CONSUMER WILLINGNESS TO PAY FOR ETHICALLY PRODUCED COTTON

Sawssan Boufous
Darren Hudson
Carlos Carpio
Texas Tech University
Lubbock, Texas

Abstract

The United States is the largest importer of cotton apparel in the world and the largest supplier is China. The U.S. State Department among others have charged China with exploitation of the Uighur Muslim minority in forced labor in cotton farms and textile mills in Xingjian China. We examine the impact that information about this potential exploitation has on consumer WTP for denim jeans by country of origin (China, US, and ROW) using data collected from an online nationwide survey and a discrete-choice experiment. Random utility theory is the basis for the survey's responses analysis to obtain the WTP space (Scarpa et al., 2008) that is estimated by using simulated maximum likelihood procedures (Train, 2003). We expect that consumers will express an increased relative WTP for other origins other than China after exposure to the information regarding potential labor exploitation. Investigating preferences for ethically produced denim jeans opens the possibility for a better understanding of the economic value of ethical practices that is of interest to society, manufacturers, and the retailers who distribute those products (Tully and Winer, 2014) and also to open the debate on labor practices in the textile industry.

Introduction

Cotton is the most important textile fiber in the world representing 35% of all fibers produced (AGMRC, 2017). Behind China and India, the United States is the third-largest cotton producer in the world, and a key exporter participating by 38% of the raw cotton fiber exports (ERS, 2019). In 2017, U.S. cotton production was more than 20 million bales representing over 7 billion dollars in total value (ERS, 2019). Moreover, the U.S. cotton industry accounts for more than $21 billion in products and services annually, generating more than 125,000 jobs in the industry sectors from farms to textile mills (ERS, 2020).

However, from farming to manufacturing, cotton production has a consequential environmental impact (Garcia et al., 2019). Cotton not only consumes 16% of the world's pesticide and causes 45% of the global greenhouse gas emissions (Cottoninc, 2021) but it is also responsible for as much as 3% of the global water use (Cottoninc, 2021). In addition to these negative environmental impacts, cotton production has also negative social impacts relative to illegal or unsustainable labor practices (ERGON, 2008).

While the environmental sustainability of the textile industries is a growing concern, labor rights abuses continue to dominate reports and news articles about these industries (European Parliament, 2014). The growing demand in the fashion industry obliged companies to delocalize their production to low-cost countries with limited capacity to implement laws and regulations, and with the pressure on profitability, working hours, and wages that new technologies bring, there is a high risk that fundamental principles and rights at work will remain a distant aspiration for many employers and workers (ILO, 2019).

Investigations recounted many factors that contribute to forced labor and bonded labor, we can cite: " *Social exclusion, Asymmetric information; whereby illiterate workers are not aware of their rights and can be taken advantage of, Labour migration – particularly the situation of (irregular) migrant workers, who are commonly unaware but also unable to assert their legal labor rights, as non-registered workers,…, Coercion on the part of state authorities – such as the situation relating to cotton harvesting practices in Uzbekistan and Tajikistan where forced labor in the cotton industry has affected mainly women, children, and young students. During the planting and harvesting seasons, they are transported to the cotton fields and made to work for little or no remuneration. Coercion can be exercised through such penalties as threats of dismissing students from the university. Women are sent by families according to an established quota, whereas children take part in this compulsory work as part of their school curricula*." (ERGON, 2008). These predispositions were sufficient to create an increasing proportion of vulnerable workers leading to child-labor, labor-exploitation of migrants, refugees, unskilled individuals…etc. (ILO, 2019). The harsh conditions in which those workers perform their jobs have been qualified as "slave labor", and many scandals have emerged involving many famous textile and fashion brands. The most unfortunate one is the deadly industrial accident at the Rana Plaza

Disaster (Dhaka, Bangladesh) in 2013, where the entire eight-story building containing five clothing factories, a bank, and shops collapsed completely, killing 1138 workers and injuring over 2500. And we can numerate more ethical issues involving cotton production: immigrants, minorities, and children labor at all stages in the fashion industry: from the production of cotton seeds in Benin, harvesting in Uzbekistan, yarn spinning in India, to the different phases of putting garments together in factories across Bangladesh, and more recently, the forced-labor in cotton production in the Xinjiang region, China, of 1.8 million Uighurs and other Turkic and Muslim minorities. Reports qualify this forced labor system as the largest internment of an ethnic and religious minority since the second war (The Guardian, 2020).

Thus, environmental footprint and ethical issues related to cotton production provoked and continue to provoke many debates (ILO, 2019), and centralize discussions at many conventions and protocols encouraging sustainable development (Pierce and Barbier, 2002). As a consequence of all these debates and facts, numerous companies are orienting their production towards ethical practices (Jegethesan et al., 2012) as an answer to not only a growing demand for responsible goods but also to a self-initiative to contribute to the preservation of the environment.
These multiple ethical concerns that arose from the intensive cotton farming and its use in the textile industry - besides other fibers and crops- generated a new wave of ethical consumers who actively select products that are seen as less harmful to the environment and the society (Harper and Makatouni, 2002), which participated into stimulating retailers to become more aware of the need to be eco-friendly, socially conscious (Brown, 2010), and involved in ethical fashion (Shen et al., 2012). Accordingly, recent statistics estimated the global market for ethical fashion to nearly value $6.35 billion in 2019, with an expected growth to $8.25 billion in 2023, while in the United States, the market for sustainable products is expected to reach $150 billion by 2021 (Nielsen, 2018) where the segment of sustainable fashion is expected to be the fastest-growing region in the 2020-2030 forecast period (Research and Market, 2020). Many studies focused on this category of consumers and tried to elicit their purchase behavior given a specific ethical good or service, and researchers found that one out of five people is willing to pay more for products that are socially and environmentally responsible (Chi et al, 2019; Wessels, 2001).

The existence of this growing niche and their willingness to pay for such products represents an interesting new source of infinite competitive advantages that would benefit businesses (Chi et al., 2019) and encourage ethical production practices. Thus, confronting the social challenges in a win-win strategy where the consumer satisfies their utility in consuming socially and ethically responsible goods, and the producers minimize the harm on the environment and the society while maximizing profit in new markets (Ellis et al., 2012; Zheng and Chi, 2015).

There has been little research on people's ethical concerns and preferences when considering products produced under labor-exploitation. However, industry research has not examined the positive and negative impacts of perceptions of labor-exploitation on consumers' responses to cotton apparel. Further, little is known about the extent to which these ethical attributes influence people's cotton apparel purchase decisions. Therefore, and given that the U.S. State Department among others have charged China with exploitation of the Uighur Muslim minority in forced labor in cotton farms and textile mills in Xingjian China, we examine the impact that information about this potential exploitation has on consumer WTP for denim jeans by country of origin (China, US, and ROW). There are several reasons behind this choice for denim jeans as a prompt product for this study. First, denim jeans are a cultural icon (Kuik, 2004) that is commonly worn around the world (Jegethesan et al., 2012; Miller and Woodward, 2007, Herbst and Burger, 2010). Second, denim is made from 100% cotton (Cotton Mill, 2014). If many studies have focused on consumers' willingness to pay for ethical products, the majority have oriented their interest towards food products instead of apparel's ethical attributes. This might be explained by the fact that apparel consumption decisions are more complex and involve trade-offs between a variety of garment and ethical attributes (Jegethesan et al., 2012). Also, even if some manufacturers have already launched environmentally responsible denim jeans and that a flourishing market exists, little is known about the extent to which these functional, hedonistic, and ethical attributes influence purchase decisions (Jegethesan et al., 2012).

However, investigating preferences for ethically produced denim jeans opens the possibility for a better understanding of the economic value of ethical practices that is of interest to society, manufacturers, and the retailers who distribute those products (Tully and Winer, 2014 Tully and Winer, 2014). As every purchase is a proof of support or lack of support for how companies conduct business (Brosdhal, 2007; Shen et al., 2012), three hypotheses will be tested in this research:

(1) H_1: US consumers are willing to pay premiums for organic cotton made denim jeans
(2) H_2: US consumers prefer US made denim jeans over ROW made denim jeans
(3) H_3: US consumers are willing to pay for ethically produced denim jeans

Methods and Procedures

Revealed and stated preferences are two approaches that are used to study consumers' preferences for a given good. The first method, the revealed preferences, considers consumer's responses to model his preferences for market and non-market goods using techniques such as hedonic analysis and travel cost methods. Stated Preferences is a method that consists of collecting data from participants preferences in a hypothetical setting using the contingent valuation, contingent behaviour and choice experiments. However, the literature endorses the use of Stated Preferences Method, that it considers as the best performing method to estimate the demand for new products, products with new features, and/or ones not yet traded in the real market (Louviere et al., 2000). In fact, the study of Loureiro et al. (2003) shows that the Stated Preferences Method proofs indifference between survey responses, market behaviours of the same individuals, and the predicted market behaviour.

Therefore, given the nature of our product that is relatively new (ethical production), we collected and analyzed a stated preferences data to elicit consumers' preferences for ethically produced denim jeans.

Experiment and Survey Design

In practice, there are procedures that are the most used to estimate the economic value of consumers' preferences for a given product such as: personal interviews, written surveys, and experimental auctions (Umberger et al., 2000). Recently, experimental auctions gained a lot in popularity given their effectiveness in providing more credible measurements for consumers' willingness to pay than hypothetical surveys and in ensuring high response rates (Lusk et al., 1999). However, the method is not totally perfect, and presents some inconveniencies: it is a costly technique, time-consuming, can cause bias into bids, bids can also be influenced by other substitutes, zero biddings might be easy to observe (Lusk and Hudson, 2004), and also it limits the sample size which reduces its power in representativity of the total population. Therefore, to obtain consumers' WTP values for ethically produced denim jeans, this research uses a survey composed of dichotomous choice and choice-based questions, as it is the most commonly used method to elicit WTP along with auctions just discussed (Lusk and Hudson, 2004).

The most usually seen applications in surveys to obtain WTP are contingent valuation and choice-based experiments. In contingent valuation, individuals are asked to directly report their WTP to possess a specific good rather than inferring them from observed behavior in regular marketplaces (FAO). While in conjoint valuation, participants are asked to state their WTP for a non-market good that is traded in a hypothetical market (Mitchell and Carson, 1989). Various methods exist to conduct a conjoint analysis such as choice-based conjoint analysis, ratings-based conjoint analysis (Elrod et al., 1992), full-profile conjoint analysis, trade-off matrices, and paired-comparisons (Reibstein et al., 1988). The present research opts for the choice-based conjoint analysis (CBCA).

The CBCA is a prominent approach that is used in both academic research and marketing practice (Sichtmann et al., 2011, Struhl, 1994). In a typical Choice-Based Conjoint Experiment, a respondent is asked to choose an alternative from a competitive set of alternatives or choice set, each of which is a profile of a different combination of levels or values of a set of multiple attributes and repeats this task for a limited number of choice sets (Desarbo et al., 1995). In their paper that compares Rating-Based Conjoint Analysis to CBCA, Elrod et al., cite numerous advantages of the CBCA explaining that it is better in predicting choice behaviour and allows for a direct prediction of choice shares without using conjoint simulators (Elrod et al., 1992).According to Louviere, Hensher, and Swait (2000), product attributes can be varied in choice experiments enabling the effects of each attribute to be identified. The responses from choice experiments can be analyzed based on the random utility theory (Thurstone, 1927), and Lancaster's theory of utility maximization (Lancaster, 1966).

Thus, the Choice-Based Experiment method seems to be the most suitable technique to address our research objective which is to estimate consumers' WTP for ethically produced denim jeans-attribute. Moreover, using Choice-Based Experiments can predict participants' choices by determining the relative importance of various attributes in their choice process (Hanemann and Kanninen 1998). A Choice-Based Conjoint Experiment asks sampled individuals to choose their most preferred alternative from choice sets comprising of several alternatives with pre-specified attributes and individuals can be allowed to choose none of the alternatives in a given choice set. Each choice set has two alternatives (Denim jeans products A and B), and each product alternative is specified with three attributes (price, production systems, and country of origin) which levels differ from two to five. The attributes are discussed in detail in the following paragraphs and described in table 1.

Table 1. Attributes and levels

Attribute	Levels
Price	- $ 62 (30% Above the average market price) - $ 54 (20% Above the average market price) - $ 43 (Average market price for a regular denim jeans) - $ 34 (20% Below the average market price) - $ 22 (30% Below the average market price)
Production systems	- Conventional farming - Organic farming
Country of Origin	- USA - China - Other

The survey design includes two survey blocks. Each survey has one sequential choice experiment reflecting the current situation where consumers know the price, country of origin, and production systems attributes, to select denim jeans products. Each respondent needs to choose between two alternatives or neither option. The two blocks have the same survey questions and differ only in the information provided in the conjoint choice script. Block 1 is assigned to the two first surveys that have no cheap-talk on labor-exploitation but differ in the organic farming definition. One survey has the organic agriculture definition as described by USDA, the second one provides a generic definition of the attribute's level organic agriculture. Block 2 is assigned to the two other surveys having the same different definitions of organic agriculture, and a conjoint-choice script containing a cheap-talk on labor-exploitation. As presented above, our conjoint analysis contains three attributes that differ in levels, and below are their definitions.

Attribute 1: Price

The attribute "Price" has four levels that are below or above the average market price for a regular denim jeans; 10%, 20%, and 30%. The value of the average market price represents a weighted mean price for denim jeans around the US and was obtained by Cotton Incorporated using their "Retail Monitor" database. However, this average price is probably a little higher than the true average price as it is a little bit oversampled to higher-end retailers. For the levels we choose five levels differing from 20% to 30% above and below the average market price based on the price range provided by the first 10 retailers of denim jeans in the US. These levels were set based on the literature and a search on different retailers' market-prices for regular denim jeans.

Attribute 2: Production Systems

An agricultural system is an assemblage of components that are united by some form of interaction and interdependence and which operate within a prescribed boundary to achieve a specified agricultural objective on behalf of the beneficiaries of the system (FAO, 1989). For this attribute, we are considering two levels that refer to organic and conventional farming systems.

(1) Conventional production systems are defined as the uses of seeds that have been genetically altered using a variety of traditional breeding methods, excluding biotechnology, and are not certified as organic (USDA, 2015).

(2) Organic production systems as defined by USDA refer to the ecological production management system that promotes and enhances biodiversity, biological cycles, and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain, and enhance ecological harmony. Organic agriculture practices cannot ensure that products are completely free of residues; however, methods are used to minimize pollution from air, soil, and water (*USDA*).

Attribute 3: Country-of-Origin (COO)

The attribute "Country-of-Origin" refers to where the cotton fiber is processed or manufactured. We chose three levels as a potential origin for the cotton fiber used in jeans: The United States, China, and other countries (ROW).

The Cheap-talk

Recently the U.S State Department among others has charged China with the exploitation of the Uighurs Muslim minority in forced labor in cotton farms and textile mills in Xingjian China. We examine the impact that information

about this potential exploitation has on consumer WTP for denim jeans by country of origin (China, US, and ROW) using a concise, neutral, and short cheap-talk (75 words) on the scripts of two of our 4 surveys. In practice, a cheap-talk is a common technique that is used in stated preferences methods of nonmarket valuation to reduce hypothetical bias (Penn & Hu, 2019). Studies have demonstrated that short and neutral cheap-talks were efficacy in reducing the hypothetical bias (Aadland and Caplan, 2006). Given that WTP generated from hypothetical valuations are often greater in comparison to the premiums obtained from real and binding outcomes, findings prove that introducing cheap-talks are on average significant in reducing estimated values by about 20% compared to the baseline treatment without implementing cheap-talks (Penn & Hu, 2019).

The Experimental Question Design

SAS software is used to create the experimental question design. The combination of all attributes and levels for our experiment resulted in a total of 30 (2×3×5) possible product profiles and 435 possible choice scenarios (C_{30}^{2}). Where C_n^r denotes the number of unordered subsets of n objects taken r at a time (Hogg et al., 2001). Hence, fractional factorial designs were applied to choose 12 choice scenarios for each block. Finally, the design was blocked into two versions of the conjoint-choice script with the same survey questions, where each respondent was offered a twelve-choice scenario.

Survey Design

An online survey is administered and randomly sent to subjects nationwide. The panel of consumers is purchased from a marketing research company. This might cause a restriction in our sample to a certain segment of the population. The survey is organized into four parts that collect information about households: (1) socio-economic demographic characteristics, (2) Denim jeans purchase habits, (3) Knowledge, opinions, and experiences about cotton production and conservation techniques, (4) One sequential stated choice experiment to assess their preferences for the attributes.

Methods

Random utility theory is the basis for the survey's responses analysis (Thurstone, 1927). To do so, Louviere, Hensher, and Swait (2000) mentioned three factors that need to be taken into consideration: 1) the choice set, 2) the observed attributes and decision rules of combining them, 3) and the model of individuals' choice and behaviour and its distribution patterns in the population.

Let U_{iqt} be the utility derived from the q^{th} alternative in the t^{th} choice occasion for the i^{th} individual, according to the random utility theory, this can be written as:

$$U_{iqt} = V_{iqt} + \varepsilon_{iqt} \quad (1)$$

Where: i=1, …,I; t=1,…,T; q=1,…,Q; V_{iqt} is the systematic component of the utility, and $\varepsilon_{iqt}$is the random component that represents the unobserved factors not included in V_{iqt} such as consumers' perceptions or their knowledge level. It is also assumed to be independent and identically distributed, and distributed extreme value and the variance of ε_{iqt}can differ among consumers such as: $Var(\varepsilon_{iqt}) = k_i^2(\frac{\pi^2}{6})$, where k_i is a scale parameter corresponding to consumer *i*. Intuitively, this consumer-specific scale parameter reflects the variability of utility across choice situations (Train and Weeks, 2005). We can formulate U_{iqt} as:

$$U_{iqt} = -\alpha_i p_{iqt} + \beta'_i X_{iqt} + \varepsilon_{iqt} \quad (2)$$

Where: the β_i and α_i are individual-specific utility parameters corresponding to the nonprice and price attributes, respectively. Dividing equation (1) by the scale parameter k_i results in a new error term (e_{iqt}) with constant variance ($\frac{\pi^2}{6}$) that corresponds to the traditional indirect utility model in preference space (Train and Weeks, 2005):

$$U_{iqt} = -(\alpha_i/k_i)p_{iqt} + (\beta_i/k_i)'X_{iqt} + (\varepsilon_{iqt}/k_i)$$

$$U_{iq} = -\gamma_i p_{iqt} + \tau_i' X_{iqt} + e_{iqt} \quad (3)$$

Because the WTP for an attribute is the ratio of the attribute's coefficient to the price coefficient, $W_i = {}^{\tau_i}/_{\gamma_i}$, equation (3) can be re-parameterized if we multiply and divide τ_i by γ_i.

$$U_{iq} = -\gamma_i p_{iqt} + (\gamma_i W_i)' X_{iqt} + e_{iqt} \quad (4)$$

Which is called the model in WTP space, and $W_i$is the vector of WTP values for all the attributes (Train and Weeks, 2005). We adopted the model in WTP space instead of the model in preference space because this approach tends to fit data better and results in more plausible estimates of the WTP values for the nonprice attributes (Scarpa, Thiene, Train, 2008). The subject will choose the choice *q* over *j* only if : $U_{iqt} > U_{ijt}$ (4), for all j ≠ q∈B, where B is the choice set available for subjects, so this implies:

$$V_{iqt} + \varepsilon_{iqt} > V_{ijt} + \varepsilon_{ijt} (5),$$

If rearranged:

$$V_{iqt} - V_{ijt} > \varepsilon_{ijt} - \varepsilon_{iqt} \quad (6)$$

Given that $\varepsilon_{ijt} - \varepsilon_{iqt}$ is not observable, equation (6) cannot be specified too. Therefore, it is only possible to estimate the probability of the condition where $V_{iqt} - V_{ijt} > \varepsilon_{ijt} - \varepsilon_{iqt}$occurs as it is shown by equation (7), where:(Pr_{iqt}) is the probability that an individual *i* will prefer choice *q* rather than choice *j*:

$$Pr_{iqt} = \Pr\left[(\varepsilon_{ijt} - \varepsilon_{iqt}) < (V_{iqt} - V_{ijt})\right] = \Pr\left[\varepsilon_{ijt} < \varepsilon_{iqt} + V_{iqt} - V_{ijt}\right] \quad (7)$$

The Independence-from-Irrelevant Alternatives (IIA) axiom states that introducing a third irrelevant, alternative X into a choice set {A, B} will not change the original preferred status between A and B. It implies that the ratio of the probabilities of choosing one alternative over another (given that both alternatives have a non-zero probability of choice) is unaffected by the presence or absence of any additional alternatives in the choice set (Louviere, Hensher, and Swait, p. 44, 2000). These IIA conditions allow to compute the choice model and introduce or eliminate the alternatives from choice sets without re-estimation. IIA also implies that the random elements in the utility function such as *S*, *ψ*, and *ε* to be independent across alternatives and identically distributed. Therefore, if we are assuming that the errors are distributed according to the extreme value type 1 distribution (Louviere, Hensher, and Swait, p. 45, 2000) such as: $(\Pr(\varepsilon_{ijt} \leq \varepsilon) = \exp(-exp - \varepsilon) = e^{-e^{-\varepsilon}}$, the equation (7) then can be rewritten as:

$$Pr_{iqt} = \Pr\left(\varepsilon_{ij} < b + V_{iqt} - V_{ijt}\right)$$

$$= \prod_{j=1}^{J} \exp\left(-exp - \left(b + V_{iqt} - V_{ijt}\right)\right) = \exp(-b) \exp\left[-\sum_{j=1}^{J} exp - (b + V_{iqt} - V_{ijt})\right] \quad (8)$$

∀ j ≠ q, and b is a given value for ε_{iqt} .

Thus, given the assumption that each e_{iqt} is i.i.d extreme value, the probability that consumer *i* chooses alternative *q* in choice occasion *t*, conditional on the coefficient vector θ_i=[$\gamma_i W_i'$]', (Revelt and Train, 1998) is :

$$Pr_{iqt} = \frac{\exp(V_{iqt}(\theta_i))}{\sum_q \exp(V_{iqt}(\theta_i))} \quad (10)$$

Where $V_{iqt}(\theta_i) = -\gamma_i p_{iqt} + (\gamma_i W_i)' X_{iqt}$, furthermore, conditional on θ_i, the probability of consumer i's observed sequence of T choices is then (Train, 1998):

$$S_i(\theta_i) = \prod_t P_{iq(i,t)t}(\theta_i)$$

Where q(i,t) denotes the specific alternative *q* that consumer *i* selects in choice occasion *t*. the coefficient vector θ_i is unobserved for each consumer *i* and varies in the population with density $f(\theta_i|\Gamma)$ where the parameters of the distribution of θ_i are Γ. Thus, the unconditional probability of the observed choice sequence is as follows:

$$P_i(\Gamma) = \int S_i(\theta_i) f(\theta_i|\Gamma) d\theta_i$$

The loglikelihood function for all n consumers is $LL(\Gamma) = \Sigma_i \, lnP_i(\Gamma)$. The estimation will be carried out using simulated maximum likelihood procedures using SAS software (Rigby and Burton, 2006; Train, 1998,2003). Regarding the distribution of the coefficients in θ_i, the price coefficient will be specified to be lognormal, and the WTP distributions for all nonprice attributes were assumed to be normal.

Results

Summary of sociodemographic characteristics

Analysis of respondent demographics showed that the typical shopper is a white (74%) married female (53%), aged between 25 and 44 years old, who had some college(34%) and annually earns more than $100,000 (25%).

Apparel shopping habits

The survey shows that 33% of the respondents shop once per month or only when needed for themselves and their friends or family. They also prefer to shop in-store (67%) rather than online (32%), and among all denim products, they would buy denim jeans (79%). Respondents were also asked how important a set of attributes were and how often they were checking some labels while shopping for apparel, and results show that labels that were checked most of the time were: fiber content (42%), country-of-origin (35%). For the labels: environmental impact, fair trade, and organic, 25% of the respondents state to check them only sometimes during their shopping for apparel.

Regarding attributes, the attribute price is considered as the most important one by 68% of the respondents, followed by the attribute toxin-free dye (40%), and the attribute country of origin of apparel (33%). The rest of the attributes: water use/ conservation techniques, sustainability, country-of-origin of fiber, designer/store brand, carbon/greenhouse gas emission, and certified organic, are seen to be slightly important by about 30%, which is consistent with previous studies on apparel product attributes that found price and country/brand of origin, were among the most important attributes for the consumer (Davis, 1987; Martin, 1971; Dickerson, 1987; Jin et al., 2009).

Knowledge, experiences, and opinions

To assess their experience, respondents were asked how familiar they were with: agriculture, conservation techniques, organic production, and irrigation systems, if they have or are currently working in /owning a cotton farm, cotton mill, an apparel store, and if they have ever bought, traded, or sold raw cotton. 27% of respondents did, while 28% affirm to have taken one or more courses in agriculture, fashion industry, cotton, and/or irrigation technology.

Opinions about environmental damage and brands' action

Results show that 40% of the respondents perceive cotton and denim production (from growing to manufacturing and dying) as not harmful or has an insignificant impact on the environment, while activities like running machines, dying, and manufacturing polyester are seen as having significant damage to the environment.

However, 50% of the respondents give moderate importance to a brand's action regarding the environment while only 26% consider it as extremely important, and the almost same proportion (24%) think that is not important at all.

Overall, our descriptives show that respondents seem to be not aware of the environmental harm caused by cotton production, but they are showing interest in sustainability. Also, they have a complex apparel purchase decision process is; it is not only determined by the attribute price but by also other attributes and labels relative to the product features.

Conditional Logit Results

To analyze the impact of the information on Uighurs Muslims' forced labor in cotton farms and textile mills in Xingjian China on US consumers' purchase of denim jeans, we employ a conditional logit regression approach.

Table 2: Results of the conditional logit model in willingness to pay space

Parameter	Estimate	Std. Errors	Pr>t
ASC	-2 .3056	0.0655	<.0001*
Production Systems	0.0661	0.0318	0.0375**
COO USA	0.7901	0.0401	<.0001*
COO China	-0.4826	0.0426	<.0001*
Price	-0.0435	0.001230	<.0001*

The result shows that the price coefficient is statistically significant and negative, as expected, since utility declines with higher prices. Production systems estimate is statistically significant and positive as expected too and supports the hypothesis H_1, stating that respondents prefer denim jeans made of cotton organically produced to ones made of conventionally produced one. The coefficient of the ASC variable is negative and statistically significant suggesting that participants would rather choose one of the two alternatives than neither option. The coefficient of the variable US as country of origin is statistically significant and positive and shows that respondents have a preference for US-made denim jeans over those manufactured elsewhere, and are willing to pay a $ 19 premium, thus, we fail to reject the hypothesis H_2. Regarding China as the country of origin of denim jeans, the coefficient is statistically significant but negative as expected, which means that respondents are asking for a discount of $14 to purchase denim jeans made in China. Therefore, it appears that respondents tend to be sensitive to the labor conditions under which their apparel is manufactured and prefer US-made denim jeans to China made denim which manufacture involve minorities' labor-exploitation.

Conclusion and Discussion

In recent years, an increasing number of firms and brands have begun to make more efforts to relieve the effects the textile and apparel industry has on natural and human resources and fulfill the growing demand for ethically produced apparel. The present research sought to examine the impact of information on labor-exploitation in cotton farms and textile mills have on US consumers' purchase decisions and our findings indicate that U.S. consumers express preferences for ethically produced denim jeans. By exploring production systems attributes, our result is in concordance with previous findings where consumers were ready to pay more for apparel made of organic fiber (Hustvedt and Bernard, 2008; Hustvedt, 2006, Ellis et al., 2012). However, if some studies found larger premiums for production systems attribute than the country of origin attribute (e.g. Hustvedt and Bernard, 2008), our research demonstrates the contrary since a larger premium was offered for the attribute the US as COO than for cotton organically produced.

Respondents expressed a preference for US-made denim jeans compared to denim jeans made in ROW, which is in line with previous findings such as Ha-Brookshire and Norum (2011) who showed that US consumers were willing to pay over a 17 percent premium for a shirt made of US-grown cotton, compared to cotton without the COO display. Also, studies suggested that COO is often a proxy for quality (Insh and McBride, 2004) and consumers from developed countries tend to prefer their home products (Watson and Wright, 2000). This preference was explained in the literature by the COO effect which refers to a consumer's dependency on COO when forming opinions on the quality of a product (Han and Terpstra, 1988). Ha-Brookshire and Yoon (2012) found that when consumers see a product "Made in the USA," compared to a product "Made in China," they may perceive the US product to be higher in quality and value in addition to the fact that the United States of America is considered as a strong brand (Adina, 2015). Also, Drozdenko and Jensen (2009) attempted to translate the COO effect into prices and found that US consumers were willing to pay a 37 percent premium for US-made shoes and a 105 percent premium for US-made toothpastes, compared to the same products made in China.

Since studies proved that pre-conceived opinions on COO have an effect on consumers' purchase decision a country image can thus, be viewed as an asset when it has a positive connotation and as a liability when it is associated with negative elements (Lampert & Jaffe, 1998). The relationship between country-of-origin and willingness to buy a product can be moderated by affinity or animosity. Findings suggest that consumers are less interested to actually buy a product manufactured in a country for which they have a deep feeling of animosity (Ha-Brookshire and Yoon, 2012). Animosity is defined as "the remnants of antipathy related to previous or ongoing military, political or economic events" (Klein et al., 1998, p. 90). So, introducing a cheap-talk on the Uighurs minority labor-exploitation to our survey script, allowed consumers to express their opinion about this issue through their WTP, and thus show their support to ethically produced apparel which explains the negative coefficient of the attribute China. This result is consistent with Drozedenko and Jensen (2009) who found that price premiums were positively correlated with the amount of exposure to negative news about Chinese products.

Our knowledge of the key factors driving the U.S. consumers' purchase intention towards ethically made denim jeans apparel is limited. Furthermore, the empirical findings of consumer purchase intention towards other environmentally friendly products cannot be simply generalized to denim jeans. Consequently, further research is needed to depict how much consumers are valuing the attribute country-of-origin of garments rather than the whole product. It will be also interesting to test the effect of cheap-talks on other labor-conditions (such as minimum wage, incarcerated-individuals' labor in the apparel industry…etc.) on the purchase decision. However, our results imply that businesses need to assess where and how their materials and products are grown and manufactured, and make sure they meet the quality and sustainability standards. They need also to give more attention to the "Made in the US" and "Organic" attributes given the market opportunity they present in the denim jeans market segment and develop their communication regarding their ethical practices.

References

A.K. Chapagain, A.Y. Hoekstra, H.H.G. Savenije, R. Gautam, The Water Footprint of Cotton Consumption: An Assessment of the Impact of Worldwide Consumption of Cotton Products on the Water Resources in the Cotton Producing Countries, Ecological Economics, Volume 60, Issue 1, 2006, pp 186-203

Aadland, D., and Caplan, A.J., Cheap Talk Reconsidered: New Evidence from CVM, Journal of Economic Behavior & Organization, Vol. 60, Issue 4, 2006, Pages 562-578

Adina, C., Capatina, G., and Stornescu, R.D., Country-of-Origin Effects on Perceived Brand Positioning, 2d Global Conference on Business, Economics, Management and Tourism, 30-31 October 2014, Prague, Czech republic, Procedia Economics and Finance, Vol.23, 2015, pp 422-427

Agricultural Marketing Resource Center, Cotton, 2017, in: Https://Www.Agmrc.Org/Commodities-Products/Fiber/Cotton

Agrilife, Crop Profile for Cotton in Texas, March 2009, in: Http://Agrilife.Org/Aes/Files/2010/06/Crop-Profile-For-Cotton-In-Texas2.Pdf

Aguilar Francisco X.; Richard P. Vlosky, Consumer Willingness to Pay Price Premiums for Environmentally Certified Wood Products in the U.S., Forest Policy and Economics, 9 May, 2007, pp 1100-1112

Ancel, J., Jeans with Justice: One Stitch at a Time Freedom of Association, Cornell University, 2006, Ithaca, NY

Arbuthnot, J., The Roles of Attitudinal and Personality Variables in the Prediction of Environmental Behavior and Knowledge, Environment and Behavior, Vol. 9, Issue 2, 1977, pp 217-232.

Auger P.; Devinney, T.M., Do What Consumers Say Matter? The Misalignment of Preferences with Unconstrained Ethical Intentions, Journal of Business Ethics, Vol 76, Issue 4, 2007, pp 361-383

B.L. MacCarthy, and P.G.S.A. Jayarathne, Sustainable Collaborative Supply Networks in the International Clothing Industry: A Comparative Analysis of Two Retailers, Production Planning & Control, Vol.23, Issue 4, 2012, pp. 252-268

Banerjee, B., and Mckeage, K., How Green is My Value: Exploring the Relationship Between Environmentalism and Materialism, In NA-Advances In Consumer Research, Vol. 21, Eds. Chris T. Allen and Deborah Roedder John, Provo, UT: Association For Consumer Research, 1994, Pp 147-152

Banerjee, S., Martin, S.W., Roberts, R.K., Larson, J.A., Hogan Jr., R.J., Paxton K.W., and Reeves, J.M., Adoption of Conservation-Tillage Practices and Herbicide-Resistant Seed in Cotton Production, AgBioForum, Vol 12, Issue 3&4, 2009, pp 258-268

Barnett, C, Clarke, N, Cloke P, and Malpass, A., The Political Ethics of Consumerism, Consumer Policy Review, Vol. 15, Issue 2, 2005, pp. 45–51

Ben-Akiva M., Bierlaire M., Discrete Choice Methods and their Applications to Short Term Travel Decisions. In: Hall R.W. (eds) Handbook of Transportation Science. International Series in Operations Research & Management Science, Vol 23, 1999, Springer, Boston, MA

Berges, M., Casellas, K., Rodriguez, R., and Errea, D., Willingness to Pay for Quality Attributes of Fresh Beef Implications on the Retail Marketing, 2015 Conference, August 9-14, 2015, Milan, Italy 211330, International Association of Agricultural Economists.

Block, H.D. and Marschak, Jacob, Random Ordering and Stochastic Theories of Response, Cowles Foundation Discussion Papers, Cowles Foundation for Research in Economics, Yale University, No. 66, 1959.

Bong Ko, S. And Jin, B., Predictors of Purchase Intention Toward Green Apparel Products: A Cross-Cultural Investigation in the USA and China, Journal of Fashion Marketing And Management, Vol. 21, No. 1, 2017, pp. 70-87.

Breidert C., Hahsler M., Reutterer T., A Review of Methods for Measuring Willingness to Pay, Innovative Marketing, Vol.2, Issue , 2006, pp. 8-32

Brosdahl, D.F.C, The Consumption Crisis, in Hoffman, L. and Earth Pledge, (Eds), Future Fashion-White Papers, Grey Barberco, Lincoln Park, NJ, 2007

Brown, S., 2010, Eco Fashion, Laurence King, London.

Butler, S.M., and Francis, S., The Effects of Environmental Attitudes on Apparel Purchasing Behavior, Clothing and Textiles Research Journal, Vol. 15 No. 2, 1997, pp. 76-85

Carrigan, M. & Attalla, A., The Myth of The Ethical Consumer - Do Ethics Matter, Journal of Consumer Marketing, Vol. 18, Issue 7, 2001, pp. 560-578.

Castillo M. J., and Carpio E. C., Demand for High-Quality Beef Attributes in Developing Countries: The Case of Ecuador, Journal of Agricultural and Applied Economics, 2019, pp.1-23

Chico, D., Aldaya, M. M., and Garrido, A., A Water Footprint Assessment of a Pair of Jeans: The Influence of Agricultural Policies on The Sustainability of Consumer Products, Journal of Cleaner Production, Vol. 57, 2013, pp 238-248

Cotton Leads, Carbon Footprint and Air Quality-United States, in: https://cottonleads.org/sustainable-production/carbon-footprint-united-states/

CottonInc., Advances in Pesticides, in: https://www.cottoninc.com/about-cotton/sustainability/pioneers-of-progress/introduction/agriculture/#:~:text=The%20global%20cotton%20industry%20accounts,corn%2C%20account%20for%2035%25

Creyer, E. H., and Ross, W. T., The Impact of Firm Behaviour on Purchase Intention: Do Consumers Really Care About Business Ethics?, The Journal of Consumer Marketing, Vol. 14, 1997, pp. 421-432

D'Ambrogio, E., Workers' Conditions in the Textile and Clothing Sector: Just an Asian Affair?, European Parliament Research Service, Briefing, August 2014, in: https://www.europarl.europa.eu/EPRS/140841REV1-Workers-conditions-in-the-textile-and-clothing-sector-just-an-Asian-affair-FINAL.pdf

Davis , L.L., Consumer Use of Label Information in Ratings of Clothing Quality and Clothing Fashionability, Clothing and Textiles Research Journal, Vol.6, No.1, 1987, pp 8-14

Davis, L.L., Consumer Use of Label Information in Ratings of Clothing Quality and Clothing Fashionability, Clothing and Textiles Research Journal, Vol. 6, Issue 1, 1987, pp 8-14

De Pelsmacker, P., Driesen, L., and Rayp, G., Do Consumers Care about Ethics? Willingness to Pay for Fair-Trade Coffee, Journal of Consumer Affairs, Vol. 39, Issue 2, 2005, pp 363-386

Desarbo, W.S., Ramaswamy, V., Cohen, S.H., Market Segmentation with Choice-Based Conjoint Analysis, Marketing Letters, Volume 6, Issue 2, 1995, pp 137-147

Dickerson, K.G., Relative Importance of Country of Origin as an Attribute in Apparel Choices, Journal of Consumer Studies and Home Economics, Vol. 11 No. 4, 1987, pp. 333-43

Dickson, M.A, Utility of No Sweat Labels for Apparel Consumers: Profiling Label Users and Predicting their Purchases, The Journal of Consumer Affairs, Vol 35, No 1, 2001, pp 96-120

Dorfman, R., and Steiner, P.O., Optimal Advertising and Optimal Quality, The American Economic Review, Vol. 44, No. 5, 1954, pp. 826–836

Drozdenko, R.,and Jensen, M., Pricing Strategy & Practice: Translating Country-of-Origin Effects into Prices, Journal of Product and Brand Management, Vol.18, No. 5, 2009, pp 371-378

Eckman, M., Damhorst, M.L., and Kadolph, S. J., Toward a Model of the In-Store Purchase Decision Process: Consumer Criteria for Evaluating Women's Apparel, Clothing and Textiles Research Journal, Vol. 8, Issue 2, 1990, pp 13-22

Eckman, M., Damhorst, M.L., and Kadolph, S.J., Toward a Model of the In-Store Purchase Decision Process: Consumer Criteria for Evaluating Women's Apparel, Clothing and Textiles Research Journal, Vol.8, No.2, 1990, pp 13-22

Economic Research Service-USDA, Cotton Sector at A Glance, November 2020, in: Https://Www.Ers.Usda.Gov/Topics/Crops/Cotton-Wool/Cotton-Sector-At-A-Glance/

Elliott, K. A., and Freeman, R.B., Can Labor Standards Improve under Globalization?, Washington, DC: Institute For International Economics, 2003

Ellis, J., Mccracken, V., Skuza, N., Insights into Willingness to Pay for Organic Cotton Apparel, Journal of Fashion Marketing and Management International, Vol. 16, 2012, pp 290-305

Ellis, J.L., McCraken, V.A., and Skuza, N., Insights into Willingness to Pay for Organic Cotton Apparel, Journal of Fashion Marketing and Management: An International Journal, Vol. 16, Issue 3, 2012, pp 290-305
Ellis, J.L., McCracken, V.A., and Skuza, N., Insights into Willingness to Pay for Organic Cotton Apparel, Journal of Fashion Marketing and Management, Vol. 16, No. 3, 2012, pp. 290-305

Elrod, T., Louviere, J.J., and Davey, K. S., An Empirical Comparison of Ratings-Based and Choice-Based Conjoint Models, Journal of Marketing Research, 1992, pp 368

Engle, Katie Jo, Nelson, Audrey, Zhao, Zihui, and Chi, Ting, Impact Of Life Cycle Assessment (LCA) Labelling on US Consumers' Purchase Intentions Toward Sustainable Denim Jeans, International Textile and Apparel Association (ITAA) Annual Conference Proceeding, Vol.72, 2018.

Ergon, Literature Review and Research Evaluation Relating to Social Impacts of Global Cotton Production for ICAC Expert Panel on Social, Environmental and Economic Performance of Cotton (SEEP), July 2008, in: https://ergonassociates.net/wp-content/uploads/2011/06/literature_review_july_2008.pdf

FAO, Chapter 3. Furrow Irrigation, in: http://www.fao.org/3/S8684E/s8684e04.htm

FAO, Introduction and General Description of the Method of Contingent Valuation at http://www.fao.org/3/X8955E/x8955e03.htm

FAO, Farming Systems Development: Concept, Methods, Applications, Food and Agriculture Organization of the United Nations, Rome, 1989.

Ficner J., Ethics and Values Best Practices: Timberland. 2010, in: Http://I-Sight.Com/Best-Practice/Ethics-And-Values-Timberland/

Ganak, J., Chen, Y., Liang, D., and Chi, T., Key Factors Influencing Consumer Intent to Recycle Denim Apparel: A Study of U.S. Millennials, International Textile and Apparel Association (ITAA) Annual Conference Proceedings, Vol.104, 2018

Garcia, S., Cordeiro, A., De Alencar N., I., and De Oliveira Costa Neto, P. L., The Sustainability Awareness of Brazilian Consumers of Cotton Clothing, Journal of Cleaner Production, Vol 215, 2019, pp 1490-1502

Gianni, C., Del Giudice, T., and Scarpa, R., Consumers' Perception of Quality in Organic Food: A Random Utility Model Under Preference Heterogeneity and Choice Correlation from Rank-Orderings, British Food Journal, Vol. 104 Issue 3/4/5, 2002, pp.200-213

Goworek, H., Social and Environmental Sustainability in the Clothing Industry: A Case Study of a Fair Trade Retailer, Social Responsibility Journal, Vol.7, No.1, 2011, pp. 74-86

Gray, D., Are all Denim Blue Jeans Made of 100% Cotton?, Cotton Mill, 2014, in: https://www.cottonmill.com/blog/are-all-denim-blue-jeans-made-of-100-cotton/

Grebitus C., Streiner, B, Veeman, M., Paying for Sustainability: A Cross-Cultural Analysis of Consumers' Valuations of Food and Non-Food Products Labeled for Carbon and Water Footprints, Journal of Behavioral and Experimental Economics, Vol. 63, 2016, pp 50-58

Greene, W. H., Econometric Analysis, 2003, Prentice-Hall.

Gregory GD., and Di Leo M., Repeated Behavior and Environmental Psychology: The Role of Personal Involvement and Habit Formation in Explaining Water Consumption, Journal of Applied Social Psychology, Vol 33, 2003, pp 1261-1296

Ha-Brookshire, J. and Yoon, S., Country of Origin Factors Influencing US Consumers' Perceived Price for Multinational Products, Journal of Consumer Marketing, Vol. 29 No. 6, 2012, pp. 445-454

Ha-Brookshire, J., and Yoon, S. , Country of Origin Factors Influencing US Consumers' Perceived Price for Multinational Products, Journal of Consumer Marketing, Vol. 29, No. 6, 2012, pp. 445-454

Ha-Brookshire, J.E., and Norum, P.S., Willingness to Pay for Socially Responsible Products: Case of Cotton Apparel, Journal of Consumer Marketing, Vol.28, No.5, 2011, pp 344-353

Han, C., Terpstra, V. Country-of-Origin Effects for Uni-National and Bi-National Products, Journal of International Business Studies, Vol. 19**,** 1988, pp 235–255

Harper, G.C., and Makatouni, A., Consumer Perception of Organic Food Productions and Farm Animal Welfare, British Food Journal, Vol.104, 2002, pp. 287-299

Harper, G.C., and Makatouni, A., Consumer Perception of Organic Food Production and Farm Animal Welfare, British Food Journal, Vol. 104, Issue 3-5, 2002, pp 287-299

Herbst, F. And Burger, C., Attributes Used by Young Consumers When Assessing a Fashion Product: A Conjoint Analysis Approach", Journal of Family Ecology and Consumer Sciences, Vol. 30, 2010, pp. 40-45

Hiller Connell, K.Y., Internal and External Barriers to Eco-Conscious Apparel Acquisition, International Journal of Consumer Studies, Vol 34, Issue 3, 2010, pp 279-286

Hoekstra, Chapagain, A.K., Water Footprints of Nations: Water Use by People as a Function of Their Consumption Pattern, Water Resources Management. Vol 21, Issue 1, 2006, pp 35-48

Hustvedt, G., and Bernard, J.C., Consumer Willingness to Pay for Sustainable Apparel: The Influence of Labelling for Fiber Origin and Production Methods, International Journal of Consumer Studies, Vol 32, 2008, pp 491-498

Hustvedt, G., Consumer Preferences in Blended Organic Cotton Apparel, PhD Dissertation, Kansas State University, 2006

Hwang, C.G., Lee, Y.A. and Diddi, S, Generation Y's Moral Obligation and Purchase Intentions for Organic, Fair-Trade, and Recycled Apparel Products, International Journal of Fashion Design, Technology and Education, Vol.8, No.2, 2015, pp 97-107

Insch, G., McBride, J., The Impact of Country-of-Origin Cues on Consumer Perceptions of Product Quality: A Binational Test of the Decomposed Country-of-Origin Construct, Journal of Business Research, Vol.57, Issue 2, 2004, pp.256-265

International Labour Organization, The Future of Work in Textiles, Clothing, Leather and Footwear, Working Paper No.326, 2019

Jegethesan, Kavisha; Joanne N. Sneddon, and Geoffrey N. Soutar, Young Australian Consumers' Preferences for Fashion Apparel Attributes, Journal of Fashion Marketing and Management, Vo. l, Issue 16, Issue 3, 2012, pp 275-289

Jin, B., Yong Park, J., and Sang Ryu, J. , Comparison of Chinese and Indian Consumers' Evaluative Criteria when Selecting Denim Jeans: A Conjoint Analysis, Journal of Fashion Marketing and Management, Vol. 14 No. 1, 2010, pp. 180-194.

Kalish, S., and Nelson, P., A Comparison of Ranking, Rating and Reservation Price Measurement in Conjoint Analysis, Marketing Letters, Vol. 2, 1991, pp. 327-335

Kempen, L., Muradian, R., Sandoval, C., and Castaneda, J., Too Poor to be Green Consumers? A Field Experiment on Revealed Preferences for Firewood in Rural Guatemala, Ecological Economics, Vol. 68, No 7, 2009, pp 2160-2167

Khan, Z. Reza., Rodrigues, G., and Balasubramanian, S., Ethical Consumerism and Apparel Industry - Towards a New Factor Model, 33rd International Business Research Conference, World Business Institute, Australia, 2016, pp. 1-14.

Kim, H.S, and Damhorst, M.L., Environmental Concern and Apparel Consumption, Clothing and Textiles Research Journal, Vol.16, No.3, 1998, pp.126-134

Kim, S., Littrell, M.A., and Paff Ogle, J.L., The Relative Importance of Social Responsibility as a Predictor of Purchase Intentions for Clothing, Journal of Fashion Marketing and Management, Vol.3, No.3, 1999, pp. 207-218

Kim, Y.K., Forney, J., and Arnold, E., Environmental Messages in Fashion Advertisements: Impact on Consumer Responses, Clothing and Textiles Research Journal, Vol.15, No.3, 1997, pp.147-154

Klein, J., Ettenson, R., andMorris, M., The Animosity Model of Foreign Product Purchase: An empirical test in the People's Republic of China, Journal of Marketing, Vol. 62, Issue 1, 1998, pp. 89-100

Kohli, R., and Mahajan, V. A, Reservation-Price Model for Optimal Pricing of Multiattribute Products in Conjoint Analysis, Journal of Marketing Research, Vol. 28, Issue 3, 1991, pp. 347-354

Kozar, J. M., and K.Y. Hiller Connell, Socially and Environmentally Responsible Apparel Consumption: Knowledge, Attributes, and Behaviors, Social Responsibility Journal, Vol 9, Issue 2, 2013, pp 315-324

Kozar, J. M., and K.Y. Hiller Connell, Socially Responsible Knowledge and Behaviors: Comparing Upper- Vs. Lower-Classmen, College Student Journal, Vol 44, Issue 3, 2010, pp 279-293

Kozar, J. M., and K.Y. Hiller Connell, Sustainability in the Apparel and Textiles Industry: A Conceptual Paper Addressing Previous Findings and Areas of Future Research, in: Robinson, Jr. L (Eds) Marketing Dynamism and Sustainability: Things Change, Things Stay the Same…Developments in Marketing Science, Proceedings of the Academy of Marketing Science, Springer, Cham, 2015

Kozar, J. M.; K.Y. Hiller Connell, Barriers to Socially Responsible Apparel Purchasing Behavior: Are Consumers Right?, Proceeding of Academy of Marketing Science World Marketing Congress, Vol.15, 2011, Reims, Champagne, France

Krovetz, H., The Effect of Water-Use Labelling and Information on Consumer Valuation for Water Sustainable Food Choices in California, University of California at Berkeley, Berkeley, California, 2016

Kuik, O., Fair Trade and Ethical Labeling in the Clothing, Textiles, and Footwear Sector: the Case of Blue Jeans, Journal of International and Comparative Law, Vol. 11, No. 3, 2004, pp. 619-34

Kwan, C.Y., Yeung, K.W. and Au, K.F., A Statistical Investigation of the Changing Apparel Retailing Environment in China, Journal of Fashion Marketing and Management, Vol. 7 No. 1, 2003, pp. 87-100

Lal Almas, A. C., and Warminski, P., Reducing Irrigation Water Demand with Cotton Production in West Texas, Selected Paper for Presentation at The Southern Agricultural Economics Association Meetings Mobile, Alabama, February 4-7, 2007

Lampert, S.I., and Jaffe, E.D., A Dynamic Approach to Country-of-Origin Effect, European Journal of Marketing, Vol. 32, No. 1 & 2, 1998, pp. 61-78
Lancaster, K., A New Approach to Consumer Theory, Journal of Political Economy, Vol.74, Issue:1, 1966, pp. 132-157

Laroche, M., Bergeron, J., and Barbaro-Forleo, G., Targeting Consumers Who are Willing to Pay More for Environmentally Friendly Products, Journal of Consumer Marketing, Vol. 18 No. 6, 2001, pp. 503-20

Le Gall-Ely, M., Definition, Measurement and Determinants of the Consumer's Willingness to Pay: A Critical Synthesis and Directions for Further Research, Recherche et Applications en Marketing (French Edition), SAGE Publications, Vol.24, Issue: 2, 2009, pp.91-113

Lee, E., Dress to Be Seen, ATA Journal, Vol. 13, No. 3, 2002, pp. 78-79

Luce, R. D., Individual Choice Behavior. Newyork, NY: Johnwiley & Sons, Inc, 1959

Manski, F. C., The Structure of Random Utility Models, Theory and Decisions, Vol. 8, 1977, pp 229-254

Martin, C.R. Jr, What Consumers of Fashion Want to Know: A Study of Informational Requirements and Buying Behavior, Journal of Retailing, Vol. 47, No. 4, 1971, pp. 65-94

Mc Fadden, S., Garment Worker Study, Marymount University, Center of Ethical Concerns, IRC Survey Research group, Arlington, TX, 1995

Mcfadden, D., Conditional Logit Analysis of Quantitative Choice Behavior, Zarembka, P. (Ed.), Frontiers in Econometrics, New York: Academic Press, 1974, pp. 105-142

Mclean, F.P., Roper, L.L., and Smothers, R., Imported Versus Domestic Blouses: Women's Preferences and Purchase Motives, Home Economics Journal, Vol 14, Issue 3, 1986, pp 306-313

Mekonnen, M.M., and Hoekstra, A.Y., The Green, Blue and Grey Water Footprint of Farm Animals and Animal Products, Vol.1, Main Report, UNESCO-IHE, 2010

Miller, D. And Woodward, S., Manifesto for a Study of Denim, Social Anthropology, Vol. 15, No. 3, 2007, pp. 335-51

Mohr, Lois A., Webb, and Deborah J., The Effects of Corporate Social ResponsibilityPrice on Consumer Responses, Journal of Consumer Affairs, Vol. 39, Issue.1, 2005, pp 121-147

Nassivera, F., Troiano, S., Marangon, F., Sillani, S., and Nencheva, I. M., Willingness to Pay for Organic Cotton: Consumer Responsiveness to a Corporate Social Responsibility Initiative, British Food Journal, Vol.119, Issue 8, 2017, pp.1815-1825

Natural Resources Conservation Service, Cover Crops Definition, in: https://plants.usda.gov/about_cover_crops.html

Nielsen, Was 2018 the Year of the Influential Sustainable Consumer?, 2018, in: https://www.nielsen.com/us/en/insights/article/2018/was-2018-the-year-of-the-influential-sustainable-consumer/

North, E., De Vos, R., and Kotze, T., The Importance of Apparel Product Attributes for Female Buyers, Journal of Family Ecology and Consumer Sciences, Vol 31, 2010, pp 41-51

O'Cass, A., An Assessment of Consumers Product, Purchase Decision, Advertising and Consumption Involvement in Fashion Clothing, Journal of Economic Psychology, Vol. 21, 2000, pp 545-576

Penn, J., and Hu, W., Cheap Talk Efficacy under Potential and Actual Hypothetical Bias: A Meta-Analysis, Journal of Environmental Economics and Management, Vol. 96, 2019, pp 22-35

Pollin, R., Burns, J., and Heintz, J., Global Apparel Production and Sweatshop Labour: Can Raising Retail Prices Finance Living Wages?, Cambridge Journal of Economics, Vol. 28, No.2, 2002, pp. 153-171

Pomarici, E., Asioli, D., Vecchio, R., and Naes, T., Young Consumers' Preferences for Water-Saving Wines: an Experimental Study, Wine Economics and Policy, Vol. 7, 2018, Pp 65-76

Radhakrishnanm S., Sustainable Cotton Production, Sustainable Textiles: Life Cycle and Environmental Impact, Woodhead Publishing, Cambridge , UK, 2017, Pp 21-67

Research and Markets, Global Ethical Fashion Market 2020-30: COVID-19 Growth and Change, December 17th, 2020, in: https://www.globenewswire.com/news-release/2020/12/17/2146698/0/en/Global-Ethical-Fashion-Market-2020-30-COVID-19-Growth-and-Change.html

S. Lauer, M.R. Sanderson, D.T. Manning, J.F. Suter, R.A. Hrozencik, B. Guerrero, and B. Golden, Values and Groundwater Management in the Ogallalla Aquifer Region, Journal of Soil and Water Conservation, Vol 73, Issue 5, 2018, pp 593-600

Safaya, S., Zhang, G., and Mathews, R., Toward Sustainable Water Use in the Cotton Supply Chain: A Comparative Assessment of the Water Footprint of Agricultural Practices in India, C & A Foundation, Water Footprint Network, May 2016

Saphores, J.D. M., Nixon, H.,. Ogunseitan, A.O., and Shapiro, A. A., California Households' Willingness to Pay for Green Electronics, Journal of Environmental Planning and Management, Vol. 50, 2007, pp. 113-133

Sauri, D., Water Conservation: Theory and Evidence in Urban Areas of the Developed World, Annual Revue of Environmental Resources, Vol. 38, 2013, pp 227-248

Sellers-Rubio, R, Nicolau-Gonzalbez, J.L., Estimating the Willingness to Pay for a Sustainable Wine Using a Heckit Model, Wine Economics Policy, Vol. 5, Issue 2, 2016, pp 96-104

Shen, B., Wang, Y., Lo, C.K., and Shum, M, The Impact of Ethical Fashion on Consumer Purchase Behaviour, Journal of Fashion Marketing and Management, Vol. 16, No.2, 2012, pp.234-245

Shen, B., Wang, Y., Lo, C.K.Y, and Shum, M., The Impact of Ethical Fashion on Consumer Purchase Behavior, Journal of Fashion Marketing and Management, Vol. 16, No 2, 2012, pp. 234-345

Shim, S., Environmentalism and Consumers' Clothing Disposal Patterns: An Exploratory Study, Clothing and Textiles Research Journal, Vol.13, No.1, 1995, pp.38-48

Sichtmann, C., Wilken, R., and Diamantopoulos, A., Estimating Willingness to Pay with Choice-based Conjoint Analysis: Can Consumer Characteristics Explain Variations in Accuracy?, British Journal of Management, Vol. 22, 2011, pp 628-645

Siegle, L., Ethical Living Where are the Incentives to Go Green?, UK: The Guardian, 2012

Sondhi, N., Singhvi, S.R., Gender Influences in Garment Purchase: An Empirical Analysis, Global Business Review, Vo.l 7, Issue 1, 2006, pp 57-75

Struhl, S., Discrete Choice Modeling: Understanding a 'Better Conjoint than Conjoint.', Quirks Marketing Research Review, Vol. 8, Issue 6, 1994, pp 12

Suki, N.M., Young Consumer Ecological Behaviour: The Effects of Environmental Knowledge, Healthy Food, and Healthy Way of Life with the Moderation f Gender and Age, Management of Environmental Quality, Vol. 24, No.6, 2013, pp.726-737

Tallontire, A., Rentsendorj, E. and Blowfield, M., Ethical Consumers and Ethical Trade: A Review of Current Literature, NRI Policy Series 12, Working Paper, 2001, in: https://gala.gre.ac.uk/id/eprint/11125/

Terrell, B., Johnson, P.N., and Segara E., Ogallala Aquifer Depletion: Economic Impact On The Texas High Plains, Water Policy, Vol. 4, Issue 1, 2002, pp. 33-46

The Cooperative Bank, Ethical Consumerism Report 2010: Ethical Shopping through the Downturn, The Cooperative Bank, Manchester, 2010

The Guardian, Virtually Entire Fashion Industry Complicit in Uighur Forced Labour Say Rights Groups, July 23rd, 2020, in: https://www.theguardian.com/global-development/2020/jul/23/virtually-entire-fashion-industry-complicit-in-uighur-forced-labour-say-rights-groups-china

Tomolillo, D., and Shaw, D., Underssing the Ethical Issues in Fashion : A Consumer Perspective, in Bruce M.Moore, C., and Birtwistle, G. (eds), International Retail Marketing: A Case Study Approach, Elsevier Butterworth-Heinemann, Oxford, 2004, pp 141-152

Tully S.M., and Russel S. W., The Role of the Beneficiary in Willingness to Pay for Socially Responsible Products: A Meta-Analysis, Journal of Retailing, Vol. 90, Issue 2, 2014, pp 255-274

USDA,USDA Coexistence Fact Sheets: Conventional Farming, United States Department of Agriculture, February 2015

Van Dooren, R., La Laguna: Of Exporting Jeans and Changing Labour Relations, Journal of Economic and Social Geography, Vol. 97, No.5, 2006, pp. 480-490

Vecchio, R., and Pomaricii, E., An Empirical Investigation of Rewards' Effects on Experimental Auctions Outcomes, Applied Economics Letters, Vol 20, Issue 14, 2013, pp 1298-1300

Wang, T., R. Venkatesh, and Chatterjee, R., Reservation Price as a Range: An Incentive-Compatible Measurement Approach, Journal of Marketing Research, Vol. 44, No. 2, 2007, pp. 200-213.

Watson, J.J., and Wright, K., Consumer Ethnocentrism and Attitudes Toward Domestic and Foreign Products, European Journal of Marketing, Vol. 34, No. 9 & 10, 2000, pp. 1149-1166

Weigel, R.H., Ideological and Demographic Correlates of Pro-ecological Behavior, The Journal of Social Psychology, Vol. 103, No. 1, 1977, pp. 39-47

Wertenbroch, K., and Skiera, B., Measuring Consumers' Willingness to Pay at the Point of Purchase, Journal of Marketing Research, Vol. 39, No. 2, 2002, pp. 228-241

Wessels, C., European Consumers Want Socially Responsible Products, The Corporate Social Responsibility Magazine Europe, Vol. 1, 2001, pp 2-10

Zhang, Y., Chinese Consumers' Evaluation of Foreign Products: The Influence of Culture, Product Types and Product Presentation Format, European Journal of Marketing, Vol. 30 No. 12, 1996, pp. 50-68

Zhang, Y., Liu, X., Xiao, R., and Yuan, Z., Life Cycle Assessment of Cotton T-Shirts in China, The International Journal of Life Cycle Assessment, 2015, Vol 20, pp 994-1004

Zheng, Y., and Chi, T., Factors Influencing Purchase Intention Towards Environmentally Friendly Apparel : An Empirical Study of US Consumers, International Journal of Fashion Design, Technology and Education, Vol.8, No.2, 2015, pp.68-77