsible consumption" defined as the attitudes toward the environment that are influenced by social and environmental concerns. A study on Megatrends (ITESM, 2007) recognizes concern for the environment as a megatrend. The green consumer is defined as follows: "Green consumers are buyers who are aware of and sensitive to the impact of their consumption habits on the sustainable development of the region where they live. Their culture values quality of living in terms of respect for the environment, the responsible use of natural resources, care of their health, and the general wellbeing of the community. They recognize that this approach to life may have additional economic costs and are willing to face them. "When we think of care of health and for the wellbeing of the community in terms of care for neighbors, parks or schools, a picture emerges of women participating in activities of care for others that are a cultural trait. These features are described in the Schwarz's Global Values Inventory as altruism or benevolence. This value is defined as the preservation and enhancement of the welfare of people with whom we are in contact. In the same motivational direction of this value is responsible consumption which the literature describes in relation to the concern for the wellbeing and respect for the health of others and the community. This paper explores whether such altruism or benevolence as defined in Schwartz's inventory can be extended to environmental stewardship.

## Concern for Mother Nature. A women's issue?

### Hypothesis

Environmentally-concerned consumers will adopt responsible consumption patterns, reflecting their favorable disposition towards respect for their health, natural resources, and their communities. This concern translates in some countries into the willingness to pay a "premium" for those products and services that respect the environment, health and the community.

There is evidence that consumers in the U.S. and Europe who engage in responsible consumption are willing to pay a premium of between 15 and 20% in the U.S. (Suchard and Polonsky, 1991) and up to 40% in the UK (Myburgh-Louw and O'Shaughnessy, 1994) for products that are friendly to the environment, people's health and communities. There is evidence in the literature that Mexican consumers are concerned about the impact of their behavior and habits on their environment even if they are not willing to pay premium prices for environmentally-friendly products (Gonzalez and Merino, 2006).

An example of the above is the change in the consumption of products such as CFC-free deodorant and hairspray. However, markets in Mexico and other Latin American countries are price-driven. Since the price of sustainable products may be higher compared to conventional products', in economies such as Mexico's, responsible consumers may find the premium paid for these products deters them from purchasing, even when they are aware of the impact they have on the environment. Therefore,

*H1 Mexican consumers will show environmentally-friendly attitudes and concern for the environment.*

Certain authors have identified the discrepancy between being aware of the benefits of responsible consumption for individuals and the environment, and effectively making a purchase decision. For example, a United Nations survey (UNEP 2005) found that while

Concern for Mother Nature. A women's issue?

40% of consumers said they were concerned about the environment and willing to buy "green", only 4% actually of them did.

Gaps in the literature indicate that research is needed on environmentally-friendly attitudes specifically in emerging countries, where environmental concerns compete with concern for meeting needs with limited disposable incomes. We need to explore ways that allow us to have a clearer profile of environmental consumers, and understand their background, including demographic factors, like gender, and psychographic factors, like their values, which are associated with these pro-environmental attitudes.

Luchs and Mooradian (2011) argue that the effect of gender is well documented in the literature. Apparently women show a greater concern for environmental and social issues than men. Zelezny et al. (2000) reviewed 13 studies that examined responsible consumption and found that in 9 of them, women showed greater pro-environmental behaviors and attitudes than men, three studies reported no significant differences between men and women and only one study reported men exhibited higher scores in their concern for the environment.

As Luchs and Mooradian (2011) point out, "apparently there is a gender effect as a predictor of pro-environmental behavior, where women consistently show greater concern for responsible consumption and shop accordingly. One possible explanation is related to values, particularly the value of altruism or benevolence, described in Schwartz's Value Inventory (1992.1994) as a value present in those who care about giving, seek to help others and are concerned about general wellbeing to others. Schwartz describes people that rank high in this value as "those who are the *mothers of the earth* and that nourish everybody" (Schwartz 1992, 1994). Some studies show women score higher on values such as altruism than men and that value could be related to environmentally-friendly behavior (Dietz, Kalof and Stern 2002). Accordingly,

*H2 Participating women may exhibit a greater concern than men for the environment.*

Concern for Mother Nature. A women's issue?

*H3 Participating women would score higher than men on altruism as a value associated to environmentally-friendly attitudes.*

The purpose of this study is to investigate whether there is a difference between Mexican men and women consumers regarding environmental awareness. The main research questions are: What is the level of pro-environmental attitudes among young Mexican consumers? What values are associated to these pro-environmental attitudes? Is there a difference between men and women on these attitudes and values?

Several factors must be taken into account when exploring the importance of pro-environmental elements in consumption among Mexican youth. According to Laroche, Bergeron and Barbaro-Forleo (2001), the relevant factors when exploring sustainable consumption behaviors include demographics, level of education, values, attitudes and behaviors. For this study we have chosen to explore demographic factors such as gender, in addition to the values and attitudes.

For more than forty years, demographic segmentation has provided the foundation for consumer analysis. From the standpoint of the relation between social awareness and sustainable consumption, Berkowitz and Lutterman (1968) and Anderson and Cunningham (1972) had already described the socially aware consumer as a young woman, with at least upper secondary education and above average socioeconomic status. However, demographics alone would not suffice to define other elements of this consumer's profile.

Values are regarded as guiding life principles, and are also related to motivational elements, such as goals and objectives for example (Schwartz, 1992). They serve as a standard that allows choosing among options when making decisions or adapting behaviors to our environment. Values therefore play an important role in consumer behavior. According to Schwartz (1992), they are abstract principles that guide individual consumer's behavior and self-concept. In simple terms, we can describe them as enduring beliefs that a certain outcome is desirable or good.

## Concern for Mother Nature. A women's issue?

Values are cognitive representations of biological needs, social interactions and the group's notion of wellbeing. Schwartz (1992) has categorized these representations in 10 types of values, namely: power, achievement, hedonism, stimulation, self-drive, universalism, benevolence, tradition, conformity and security. These 10 values are consistent among various cultures according to research by Schwartz and his team (1992,1994).

Additionally, these values can be grouped into dimensions called "value orientations", namely openness to change versus traditionalism, and self-transcendence (altruism) versus self-reinforcement or self-interest (Schwartz 1992). Some authors claim that the dimension of altruism may be related to pro-environmental behaviors (Dietz, Kalof, and Stern 2002). This study will consider Schwartz Values Inventory's proposal to include altruism as a framework value for analyzing the values related to environmental concerns expressed in environmentally-friendly attitudes.

## Methodology

The study consists of a cross-sectional analysis using two self-administered scales to college students at a university in the north of the country to assess their attitudes toward responsible consumption and values. Additionally, gender is used as a demographic variable. Since the two inventories used, the pro-environmental attitudes scale and Schwartz's Values Inventory have different response ranges, scores were converted to z scores for analysis.

## Sample

Participants in this study completed a self-administered questionnaire as a group at the start of class sessions. Data were collected throughout November 2011. We collected a total of 123 completed questionnaires from 125 students. Two incomplete questionnaires were removed from the sample. All participants were undergraduate

## Concern for Mother Nature. A women's issue?

students, single, without children (see Table 1). Participation was voluntary and no compensation for participating in this research. The highest proportion of women in the sample reflects the higher number of women than men among students.

Table 1  
Sample description

Characteristics	Percent ( N= 123 )
Sex	
Male	46 %
Female	54 %
Age	
17-20	30.4
21-23	62.0
24 and older	7.6
Schooling	
High school diploma and current university student	100.0 %

### Survey

The survey was prepared after the literature review. The questionnaire consists of three sections. The first section is a 20-item scale designed to measure the respondents' attitudes toward the environment. This scale was adapted from the scales designed by Joonas and Bhuiyan's (2004) and by La Trobe and Acott (2000). Reagents were translated into Spanish for this study. Participants were asked to read and respond to 20 items with a Likert scale of 7 points to measure the level of agreement-disagreement with each of the 20 items.

The 20 items can be grouped into four factors: human interference with nature, equity and development, impact of human and economic elements on nature, and duties

Concern for Mother Nature. A women's issue?

toward non-human species. In the second section we measured value orientation adapted from Schwartz's Values Inventory (1994, 1992). This scale is designed with 10 questions that measure personal orientation to values. It has been validated and standardized in more than 60 countries. Respondents read and answered the items on a Likert scale of 9 points unbalanced responses ranging from -1 (irrelevant, opposed to my values) to 7 (very important). In the third section, participants answered questions about their demographics.

### Analysis and results

The statistical analysis of the survey data was performed using the Statistical Package for Social Sciences (SPSS) version 17. All hypotheses were tested at 0.05 level of significance.

The scale of environmental attitudes was measured on a Likert scale with options from 1 (strongly disagree) to 7 (strongly agree) and the results show that the group of participants exhibited a mean of 5.69 (see Annex 1). According to these results, H1 is accepted, i.e. Mexican participants show environmental concern despite belonging to a developing economy (N = 123, M = 5.6898, SD = 0.68)

Regarding the value inventory, the four dimensions that make up Schwartz's scale of values (self-interest, openness to change, altruism, and traditionalism) were analyzed. Openness to change was the highest (mean = 5.934, SD = 0.058 and  $\alpha = .63$ ) followed by altruism or benevolence (Mean = 5.342, SD = 0.085 and  $\alpha = .45$ ). The results are presented in Annex 2. These results show the four dimensions of value orientation: self-interest, openness to change, altruism, and traditionalism. The scale's reliability was determined using Cronbach's alpha measure. This reliability coefficient measures a single latent dimension of the construct. According to the literature, the alphas should achieve a score higher than 0.7. The resulting alphas were below 0.7. However, some authors consider alphas lower than 0.7 acceptable because of reasons related to the translation of scale or the small size of samples used in exploratory studies (Hair, Bush

## Concern for Mother Nature. A women's issue?

and Ortinatu 2003). The literature shows scores ranging from .43 to .76 similar to those obtained in this study. In this study, openness to change shows the highest score, followed by altruism. Altruism is reflected in values considered as pro-environmental (Dietz, Kalof, and Stern 2002). One of the reasons discussed in the literature to explain these alpha values is the fact that extensive constructs are measured with a scale cut at 10 items. However, the structure of these values is retained with respect to the original scale of 57 items with alphas above 0.7, for which reason it was decided to use the reduced scale, as it would allow a more efficient use of time.

In analyzing pro-environmental scores by gender, we found a significant difference in a t test for independent samples for the average for females ( $M = 1886$ ) and males ( $M = 2183$ ) ( $t = -2910$ ,  $df = 121$ ,  $\text{Sig (unilateral)} = 0.002$ ). Consequently, H2 is accepted. Women score higher than men on altruism. As control we examined the differences between men and women in another value, i.e. openness to change. No significant differences were found between men and women ( $t = -1,096$ ,  $df = 121$ ,  $\text{Sig (unilateral)} = 0.143$ ).

Finally, we analyzed the difference between averages in terms of pro-environmental behavior of men and women, and as hypothesized women scored higher on the scale of environmental attitudes ( $t = -2.006$ ,  $df = 121$ ,  $\text{Sig (sided)} = 0.022$ ). Therefore, H3 is accepted.

## Discussion

The results of this study should give us an opportunity to explore Mexican consumers and their attitudes toward the environment. As expected, study participants scored higher on environmental attitudes. So we can conclude that participants have a friendly attitude toward the environment, despite literature references hold this behavior is more typical of developed economies. The results support the assertion that in less developed countries we can identify consumers concerned with the environment, a fact documented in the literature (Economist, 2000; Adams, 2006).

Concern for Mother Nature. A women's issue?

However, limitations of this study result from the fact participants are students and the results may be a product of their university curriculum. We hope future analyses can elucidate the impact of courses and programs aimed specifically at promoting responsible consumption among the new generations.

Regarding the difference in values such as altruism or benevolence (Schwartz 1992, 1994) between men and women, it can be assumed that in Mexican culture families educate women as caregivers and they propagate this attitude to concern for the environment for the benefit of third persons and their communities at large. The limitations of this study lie in its descriptive nature. It is necessary to extend the study using more robust techniques to identify whether altruism is a causal variable of concern for the environment.

## References

Adams, L. (2006) Organic Food Expanding in Mexico. Accessed through internet at <http://www.organicconsumers.org/organic/mexico093004.cfm> on January 15, 2006.

Anderson, W.T. and Cunningham, W.H. (1972) The Socially Conscious Consumer. *Journal of Marketing*, 36 (July): 23-31.

Berenger, J., Corraliza, J.A. y Martín, R. (2005). Rural-Urban differences in environmental concern, attitudes, and actions. *European Journal of Psychological Assessment*, 21, 128-138.

Berkowitz, L. and Lutterman, K.G. (1968). The Traditional socially responsible personality. *Public Opinion Quarterly*, 32, 169-185.

Dietz, T., Kalof, L. and Stern, P.C. (2002). Gender, values, and environmentalism. *Social Science Quarterly*, 83(1), 353-364.

Concern for Mother Nature. A women's issue?

González, S. y Merino, M. (2007). Understanding the Motivations of Mexican Consumers to Purchase Organic Products. In Delbard, O. (Ed). *Sustainability Management Issues in Latin America and Europe: A Multi-stakeholder Perspective*. ESCP-EAP, Paris, France. 141-149.

Hair, J.F., Bush, R.P., and Ortinau, D.J. (2003). *Marketing Research*. 2<sup>nd</sup> Ed. McGraw-Hill Irwin.

How green is your market? (2000, January, 6). *Economist*. Accessed through internet at <http://www.economist.com/node/271970>.

Joonas, K., Bhuian, S. and Ruiz, D. (2005-2006). An investigation of the Environmental Beliefs and Attitudes of Business Students in the U.S.A. and Mexico. *Southwest Business and Economics Journal*. 39-52.

Laroche, M., Bergeron, J., and Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503-520.

La Trobe, H. L. and Acott, T. G. (2000). A Modified NEP/DSP Environmental Attitudes Scale. *The Journal of Environmental Education*, 32(1), 12-20.

Murphy, R. (2010). Why doing good is good for business? *Fortune*. 161, 90-95.

Myburgh-Louw, J., and O'Shaughnessy, N.J. (1994). Consumer perception of misleading and deceptive claims on packaging of 'green' fast moving consumers goods. In Achrol, R. and Mitchell, A. (Eds.). *AMA Summer Educators' Conference Proceedings*, American Marketing Association, Chicago, IL. Vol. 5: 344-353.

Concern for Mother Nature. A women's issue?

Schrader, U. and Thøgersen, J. (2011). Putting sustainable consumption into practice. *Journal of Consumer Policy*, 34, 3-8.

Schultz, P.W. and Zelezny, L.C. (1999). Values as predictors of environmental attitudes. *Journal of Environmental Psychology*, 19, 255-265.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology*, Orlando, FL: Academic Press, (25), 1-65.

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*. 50(4),19-45.

Suchard, H.T. and Polonsky, M.J. (1991). A Theory of environmental action-behavior model. In Gilly, M.C. et al (eds.) *AMA Summer Educators' Conference Proceedings*, American Marketing Association, Chicago, IL.(2),187-201.

Concern for Mother Nature. A women's issue?

Annex 1

**Statistics**

Results on the Environmental

Attitudes Scale.

N	Valid	123
Average		5.6898
Median		5.7500
Standard dev.		.68759
Variance		.473
Assymetry		-1.582
Typical assymetry error		.218
Kurtosis		6.745
Typical kurtosis error		.433

Concern for Mother Nature. A women's issue?

Annex 2

Orientation to Schwartz Values

<b>Values</b>			
<b>n = 109</b>			
<b>Value</b>	<b>Average</b>	<b>DS</b>	<b><math>\alpha</math></b>
Self-interest	4.23	0.937	.51
Openness to change	5.934	0.058	.63
Altruism	5.342	0.085	.45
Traditionalis m	5.169	0.163	.50