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ACADEMIC PAPER

Consumer likelihood of purchasing organic cotton apparel

Influence of attitudes and self-identity

Purchasing
organic cotton
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Abstract

Purpose – The purpose of this paper is to contribute to a better understanding of the organic apparel consumer. Is the recent upsurge in organic cotton products another fashion trend or is there a segment of consumers genuinely interested in purchasing organic cotton apparel based on the benefits of organic agriculture to the environment?

Design/methodology/approach – Data were collected with a mail survey of US health and natural foods consumers. Conjoint analysis revealed salient product attributes and cluster analysis identified segments of consumers with different attribute preferences. Factor analysis uncovered latent variables from among the large number of items and the clusters were examined for differences in their psychographic profiles.

Findings – It was found that the 38 percent of consumers who found used organic cotton content salient had positive attitudes toward organic and sustainable agriculture, preferred to “buy locally” and had a strong self-identity as environmental, organic, and socially responsible consumers.

Research limitations/implications – The sample of US health and natural foods consumers means that the results cannot be generalized too widely. Research is currently under way to relate the self-reported purchase behavior of organic apparel consumers discussed here to actual purchase behavior.

Practical implications – Survey respondents interested in purchasing organic cotton apparel agreed that organic farming is good for the environment, suggesting that consumers would be receptive to marketing messages that place an emphasis on the environmental benefits of purchasing organic cotton apparel.

Originality/value – The paper provides insight into the attitudes and motivations of environmentally concerned US consumers of organic apparel and provides information on focusing marketing to these consumers.

Keywords United States of America, Social values, Attitudes, Consumer behaviour, Cotton, Clothing

Paper type Research paper

Introduction

The organic apparel market is growing every year as consumers, whose appetites have been whetted with organic foods, are seeking to expand their organic lifestyle to



include apparel. Sales of products made from organic cotton, the most widely available organic fiber, have jumped to \$1.07 billion in 2006 and apparel manufacturers and retailers, eager to capture a piece of this growing consumer segment, have been producing organic textiles and apparel for every budget (Lipke, 2007). While the demographics and motivations of organic food consumer have been examined in academic research, little has been published on the psychology of organic apparel consumers.

A study of consumers for blended organic cotton apparel, garments that contain less than 100 percent organic cotton, found that consumers willing to consider moderate percentage blends (45 percent-70 percent) in their purchase decisions did not differ demographically from consumers for whom organic cotton content was not a determinant attribute (Hustvedt and Dickson, forthcoming). The lack of relationship between interest in organic apparel and demographics is not surprising, given that a meta-analysis of 128 studies of environmental behavior found no significant relationship between any of the socio-demographics variables and environmental behavior (Hines *et al.*, 1986). Other more recent studies have found that organic food consumers are presently not much different from the general population in terms of their demographics.

Standards for organic apparel products have been evolving over the past several decades. Organic cotton, as opposed to conventionally produced cotton, has been produced using methods that are free from most synthetic chemical inputs such as pesticides, herbicides and chemical fertilizers (Myers and Stolton, 1999). Organic cotton produced around the world can be certified under various standards, depending on the needs of the producers and buyers. The International Federation of Organic Agricultural Movements (IFOAM), founded in 1972, accredits organic certifiers who inspect cotton crops around the world (Rundgren and Hagenfors, 1999). Cotton sold in the United States as organic must be certified by inspectors registered with the US Department of Agriculture (USDA) in order to use the USDA organic logo, regardless of where the cotton is grown (Lackman, 2005). Unlike processed food products, the USDA organic standard, however, does not cover the certification of fiber processed into apparel products. Europe, Japan, India, and Australia all have organic standards that cover the production of organic cotton, but over the decades to answer consumer concerns, standards that cover organic processing of cotton into textiles and garments have been created by a wide variety of organizations around the world (Lackman, 2005).

In an effort to reduce consumer and manufacturer confusion caused by a wide variety of standards, a consortium of global organic experts and organizations was formed in 2002 to develop the Global Organic Textile Standard (GOTS). Participating organizations in the International Working Group on Global Organic Textile Standard (IWGGOTS) included the Organic Trade Association (OTA) in the United States, the Soil Association in the United Kingdom, the International Association Natural Textile Industry (IVN) in Germany, and the Japan Organic Cotton Association. Each of these organizations already had voluntary standards that defined organic textiles and organic apparel created from organic fibers and worked closely with the International Federation of Organic Agricultural Movements (IFOAM) to develop a standard that harmonized with IFOAM standards (IGGWOTS, 2006). The first version of GOTS, completed in 2005, covers every step of apparel production, from fiber to finished

product and includes social responsibility criteria along with the environmental criteria (IWGGOTS, 2005, 2006). GOTS also includes a number of exceptions to the standards, such as an increase in allowed spandex content, specifically for products marketed in the United States. in order to satisfy the concerns of US retailers.

GOTS does not allow the blending of conventional and organic fibers of the same fiber type. For this reason, blended organic products are not certifiable under GOTS. The organization Organic Exchange, formed with the long term goal of increasing organic land used for fiber production by 50 percent every year, has recently drafted a standard for blended organic cotton products which they define as “any combination of organic cotton and natural or conventional fibers” (Organic Exchange, 2007). Companies that produce a large amount of cotton apparel are blending small amounts of organic cotton (3-10 percent) with conventional cotton to deal with supply challenges organic cotton market. Blending allows the available quantity of organic fiber to be spread thinly across all products and allows a more gradual and predictable expansion in organic cotton use without commitment to 100 percent organic cotton products (Boone, 1999).

The purpose of this study was to further understanding of consumers who may be interested in purchasing apparel products made with a percentage of organic cotton by creating a profile of their attitudes, beliefs, and self-identity. An understanding of the attitudes and beliefs of organic cotton apparel consumers can help both apparel manufacturers and organizations that advocate for organic farming to target their marketing and create communication about organic apparel that connects with these consumers.

Literature review

Organic food consumers

The attitudes and opinions of organic food consumers have been more extensively examined than those of organic apparel consumers. According to Allen and Kovach (2000) organic food production is part of the “green consumerism” movement that began in the 1980s. Organizations and consumers promoting green consumerism hope to use market forces to reduce the environmental damage created by the growing level of global consumption. A survey of British consumers, however, revealed that a vast majority (93 percent) of organic food consumers surveyed are motivated by “health reasons” and/or because organic food is “better for the children” (Hutchins and Greenhalgh, 1997). A minority (30 percent) cited environmental concern as a reason for organic food purchase. The USDA characterizes organic food as being “produced by farmers who emphasize the use of renewable resources and the conservation of soil and water to enhance environmental quality for future generations” (United States Department of Agriculture, 2002). A survey of organic food consumers revealed that many have concerns about farming production processes that are broader than pesticide use (Conner, 2004). Many respondents stated they were opposed to corporate based food production and were interested in supporting “sustainable” agriculture. Studies of organic food consumers have identified attitudes and motivations related to reducing pesticide use, improving environmental quality and food safety (Hearne and Volcan, 2006; Loureiro *et al.*, 2001; Reicks *et al.*, 1999; Roosen *et al.*, 1998). Hearne and Volcan (2006) found that 84 percent of Costa Rican consumers in their survey were willing to pay more for vegetables to protect the environment. Roosen *et al.* (1998)

found that nearly 50 percent of consumers in their study had a high degree of concern about pesticide use.

Unlike the organic food consumer, the organic apparel consumer has not been examined in previously published research. Because the issues of concern to organic consumers may include other issues, a brief review of studies in the area of environmentally or socially responsible consumer behavior was conducted.

Environmentally and socially responsible consumer behavior

Consumers of organic cotton apparel also labelled for social and processing claims may be influenced by a variety of beliefs and attitudes. If organic apparel is framed as an environmental issue, than concern for the environment may be an important psychographic variable. Environmental concern is one of the most commonly studied variables related to environmental consumer behavior. It can be defined most simply as the possession of a concern for the ecosphere itself or over the degradation of the ecosphere created by human beings (Dunlap and Jones, 2002). Dunlap and Jones (2002, p. 485), researchers in the field of environmental sociology define it thusly: "Environmental concern refers to the degree to which people are aware of problems regarding the environment and support efforts to solve them and/or indicate a willingness to contribute personally to their solution". Concern for the environment can be measured at the most general (least specific) levels, where it resembles an ideology or worldview.

Studies of environmental concern related to apparel consumers have examined several different phases of the apparel lifecycle, from advertising to clothing disposal/recycling (Butler and Francis, 1997; Kim *et al.*, 1997; Kim and Damhorst, 1998; Shim, 1995). Butler and Francis (1997) used 11 of the 40 items used the Socially Responsible Consumption Behavior scale (Antil and Bennett, 1979) to measure environmental attitudes. One of the three factors in this measure, proenvironmental regulation had a significantly positive relationship ($\beta = 0.26$) with environmental purchasing behavior related to clothing. A study by Kim and Damhorst (1998) showed that environmental concern, measured by the New Environmental Paradigm (Dunlap and Van Liere, 1978), was not directly related to environmental apparel behavior. However, it did predict general environmental behavior ($\beta = 0.39$), which in turn predicted the apparel specific environmental behavior ($\beta = 0.67$).

Measuring generalized environmental attitudes or values may be helpful for understanding the psychology of environmental consumers, but when studying specific behavior, generalized attitudes are not as useful as specific, behavior-related attitudes. In their review of the conceptualization and measurement of environmental concern, Fransson and Garling (1999) point out that only recent studies of the relationship between environmental attitudes and behavior have been careful to measure attitude at the same level of specificity as the behavior. Based on the stronger relationships seen with more specific measures, this study focused on apparel specific environmental attitudes relating to fiber and apparel production or the role of the apparel industry and apparel consumers in environmental protection.

Many studies of environmental consumer behavior have identified a significant relationship between altruistic values and environmental behavior (Dietz *et al.*, 2002; Nordlund and Garvill, 2002, 2003; Stern *et al.*, 1993; Stern *et al.*, 1999). Two apparel related studies have focused on altruism as value related to socially responsible

(ethical) apparel consumer behavior (Dickson and Littrell, 1997; Dickson, 2000). Dickson and Littrell (1977) measured altruistic attitudes in relation to purchases of clothing from an alternative trading organization (ATO). Multiple discriminant analysis between three groups, respondents who made ATO clothing purchases, those who made other ATO purchases, and those who received an ATO catalog but made no purchases, found that the three groups did not differ in terms of these altruistic items. Dickson and Littrell (1997) concluded that altruism does not appear to lessen the demand for high-quality products. Dickson (2000, p. 25) measured altruistic attitudes related to apparel purchases from socially responsible businesses, apparel businesses that had taken steps to meet high ethical or environmental standards. Measures included, "I would buy clothing from a socially responsible business just to help support their business practices" and "I would settle for a lower quality garment in order to buy something from a socially responsible clothing business". By posing situations in which the respondents would either not gain or actually lose benefit by taking an action, the two items used in this measure seem to capture the essential definition of altruism, which involves "self-sacrificial acts intended to benefit others regardless of material or social outcomes for the actor" (Schwartz and Howard, 1984, p. 229). Dickson (2000) did not find this measure of altruism to be a significant predictor of support for or intention to buy from socially responsible apparel business.

The items used to measure altruistic attitudes in these apparel studies included the idea that consumers would have to trade off attributes creating apparel product quality in order to obtain other attributes such as socially responsible (environmental/ethical) production. In the case of organic cotton apparel, including both 100 percent and blends, many products now offered do not require the consumer to make a tradeoff in terms of the attributes that create quality, just in terms of price. While it is possible that some consumers believe that purchasing organic cotton apparel may give them perceived health benefits similar to organic food products, in the case of products with only a small percentage of organic cotton, altruistic purchase motivations would seem to become more likely.

Self-identity

Consumer self-identity is another psychographic variable that has been related to both socially responsible and organic consumers. Self-identity can be defined as the "relatively enduring characteristics that people ascribe to themselves", and is often synonymous with self-perception or self-concept (Sparks and Guthrie, 1998, p. 1396). In the case of consumers of organic cotton apparel, it might be possible that a self-identification as a "green consumer" or an "organic consumer" would have some impact on their behavior in addition to their attitudes toward the products, beliefs about the environment, or their feelings of moral obligation to buy organic products.

Sparks and Shepherd (1992, p. 392) looked specifically at the role of identification in green consumerism in their study of self-identity and the theory of planned behavior. Agreement with statements such as "I think of myself as a 'green consumer'" correlated as highly with behavioral intention to purchase organic foods ($r = 0.37$) as did attitudes toward organic foods ($r = 0.38$).

Stets and Biga (2003) included the variable of environmental self-identity in their study of environmental behavior along with the variables of environmental concern (measured with the New Environmental Paradigm scale) and awareness of

consequences of human behavior on the environment. The variables of awareness of consequences and environmental concern together significantly predicted general proenvironmental behavior ($R^2 = 0.23$). However, the addition of environmental self-identity increased the amount of variance explained by the model ($R^2 = 0.38$). Further, once environmental identity was included in the model the variable of environmental concern no longer significantly predicted behavior. This suggests that some portion of awareness of consequences or environmental concern is tied to self-identity. The role of self-identity in predicting environmental behavior also suggests that efforts to change environmental consumer behavior might focus on creating or reinforcing self-concepts of environmental consumerism.

Shaw *et al.* (2000) also found that including self-identity along with the variables from the theory of planned behavior and personal norm of perceived ethical obligation in their survey of ethical consumers slightly improved the ability of the model to predict the purchase of fair trade groceries ($R^2 = 0.21$ to $R^2 = 0.24$). Agreement with items such as "I think of myself as someone who is concerned with ethical issues" (p. 894) correlated with behavioral intention to purchase fair trade groceries ($r = 0.25$).

Method

Sample and procedure

The survey method was a good way to obtain information in a systematic way about variables that are not easy to observe, such as attitudes and intentions, and allowed access to consumers located across the United States. The names and addresses of 2905 health and natural food consumers were purchased from a national mailing list database firm. While this focus means results cannot be generalized to all consumers, we felt that targeting consumers who were likely already aware of the issues related to organic food would allow greater insight into the impact of organic related attitudes on purchase decisions. The randomly selected sample of adults 18 years or older was stratified by state population.

Questionnaire

The questionnaire format was a 12-page booklet similar to that recommended by Dillman (2000). The questionnaire measured the likelihood of purchasing specific organic cotton apparel products and skepticism of environmental product claims using items adapted from previously published research as well as items developed specifically for this study.

The first portion of the questionnaire contained a conjoint task designed to elicit consumer evaluations of apparel product attributes relevant to the purchase of organic cotton apparel. Respondents were asked to rate their intentions to purchase each of eight hypothetical t-shirts that varied based on levels of four attributes: organic cotton content (5 percent, 45 percent or 70 percent), price (\$15 or \$18), social responsibility labeling (fairly traded fiber or \$1 donation to cancer research, and processing labeling (organic processing or eco-friendly processing). Research has shown that the appeal of the clothing itself, based on factors such as style or color, is often more important to consumers than intangible attributes like social responsibility (Dickson and Littrell, 1996; Kim *et al.*, 1999). For this reason, respondents were asked to imagine that the hypothetical t-shirts described in the profiles were in their favorite color and style.

Conjoint and cluster analysis were used to create two market segments based on the use of the organic cotton content attribute.

The second section of the questionnaire included a number of different measures for psychological variables that have been related to environmental, organic or socially responsible consumer behavior. The 13 items, measured with a 1 to 7 Likert type scale (1 = strongly disagree, 7 = strongly agree), included general attitudes toward organic agriculture, attitudes toward the environmental impact of clothing production, and attitudes of support for organic and fairly traded fiber clothing production. Two of the items “Government subsidies of US cotton producers are unfair to farmers in developing countries” and “Cotton producers in foreign countries do not get a fair price for their cotton” were designed to determine if some of the fair trade issues of concern to social responsibility organizations, specifically US trade policy, resonate in any way with consumers.

A measure of self-identity was adapted from the single item measure “I think of myself as someone who is concerned about ethical issues” used by Shaw *et al.* (2000, p. 894). This item, adapted by changing “ethical” to “social”, and another item “I am a socially responsible consumer” was added. Because of the potentially dual environmental/ethical nature of organic apparel products, several more items were added reflecting the environmental or organic side of this issue and all five items were measured on a seven-point Likert type scale (1 = strongly disagree, 7 = strongly agree).

Attitude was measured in this study using the expectancy-value model, which defines the attitude toward an attitude object as the sum of expectancy-value products related to the attributes of the attitude object (Fishbein, 1967). Using this model, attitude was measured by responses to both behavioral beliefs and outcome evaluations related to the behavioral beliefs. The behavioral beliefs, covering a wide range of issues related to ethical/environmental consumerism, were measured by asking respondents to rate their agreement (on a seven-point Likert scale) that selected outcomes would result from their purchase of an organic cotton apparel product. The outcome evaluations were measured by asking respondents to rate the importance (1 = very unimportant to 7 = very important) “How important is each of the following to you?” for each of the outcomes suggested in the behavioral beliefs.

Two items were included to measure behavioral intention, which in the case of this study, was the intention to purchase organic cotton apparel products. An item adapted from Shaw *et al.* (2000), “The next time you go apparel shopping, how likely are you to purchase an organic cotton apparel product?” using a seven-point scale from likely (1) to unlikely (7) was included to measure purchase intention. Because some consumers may never have encountered an organic cotton apparel product while shopping, it was suggested by an organic industry professional we consulted with that a second purchase intention question be included. This second item asked respondents how likely they would be to purchase an organic cotton apparel product if they found one the next time they went shopping for apparel. This removed the issue of actually looking for an organic cotton apparel product, allowing respondents to focus on the actual purchase. For this reason, the resulting variable was called Purchase Intention, while the variable measured by the first item was called Search Intention, reflecting that some searching for organic apparel may be involved in the behavior. The final section of the questionnaire included demographic items such as age, gender, household income, education level and number of children at home.

Results

The number of returned questionnaires that were at least partially complete was 422 out of 2,846 questionnaires that were delivered (response rate of 14.9 percent). Of the 422 questionnaires, 377 (89.3 percent) appropriately completed the conjoint task and were used for the analysis presented here.

Respondent profile

Analysis of respondent demographics showed that typical participants were equally likely to be male or female, 57 years of age, and unlikely to have children under the age of 18 in the home. Over 40 percent of respondents had completed a college degree. Of respondents who shared their income level, 65 percent had annual pre-tax household incomes of at least \$50,000 in 2004. A discussion of how the demographic of respondents relates to those of the general population and the failure of demographics to predict interest in organic cotton content in apparel will be shared in a forthcoming paper by the authors.

Organic cotton apparel market segments

Conjoint analysis of the likelihood of purchasing eight different t-shirts for 377 respondents was used to determine which attributes of blended organic cotton apparel products were most influential to purchasing decisions. The purchase likelihood ratings were used to determine the individual part-worths for each attribute using Ordinary Least Squares (OLS) regression. K-means cluster analysis was used to divide the respondents into two groups based on their individual part-worths for the organic cotton content attribute (see Table I).

The first cluster, 62 percent of the sample ($n = 234$), had a very low R -square (0.03) of variance in purchase likelihood accounted for by the product attributes (see Table I). Members of this cluster were mainly interested in the lowest price and did not use the organic content attribute to a significant degree. For this reason, it was named the Non-User segment. The second cluster, 38 percent of the sample ($n = 143$), had the highest R -square (0.48) of variance accounted for by the attributes in the model and the most interest in the organic cotton content of the t-shirt. This cluster was named the Content User segment to highlight the importance of the organic cotton content to the purchase likelihood.

One way to highlight the difference in behavior between these two segments is to examine the changes in purchase likelihood for various hypothetical shirts based on their regression equations from the conjoint analysis (see Table II). Consumers in the Content User segment are nearly 20 percent more likely to purchase the \$15 shirt with 70 percent organic cotton content than the Non-Users. The likelihood of purchase for the Content Users increases steadily as the organic cotton content is increased, while the likelihood of the Non-Users is nearly 20 percent higher at the 5 percent organic cotton content level and does not significantly change once the organic cotton content reaches 45 percent.

Exploratory factor analysis

Exploratory factor analysis using the Principal Factor method of extraction, with Varimax rotation, was conducted separately on the items comprising each psychographic variable or questionnaire section. These included: attitudes toward

Cluster	Variables					Model statistics		
	Constant	A (-1 = 5%, 1 = 45%, 0 = 70%)	B (-1 = 5%, 1 = 45%, 0 = 70%)	Price (-1 = \$15, 1 = \$18)	Social label (-1 = Fairtrade fiber, 1 = \$1 donated to cancer research)	Processing label (-1 = Organic processing, 1 = eco-friendly processing)	F	R ²
Cluster 1 (<i>n</i> = 234)	58.51***	3.06**	2.97**	-2.80***	-0.49	1.17	12.52***	0.03
Cluster 2 (<i>n</i> = 143)	52.64***	-0.25	26.70***	-3.12***	-0.85	-0.71	184.32***	0.48
Overall (<i>n</i> = 377)	56.52***	1.65*	12.12***	-2.91***	-0.55	0.41	86.67***	0.13

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table I.
Regression equations and
model statistics for
likelihood of buying by
clusters and overall
sample

	Shirt A 5% Organic cotton (-1, -1) \$15 (-1)	Shirt B 45% Organic cotton (1, 0) \$15 (-1)	Shirt C 70% Organic cotton (0, 1) \$15 (-1)	Change in purchase likelihood due to higher organic cotton content (5% to 45%) (%)	Change in purchase likelihood due to higher organic cotton content (5% to 70%) (%)
	Fair trade fiber (-1) Organic processing (-1) (%)	Fair trade fiber (-1) Organic processing (-1) (%)	Fair trade fiber (-1) Organic processing (-1) (%)		
Cluster 1 (n = 234)	54.60	63.69	63.60	9.09	9.00
Cluster 2 (n = 143)	29.45	55.65	82.60	26.20	53.15
Overall sample	48.80	64.22	74.69	15.42	25.89

Table II.
Prediction of purchase
likelihood for shirts
varying in organic
content

the environmental impact of clothing production, organic agriculture and organic and fair trade cotton or clothing products, consumer self-identity, behavioral beliefs, and outcome evaluations. Factors were created from groups of items that had a factor loading above 0.5 that were not cross-loaded onto another factor.

General attitudes and self-identity

Factor analysis of items measuring general attitudes related to organic agriculture, organic clothing, the impact of clothing production on the environment, and fair trade issues related to cotton grouped into two factors (see Table III). A variable named Environmental Attitudes had an overall mean of 5.80 (SD = 0.83, $\alpha = 0.69$), indicating that respondents agreed that organic agriculture is good for the environment and that sustainable agriculture is important. A second variable, Clothing Attitudes, had a mean of 4.57 (SD = 1.30, $\alpha = 0.79$) indicating that overall, respondents slightly agreed that they would go out of their way to buy organic or fair trade clothing with the aim of supporting organic farming. Reliability analysis indicated a measure created from two items related to attitudes towards the fairness of US cotton trade policies was not reliable enough for even exploratory research ($\alpha = 0.44$), so it was not used for further analysis. The five items related to consumer self-identity, analyzed separately, all loaded onto a single factor (see Table III). The overall mean for the resulting variable, called Self-Identity, was 5.40 (SD = 0.93, $\alpha = 0.84$), indicating that respondents somewhat agreed that they considered themselves to be socially responsible, organic or environmental consumers.

Attitudes toward organic cotton

The 11 items measuring behavioral beliefs about the purchase of organic cotton products produced two factors (see Table IV). The five items loaded onto the first factor all related in some way to the potential personal benefits that might be derived from purchasing organic cotton apparel. This measure, called Self-Centered Behavioral Beliefs, had a mean of 5.34 (SD = 1.10, $\alpha = 0.83$), indicating that respondents slightly

Variable	Item	Factor loading
<i>Environmental attitudes</i> (Cronbach's alpha = 0.69, variance explained = 34%, Eigenvalue = 3.70)	The dyes and chemicals used in apparel production can be harmful to the environment	0.73
	Organic agriculture is good for the environment	0.66
	Sustainable agriculture is important to me	0.60
	I prefer to "buy locally"	0.58
	I am concerned about the impact of clothing production on the environment	0.57
<i>Clothing attitudes</i> (Cronbach's alpha = 0.79, variance explained = 12%, Eigenvalue = 1.30)	I would go out of my way to buy organic clothing	0.89
	I would buy organic clothing to help support organic farming	0.74
	I would go out of my way to buy clothing produced from fairly traded fibers	0.72
<i>Consumer self-identity</i> (Cronbach's alpha = 0.849, variance explained = 64%, Eigenvalue = 3.13)	I think of myself as an "environmental consumer"	0.88
	I am a socially responsible consumer	0.81
	I think of myself as someone who is concerned about environmental issues	0.79
	I think of myself as an "organic consumer"	0.77
	I think of myself as someone who is concerned about social issues	0.71

Table III.
Factor loadings of
general attitudes and
self-identity

agreed with statements that each of the benefits would result from their purchasing an organic cotton apparel product.

Five items also loaded onto the second factor (see Table IV). Three of the five items related directly to the benefits (support in this case) for others that would result from the purchase of organic cotton apparel. The other two items loading onto this factor were, "Purchasing a product which is more expensive" and "...not readily available" relate to the personal costs in time or money associated with organic cotton apparel purchase. This suggests that these costs are considered part of the altruistic behavior that benefits others in spite of costs to the self. The variable, called Altruistic Behavioral Beliefs, had a mean of 5.11 (SD = 1.00, $\alpha = 0.80$), indicating that respondents agreed that each of the benefits to others or costs to themselves would result from their purchasing an organic cotton apparel product.

The 11 items measuring the importance of outcomes measured in the behavioral beliefs about the purchase of organic cotton products also loaded onto two factors (see Table IV). The nine items loaded onto the first factor all related to the benefits derived for self and others from the purchase of organic cotton apparel. The variable, called Benefit Related Outcomes, had a mean of 5.59 (SD = 0.93, $\alpha = 0.91$) indicating that respondents felt the outcomes of benefits to self and others, were important. Two items related to the costs, either time or money, associated with the purchase of organic

Variable	Item	Factor loading
<i>Self-centred behavioral beliefs</i> (Cronbach's alpha = 0.83, variance explained = 47%, Eigenvalue = 5.12)	The following would result from my purchasing an organic cotton apparel product	
	Improving my health or the health of my family	0.98
	Increasing my peace of mind	0.76
	Purchasing a quality product	0.72
	A fair price for organic cotton producers	0.69
	A reduction in the use of pesticides	0.65
<i>Altruistic behavioral beliefs</i> (Cronbach's alpha = 0.80, variance explained = 13%, Eigenvalue = 1.44)	The following would result from my purchasing an organic cotton apparel product	
	Supporting organic cotton producers	0.73
	Supporting pro-environmental companies	0.72
	Purchasing a product which is more expensive	0.71
	Supporting organic farming	0.70
	Purchasing a product which is not readily available	0.63
<i>Benefit-related outcomes</i> (Cronbach's alpha = 0.890, variance explained = 47%, Eigenvalue = 5.14)	How important is each of the following to you?	
	Improving my health or the health of my family	0.77
	Supporting organic farming	0.76
	Supporting organic cotton producers	0.76
	More retailers selling organic cotton apparel products	0.76
	A reduction in the use of pesticides	0.72
	A fair price for organic cotton producers	0.68
	Purchasing a quality product	0.68
	Supporting pro-environmental companies	0.68
Increasing my peace of mind	0.64	

Table IV.
Factor loadings of
behavioral beliefs and
outcome evaluation

cotton apparel loaded onto a second factor. The Cronbach's alpha for this measure (0.59) was just below the level considered acceptable for even exploratory research. For this reason, it was dropped from further analysis.

Analysis of segment differences

Analysis of variance for of the psychographic variables showed that only the means for Self-Identity, Altruistic Behavioral Beliefs, and Benefit Related Outcomes did not differ significantly between the two market segments of organic cotton apparel consumers (see Table V).

Environmental and clothing attitudes and self-identity

The ANOVA revealed that the attitude of members of the Content User market segment toward organic agriculture and the environmental impact of clothing (M = 5.94, SD = 0.75) was significantly higher at the 0.05 level than the Non-User

Variable and source	df	SS	MS	F	Purchasing organic cotton apparel
<i>Environmental attitudes</i>					
Between groups	1	4.33	4.33	6.35 **	
Within groups	369	250.75	0.68		
<i>Clothing attitudes</i>					
Between groups	1	17.96	17.96	11.30 ***	
Within groups	369	584.2	1.59		
<i>Self-identity</i>					
Between groups	1	0.81	0.81	0.95	
Within groups	372	319.34	0.86		
<i>Self-centred behavioral beliefs</i>					
Between groups	1	8.64	8.64	7.24 **	
Within groups	352	420.41	1.17		
<i>Altruistic behavioral beliefs</i>					
Between groups	1	3.40	3.40	3.39	
Within groups	351	351.91	1.00		
<i>Benefit-related outcomes</i>					
Between groups	1	2.68	2.68	3.12	
Within groups	360	309.65	0.86		
<i>Search intention</i>					
Between groups	1	15.97	15.97	7.689 **	
Within groups	370	771.61	2.085		
<i>Purchase intention</i>					
Between groups	1	19.18	19.18	12.13 ***	
Within groups	370	585.36	1.582		

Table V.
One-way analysis of variance for effects of content use on psychographic and behavioral intention variables

market segment ($M = 5.74$, $SD = 0.87$, see Table V). The Content User segment agreed with statements about organic and sustainable agriculture, local buying, and the environmental impact of clothing production. The attitudes of members of the Content User market segment toward going out of their way to purchase organic or fair trade clothing ($M = 4.86$, $SD = 1.10$) was also significantly higher at the .001 level than the Non-User market segment ($M = 4.40$, $SD = 1.35$, see Table V). The Content User segment was somewhat in agreement that they would go out of their way to purchase organic or fairly traded clothing. There was no significant difference however, between the segments in terms of Self-Identity as organic or environmental consumers.

Behavioral beliefs and outcomes

Analysis of variance revealed that the Self-Centered Behavioral Beliefs of consumers in the Non-User segment was significantly lower ($M = 5.22$, $SD = 1.13$) than the Content User segment ($M = 5.54$, $SD = 1.04$, see Table V). Unlike the other segment, the consumers who did not use the organic content to determine their purchase likelihood only somewhat agreed that they would personally benefit from purchasing organic cotton clothing. There was no significant difference between the segments in terms of the mean Altruistic Behavioral Beliefs. Consumers in both segments were in agreement

that they might incur some costs but that others would benefit from the purchase of organic cotton apparel. In terms of the importance consumers placed on the benefit related outcomes of organic cotton apparel purchases, analysis of variance found there was also no difference between consumers in the two segments (see Table V).

Search and purchase intention

Both the Search and Purchase Intentions of the Content User segment were significantly higher than that of the Non-User segment (see Table V). Consumers in the Content User segment had a mean Search Intention of 5.04 (SD = 1.45), meaning they were somewhat likely to purchase organic clothing the next time they went shopping for apparel. The Non-User segment was only neutral to somewhat likely to purchase organic cotton apparel (M = 4.61, SD = 1.44). The Purchase Intention of the Non-User market segment was higher than the Search Intention but still significantly lower than the Purchase Intention of the Content User segment (see Table V). The Content User segment had a mean Purchase Intention that was significantly higher (M = 5.32, SD = 1.26) than the Non-User segment (M = 4.86, SD = 1.25), meaning both segments were somewhat likely to purchase organic clothing if they happened to find it the next time they went shopping for apparel.

Conclusions

The psychographic profiling of a market segment that uses organic content in their purchasing decisions reveals several main themes. These consumers are motivated by their beliefs about the beneficial outcomes of the purchase, for themselves, the organic industry, and the environment. One outcome of purchasing organic cotton apparel that consumers in both segments found important was “improving my health or the health of my family”. Unlike organic food producers, organic cotton apparel manufacturers and retailers do not typically make health related claims about their products. Nonetheless, these results suggest that organic cotton apparel benefits from the aura of health associated with organic food products. This conclusion is supported by the fact that the Self-Centered Behavioral Beliefs, which included this health related item, had a higher mean for both segments than Altruistic Behavioral Beliefs.

Another conclusion that can be drawn from the evaluation of the behavioral beliefs is that supporting organic farming in general was more important to consumers than supporting organic cotton farmers in particular or supporting pro-environmental apparel companies or retailers of organic products. This suggests that consumers would be receptive to marketing messages that place an emphasis on how the purchase of organic cotton apparel supports not just cotton farmers, but also the growth of organic farming in general. And because respondents agreed that organic farming is good for the environment, it is clear that marketing about how organic cotton apparel supports organic farming is another way to market the environmental benefits of purchasing organic cotton apparel. Finally, it is encouraging to producers of organic apparel products that even consumers in the Non-User segment agreed that the purchase of a quality product was an outcome of their organic cotton apparel purchase, given the importance of quality to consumers.

The main contribution of this study is the creation of a psychographic profile for specific market segment of consumers interested in purchasing blended organic cotton apparel. Consumers in the segment that used organic cotton content to form their

purchase intentions had positive attitudes toward organic and sustainable agriculture and were more concerned about the impact of clothing production on the environment than other consumers. They also preferred to “buy locally” and had a strong self-identity as environmental, organic, and socially responsible consumers.

Future research should focus on the exact nature of the health related benefits that consumer believe they and their families derive from the use of organic cotton apparel products, given that while general health related benefits are being touted by some retailers, of infant wear for example, there is not currently any objective research showing that organic apparel conveys health benefits to anyone beyond the producer and the producers’ family and community.

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