

Effect of “Environmentally Sound” Manufacturing Processes on Consumer Evaluations of Natural Apparel Product: Comparison between Americans and Koreans

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<Abstract>

The present study examined the relationships between consumers citizenship (United States, Korea) and their attitudes toward and evaluations of apparel product manufactured with either environmentally friendly processes or traditional processes. The apparel product being evaluated were also labeled in three different ways. Results indicated that United States consumers preferred the environmental apparel product whereby the Korean consumers preferred the traditional apparel product. Label information had no significant effect on attitudes and evaluations. Results support models of consumer behavior that indicate culture affects consumer decision-making. Implications for marketing are discussed.

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“환경친화적” 제조과정을 거친 의류제품에 대한 한국과 미국 소비자 평가의 비교 연구

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<요 약>

본 연구의 목적은 한미 소비자간의 환경 친화적 제조과정을 거친 의류제품에 대한 평가와, 그 제품에 관한 정보제공이 제품 평가에 영향을 미치는 지 비교 조사하는 데 있다. 그 결과, 미국 소비자들이 환경 친화적 제조과정을 거친 천연 의류제품을 선호하는 반면 한국 소비자들은 일반 제품을 선호하는 것으로 나타났다. 하지만 제품정보제공은 두 집단의 평가에 유의한 영향을 미치지 못한 것으로 나타났다. 본 연구는 의류제품에 대한 국제 마케팅전략을 제시하면서 문화가 소비자 의사결정에 영향을 미친다는 소비자행동 모델을 지지한다.

Introduction

Since World War II and particularly during the last twenty years the United States textile and apparel market has been flooded with imported products (e.g., Dickerson, 1991; Douglas, 1992). Along with this growth in textile and apparel imports, the United States market for textile and apparel products is relatively mature, growing no more than 2-3% annually. On the other hand, it is estimated that world consumption of apparel fibers will steadily increased into the next century with most of the growth expected in developing markets. Thus, the time is right for United States textile and apparel companies to increased the level at which United States textile and apparel products are exported. Consumer markets are expanding in Pacific Rim nations, where living standards are increasing and a consumer orientation to society and government policy is emerging (Worthy, 1990). To increase United States exports of natural fiber textiles and apparel, companies must look globally to develop new markets for their products (Levitt, 1983; Pysarchik & Perez, 1989; Quelch & Hoff, 1986).

Because of the wage differences between United States and Asian apparel workers, it is unlikely that domestically made United States apparel will be able to compete with products made in Asia on the basis of price. Pysarchik and Perez (1989) suggest that United States apparel manufacturers compete by emphasizing marketing capabilities, design expertise, product quality, brand-name, recognition, and customer service. Although factors such as price, product quality, and service will affect competitiveness in international markets for apparel products, an understanding of the attitudes of consumers in these markets is vital for companies to successfully market their goods to these consumers. Thus, the purpose of this study was to compare American and Korean consumers attitudes towards and evaluations of apparel products manufactured with either environmentally process or traditional processes.

Literature of Review

Models of consumer decision making suggest that cultural factors affect consumer decisionmaking processes (e.g., Engel, Kollat, & Blackwell model; Engel, Blackwell, & Miniard, 1993). In the present study, culture was operationally defined as national citizenship. Research concerning the perceptions, attitudes, and behaviors of Korean consumers indicates that brand names are important evaluative criteria to young Korean women when purchasing clothing (Lee & Burns, 1993). Other researchers (Hafstrom, Chae, & Chung, 1992; Kim, 1989) have found that young Korean consumers highly brand conscious and fashion conscious. Shim (1989) also found that Korean women preferred to purchase imported apparel products, including United States products, over Korean apparel.

One area of interest for researchers of consumer behavior is the influence of company philosophies and policies on consumers attitudes towards the companys products or services. Consumers, in general, are increasingly becoming interested in the social values of the companies they patronize. As such, environmentally-conscious processes and products provide a value-added dimension that is often viewed as attractive to consumers (Menagh, 1991). One strategy for developing markets in Korea for United States apparel is to offer products manufactured through ecologically sound processes. Although the United States textile and apparel industries are leading the way in green investing and are well-poised to enhance their competitiveness by concentrating on the value added to products on the basis of sound environmental practices, little is known about consumers evaluations of and attitudes toward environmentally sound natural fiber fashion products, particularly from a cross-national perspective.

Research has studied consumer evaluations of recycled product (Mobley, Painter, Untch, & Unnava, 1995, the relationship between attitudes toward the environment and behavior (Alwitt & Berger, 1993; Scherhorn, 1993) or behavioral intent (Borden & Schettino, 1979; Sohugwark & Lefkorr-Hagius, 1955), and the relationship between demographics and support for or involvement in environmental issues (e.g., Grazin & Clsen, 1991). Demographic characteristics studied include age (Van Liere & Dunlap, 1980; Vining & Ebreo, 1990), education (Samdahl & Robertson, 1989), income level (Jacobs, Bailey, & Crews, 1984), social class (Mohai, 1985), and sex (Hill, Rubin, Peplau, & Willard, 1979). However, attitudes toward environmental issues (including products manufactured with environmentally friendly processes) have not been studied in conduction with citizenship. Such relationships might assume policy importance as countries of the world recognize the value of lowering trade barriers through agreements such as NAFTA, yet are concerned with the environmental policies of trade partners who share international borders.

Therefore, to increase our understanding of cross-national differences in consumer behavior and to lay foundation for assessing international consumer markets, the

present research assessed Korean and United States students with respect to attitudes toward and evaluations of fiber characteristics, quality, status, cost, and purchase intent for a natural fiber apparel product, cotton socks. Differences in consumers attitudes toward and evaluations of socks manufactured with environmentally friendly processes and traditional processes and the associated labeling of products were also examined. Socks were selected because they are a commonly worn apparel product, they are worn by both sexes, they are worn by consumers in Korea, and they are often influenced by fashion trends.

Method

Experimental Design

The purpose of this study was to examine the effect of (1) national citizenship, (2) environmentally sound manufacturing processes and (3) label information on consumers attitudes toward and evaluations of a fashion product, cotton socks. To achieve the purpose of this study, a 2 by 2 by 3 complete factorial between-subjects experiments was conducted. The independent variables were (1) citizenship (United States, Korean) (2) method of fiber processing used in manufacturing the cotton socks (environmental unbleached/undyed of traditional bleached/undyed) and (3) product label information (no information; fiber content and care instructions; or fiber content, care instructions, and information regarding environmental soundness of the processing procedures). Dependent measures were consumers evaluations of and attitudes toward the socks, likelihood of purchase, and perceived cost.

Subjects

Subjects (American; 98, Korean; 85) were students or family members of students at two universities in the United States. 90 male and 93 female subjects participated in the study. Ages of the subjects from each country ranged from 17 years to 38 years with a mean age of 24 years. Their majors were Business (32%), Human Ecology (30%), Engineering (25%), Humanities (8%), and Arts (5%). Korean subjects had lived in the United States less than three years. Subjects for the study were recruited from Korean student organizations on each of the respective campuses. Subjects were randomly assigned to the experimental treatments.

Procedure

Subjects participated in the study in groups of 5-10 individuals. Each subject was given a folder which included one of the two types of socks (environmental

unbleached/undyed or traditional bleached/undyed) along with one of the three forms of product label information and were asked to examine the socks and complete the dependent measures. Dependent measures included asking subjects to evaluate the socks according to 18 adjectives/evaluative criteria using 5-point unipolar scales. Subjects were also asked if they wear products (socks) similar to these, if they would expect to pay for the socks. Open-ended questions allowed for comments regarding the socks. Information about subjects' demographic characteristics including country of citizenship was collected and used in classifying the subjects. Although dependent measures were written in English, Korean translators were available to clarify and answer any questions respondents might have had.

Results

Multivariate and univariate analyses revealed differences between the United States subjects and Korea subjects in their attitudes toward and evaluations of the sock types. In general, American subjects rated the characteristics of the unbleached/undyed environmental socks higher than bleached/undyed traditional socks. Compared to the bleached/undyed traditional socks, they rated the unbleached/undyed environmental socks as more fashionable, attractive, stylish, and of having higher quality fabric. In addition, American subjects indicated they were more likely to purchase the environmental unbleached/undyed socks than the traditional bleached/undyed socks (See Table 1).

<Table1 > Mean scores of American Subjects by Sock Type

	Traditional	Environmental	F
Fashionable	2.72	3.44	2.45**
Attractive	3.00	3.71	2.77**
Stylish	2.65	3.29	2.44**
Higher Quality Fabric	4.38	4.68	1.95*
Like the Product	2.91	4.12	1.93*
Likely to Purchase	3.56	4.06	1.94*

* $p < .05$

** $p < .01$

Unlike the American subjects, when Korean subjects rated the sock types differently it was because they rated characteristics of bleached/undyed environmental socks. Korean subjects rated the bleached/undyed socks as more appealing, more attractive, more comfortable and of higher quality than the unbleached/undyed socks. The Korean

subjects were also more likely to indicate that they would purchase the traditional bleached/undyed socks than the environmental unbleached/undyed socks (See Table 2). Responses to the open-ended questions suggested that Korean subjects seemed to prefer the bleached white color of the traditional socks to the unbleached beige color of the environmental socks. However, label information had no significant effect on the United States and Korean subjects evaluations toward the socks.

<Table 2> Mean scores of Koran Subjects by Sock Type

	Traditional	Environmental	F
Appealing	3.46	2.60	3.33**
Attractive	2.89	2.45	1.76*
High Quality	3.71	2.97	2.76**
High Quality Fabric	4.00	3.30	2.81**
Well-Made	3.71	3.2	1.98*
Comfortable	4.31	3.53	3.11**
Like the Product	3.57	2.7	3.77**
Likely To Purchase	3.26	2.10	4.23**

* $p < .05$

** $p < .01$

Discussion and Implications

The results of this study support models of consumer behavior that indicate cultural factors affect consumer decision making. In the present study culture was operationally defined as citizenship. Decision making (e.g., evaluations, preferences, purchase intention) by the consumers in the present study differed depending upon the citizenship of the consumers. Thus, these results imply that consumer decision making research related to evaluations of and preferences for apparel conducted with American consumers can not be directly applied or generalized to consumers of other countries. American consumers in this study preferred the environmental socks whereas the Korean consumers in this study preferred the traditional socks. These differences may be a result of the environmental emphasis evidences may be a result of countries, the degrees to which the media in each country, and/or the awareness and interest of consumers in each country on environmental issues.

These results also imply that promotions of cotton socks found to be effective in America cannot simply be transplanted to Asia such as Korea. Indeed, sock styles and colors popular in the United States may not appeal to Asian consumers. In addition, label information had no significant effect on the evaluations of the socks by United

States, or Korea subjects. This suggests that special packaging promoting environmental processing may not be useful in marketing socks. Although American consumers in this study preferred the environmental socks compared to the socks manufactured with traditional processes, these preferences were not shared by the Korean subjects, such as green marketing that are influenced by fashion trends, need to be tested with specific consumer target groups. As textile and apparel producers expand their international marketing, additional cross-national research on consumer attitudes is needed to guide them in their understanding of international consumer markets for fashion products.

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