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# Willingness to pay for organic cotton

## Consumer responsiveness to a corporate social responsibility initiative

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to a CSR  
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1815

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### Abstract

**Purpose** – Consumers seem to be increasingly concerned about the environmental and social consequences of their purchases. For this reason, companies are involved in corporate social responsibility (CSR) strategies for their supply chain to responsibly manage the consumption of the environmental resources and to support sustainability. The purpose of this paper is to contribute to a better understanding of the Italian organic apparel consumer by investigating the importance of consumers' attitudes towards CSR in agricultural products processing industries and their willingness to pay (WTP) for organic cotton clothing.

**Design/methodology/approach** – Questionnaire data were gathered in Italy on a Likert scale. Questions focussed on WTP for organic cotton, with the aim to test consumer responsiveness to a CSR initiative in Italy. A structural equation model is proposed to shed some light into this relatively unexplored area.

**Findings** – One of the direct implications of the authors' study is that companies in apparel industry should try to improve their social and environmental performance to elicit the desired consumer responses.

**Originality/value** – This implies important managerial implications for new marketing strategies. If consumers' perception of CSR practices drives their behavioural intention, firms will be motivated to be involved and to invest in socially responsible practices.

**Keywords** Consumer behaviour, Corporate social responsibility, Organic cotton, Organic production, LISREL

**Paper type** Research paper

### 1. Introduction

Organic cotton is cotton that has been produced using methods that are free from most synthetic chemical inputs, such as pesticides, herbicides and chemical fertilisers (Myers and Stolton, 1999), in contrast to conventional cotton, which is mainly characterised by massive utilisation of synthetic chemicals. Throughout recent years, there has been an upsurge in organic cotton products, which have experienced considerable growth in the apparel sector.

Although cotton is an economically important crop for many countries and is grown worldwide, organic cotton is still a small component of total production, presently produced in countries on all arable continents. In total, there are 19 countries growing organic cotton, with the top five growing countries (India, China, Turkey, Kyrgyzstan and USA) accounting for more than 92 per cent of production. In 2015, 112,488 million tons of organic cotton were produced from 350,033 hectares of certified organic land. India alone accounts for 67 per cent. The number of organic cotton initiatives is constantly growing, and with this the number of involved farmers. In 2015, about 190,000 organic farmers were registered in these countries (Textile Exchange, 2016).

In 2014, Textile Exchange commissioned a life cycle assessment of organic cotton and found significant, measurable environmental benefits over conventional cotton (Textile Exchange, 2014). In 2015, by growing organic instead of conventional cotton, farmers potentially saved 218 billion



litres of water, about 289 million kilowatts of energy and 92.5 million kg of carbon dioxide; they also avoided the use of genetically modified seeds and toxic chemicals.

Numerous studies have found that consumers seem to be increasingly concerned about the environmental and social consequences of their purchases. Moreover, international trading companies and clothing processing industries have established corporate social responsibility (CSR) strategies for their supply chain to manage the consumption of the environmental resources responsibly and to support sustainability (Illge and Preuss, 2012; Koszewska, 2010).

Despite recent media attention, increased levels of consumer concern and data evidencing this phenomenon, it is not clear if it is another fashion trend or if there is a segment of consumers genuinely interested in purchasing organic cotton apparel based on the benefits of social responsibility in agricultural product processing.

Several studies that have analysed socially responsible consumers (or ethical consumers) in relation to sustainable apparel suggest that the topic is complex and can be approached from a variety of perspectives (e.g. Goworek, 2011; Hwang *et al.*, 2015; Kim *et al.*, 1999; Shen *et al.*, 2012; Suki, 2013; Zheng and Chi, 2015).

A number of studies have analysed socially responsible consumers' preferences regarding organic cotton apparel. A revealed preference experimental auction methodology was chosen to determine consumers' willingness to pay (WTP) for organic vs conventional cotton t-shirts, along with a follow-up survey. Participants were students who are regular consumers of apparel products (Ellis *et al.*, 2012).

A conjoint analysis by Hustvedt and Dickson (2009) revealed that consumers who found used organic cotton content salient had positive attitudes towards organic and sustainable agriculture, preferred to "buy locally" and had a strong self-identity as environmental, organic and socially responsible consumers. A discrete choice conjoint approach was chosen by Oh and Abraham (2016) to study whether consumer knowledge of organic cotton and relevant issues influenced attitudes towards and price acceptance of organic cotton clothing. Their results indicated that moderately and highly knowledgeable participants were more willing to buy organic cotton clothing at higher price points and that they had a more positive attitude towards organic cotton clothing than did participants with low knowledge levels. In addition, a stepwise regression and mean comparisons were used by Ha-Brookshire and Norum (2011) to investigate significant factors influencing consumers' WTP a premium for three different socially responsible products: organic cotton, sustainable cotton and locally grown cotton shirts. Their findings showed relationships among attitudes, product evaluative criteria, demographic characteristics and WTP a premium for socially responsible cotton apparel. Moreover, Gam *et al.* (2010) used a buying scenario experiment to identify the consumer characteristics related to willingness to purchase and selection of children's organic cotton clothing. It was found that a mother's environmental concerns, environmental purchasing and recycling behaviour significantly affected engagement with organic cotton clothing. However, mothers were not willing to pay a premium to purchase children's organic cotton clothing.

In another study, the researchers found that a potential credence attribute of interest in apparel products was fibre type, with the emphasis on sustainable fibres (Hustvedt and Bernard, 2008); the apparel products can thus be labelled as having been made with organic fibres. The certification of "organic made" at the fibre level is attached to the product through every step of processing. This certification, which connects the product to a specific farm, can be used to identify the origin of the fibre.

Nevertheless, only a few published studies have dealt with the relationship between consumers' attitudes towards CSR and their WTP for organic cotton apparel products. Hustvedt and Bernard (2010) examined how consumer WTP changes for apparel products when labour-related and brand details were added. By using a Tobit analysis of auction bids, they showed that positive attitudes towards social responsibility and fair trade

increased the amount of money that consumers were willing to pay for apparel products featuring labour-related information. Van Doorn and Verhoef (2011) proposed that buying organic products depends on both individual motives (i.e. higher quality, healthfulness) and other-oriented motives (i.e. prosocial benefits). Gupta and Hodges (2012) explored perceptions of Indian consumers regarding CSR in the apparel industry, and investigated its importance in the apparel decision-making process. Respondents indicated that CSR was important in terms of buying apparel, but they did not necessarily want to pay unreasonably high prices for the sake of social responsibility.

Carter and Jennings (2004) coined the term purchasing social responsibility (PSR) to refer to the involvement of the purchasing function in CSR. They argued that PSR has the characteristics of CSR, but differs from it because of the purchasing manager's distinct interaction with a broad set of stakeholders, including buyers, suppliers, contractors, the community and internal employees in most of the other functional areas of the company. While some of these activities may overlap with the general CSR of the firm, the purchasing manager occupies a distinct role in garnering support from and coordinating with other groups for socially responsible conduct in the company's relationship with suppliers. Studies of consumers' increasing awareness found that health and environmental concerns, together with trust of organic product claims and desirability of organic products attributes, lead to a greater willingness to adopt lifestyles that are more environmentally friendly (Voon *et al.*, 2011).

To the best of our knowledge, no previous studies have supported the correlation between consumers' propensity to engage in organic cotton apparel-purchasing behaviour and attitudes and beliefs regarding CSR.

The aim of this paper is to contribute to a better understanding of the Italian organic apparel consumer by using structural equation modelling to investigate the importance of consumers' attitudes and beliefs regarding CSR in the agricultural product-processing industries and their WTP for organic cotton (OG) clothing.

The remainder of the paper is structured thus: Section 2 reviews the theoretical background of the research framework and illustrates the proposed model; Section 3 describes the method used to analyse consumer attitudes towards CSR, defined and proposed as an enhancer of company performances, and WTP for organic cotton clothing; in Section 4, the results are discussed. Finally, we draw some general conclusions and implications for practice and future research.

## 2. Research framework

Consumers' attitudes towards CSR are determined by their beliefs that the product fulfils certain functions and that it satisfies some of their needs (Kalafatis *et al.*, 1999). In terms of perceived value theory, CSR can be viewed as an attribute that provides functional, emotional and social value to customers (Green and Peloza, 2011). This particular aspect of consumers' attitudes in this study was investigated and measured through items selected from the cited studies and then modified to fit the context of our research.

Consumer responsiveness to CSR as an enhancer of company performance has been proposed in various studies (Webb and Mohr, 1998). Results indicated that corporate credibility had a significant impact on consumer attitudes towards a brand and on purchase intentions. High CSR led to a higher evaluation of the company than did low CSR, and company evaluation significantly influenced evaluation of a company's product. For this reason, in our study, consumer responsiveness to CSR was investigated and measured according to the valid and reliable existing measurement scale proposed by Mohr and Webb (2005).

A large body of research exists on consumers' WTP for environmental friendliness and/or quality/safety in food production (Husted *et al.*, 2014), as well as for non-food products (Laroche *et al.*, 2001; Sexton and Sexton, 2014; Vlosky *et al.*, 1999) or services (Johnston *et al.*, 2013; Tse, 2001). Price premiums, the excess paid over and above the "fair"

price justified by the “true” value of a product, may be indicators of consumers’ demand for that product (Tse, 2001). WTP responses may reflect individuals’ attitudes towards the CSR adopted by companies. Respondents who are unfavourably disposed towards CSR may be less willing to pay for a product made by a company regardless of the price offered and their level of income. A large proportion of the variability in WTP may simply be a function of whether respondents believe that CSR adopted in the apparel industry is an equitable means to achieving environmental improvements. WTP for organic cotton apparel can be a good predictor of demand for these products. Consumers are highly fragmented in terms of their level of environmental awareness and willingness to choose higher-priced environmentally oriented products. Laroche *et al.* (2001) argue that consumer attitudes towards the environment are very good predictors of their WTP more for green products. However, there is limited information about how much consumers are willing to “sacrifice” for such products (Uchida *et al.*, 2014). It is true that the validity of WTP results often depends on the measurement method followed. In this study, a single-item measurement scale for WTP is proposed to evaluate the acceptability of a premium price for organic cotton apparel from a company committed to supporting sustainability.

### 3. Research methodology

Starting from these premises, this study proposes a theoretical model that analyses the relationships between latent constructs. The theoretical framework is summarised in Figure 1, showing the proposed causal relationships between attitude of consumer towards CSR, consumer responsiveness to considering CSR as an enhancer of company performance (CSRP), consumer responsiveness to considering CSR as an enhancer of company performance in the apparel industry (CSRAI) and WTP for organic cotton clothing.

Referring to the measurement scale described for each latent construct, we propose in the model the following hypothesis:

- H1. The attitude of the consumer towards CSR has a significant impact on CSRP.
- H2. The attitude of the consumer towards CSR has a significant impact on CSRAI.
- H3. The attitude of the consumer towards CSR positively affects WTP for organic cotton clothing.
- H4. CSRP has a positive impact on WTP for organic cotton clothing.

Following these considerations, the following additional assumptions are proposed:

- H5. CSRP has a positive impact on CSRAI.
- H6. CSRAI has a positive impact on WTP for organic cotton clothing.

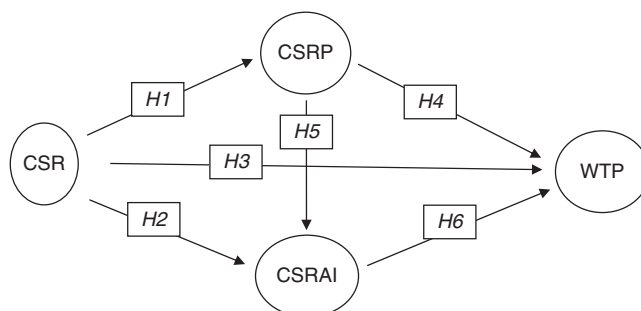


Figure 1.  
The proposed model

The empirical analysis is articulated in the following three steps: questionnaire design, pilot testing, and sampling and data collection.

The questionnaire was divided into three main sections. The first section investigated attitudes of respondents towards CSR. The second section was dedicated to respondents' WTP for organic cotton apparel (e.g. a t-shirt). The third section was dedicated to collecting socio-economic data about the respondents. Respondents were required to answer 19 questions, and were asked to rate the degree of importance of a number of indicators. A five-point Likert-scale was used, in which 1 represented "strongly unimportant" and 5 represented "strongly important".

#### 4. Results

After constructing the questionnaire, 30 participants were involved in a pilot test. The survey was conducted in the Friuli Venezia Giulia Region, in the northeast of Italy, between January and March 2013. About 400 questionnaires were distributed and 364 responses were collected (286 face-to-face interviews were also conducted by the same interviewer and 78 self-report questionnaires were completed on the spot, in light of the opportunity to collect them simultaneously). All questionnaires were successfully completed and deemed suitable for the data analysis. All respondents were shoppers at a sports department store, because our aim was to depict consumers' in-store experience, given that emotional state may affect a shopper's behaviour after the decision to shop has been made. Of the 364 respondents, 209 were women. All relevant age groups were represented. In terms of education, 52 per cent of the respondents had successfully completed high school and 30 per cent held a university degree. More than half of the respondents (51 per cent) had an understanding of CSR and 98 per cent of them were willing to purchase sustainable products. The great majority (76 per cent) stated that CSR should be taken into consideration in order to increase an industry's profits.

Data analysis was carried out using confirmatory factor analysis (CFA) to examine the fit, reliability and validity of the measurement model. Thereafter, the hypotheses were tested via a structural equation model (SEM) because this method is more suitable for making explicit the latent structure of the causal relationships (Cohen *et al.*, 1990). The CFA for each measurement model was estimated using maximum likelihood to identify the four latent constructs. The standardised factor loadings of each measurement item ( $\lambda$ ), the reliability (Cronbach's  $\alpha$  coefficient) and average variance extracted (AVE) of each latent factor are presented in Table I.

The Cronbach's  $\alpha$  of each construct is above the general guideline of 0.70, which indicates a high level of reliability or internal consistency in the measurement items (Nunnally, 1994). The AVE for each construct is above or very close to the cut-off point of 0.50, which suggests convergent validity (Hair *et al.*, 2010). The CFA results indicate that the measurement model possesses adequate fit and its associated measurement items are valid and reliable. It is possible to proceed with the formal implementation of the model and testing of the hypotheses.

The SEM was implemented with linear structural relationships (LISREL), using the LISREL 9.1 software (Jöreskog and Sörbom, 2013).

The fit indexes of the proposed model are introduced in order to verify how well the hypothesised model reproduces the observed covariance matrix, using the goodness of fit index (GFI) and adjusted goodness of fit index (AGFI), both proposed by Jöreskog and Sörbom (2001), and incremental fit indexes: the normed fit index (NFI) proposed by Bentler and Bonnet (1980), the non-normed fit index (NNFI), as proposed by Bollen (1990), the comparative fit index (CFI), proposed by Bagozzi (1992) and the root mean square error of approximation (RMSEA), proposed by Browne and Cudeck (1993). The proposed fit indexes are summarised in Table II.

BFJ 119,8	Constructs and items	Labels	$\lambda$	$\alpha$	AVE
<b>1820</b>	Attitude of consumer towards corporate social responsibility (CSR)			0.77	0.49
	Relationships with employees	D3a	0.29		
	Relationships with customers and suppliers	D3b	0.35		
	Relationship with the local community	D3c	0.56		
	Environment protection	D3d	0.69		
	Consumer responsiveness to consider CSR as enhancer of company Performance (CSR <sub>P</sub> )			0.85	0.55
	Strengthening the company's reputation	D5a	0.56		
	Improving relationships with suppliers	D5b	0.55		
	Improving relationships with the local community	D5c	0.52		
	Acquisition of commercial advantages	D5d	0.57		
	Improving access to finance	D5e	0.26		
	Consumer responsiveness to consider CSR as enhancer of company performance in apparel industry (CSRAI)			0.94	0.86
	Relationships with the local community	D7a	0.44		
	Respect for human rights	D7b	0.75		
	Environment protection	D7c	0.91		
	Willingness to pay for organic cotton clothes (WTP)				
Willingness to pay for organic cotton t-shirt	D8-1	1.15			

**Table I.**  
Reliability and AVE  
of latent constructs

Global fit indexes	Value	GDL
GFI	0.82	
AGFI	0.81	
NFI	0.90	
NNFI	0.92	
CFI	0.94	
RMSEA (test of close fit)	0.070	
$\chi^2$	165.41	59
$\chi^2$ /GDL	2.80	

**Table II.**  
Main indexes of  
model fitting

The results indicated a good fit between the model and the observed data and allowed analysis of the assumptions of the hypothesis. Table III provides the path coefficient standardised estimates and corresponding *t*-values of the main direct effects.

The existence of direct causal effects among the latent variables CSR, CSR<sub>P</sub>, CSRAI and WTP is confirmed by the fit indexes from the SEM analysis. The incremental fit indexes give an indication of the good adaptation of the conceptual model: 0.90 for NFI, 0.92 for NNFI and 0.94 for the CFI. An analysis of the indexes of the residues also provides useful

Hypothesis	Estimate (Standardized $\gamma$ )	SE	<i>t</i>
Direct effects			
(H1) CSR → CSR <sub>P</sub>	0.69	0.48	5.76
(H2) CSR → CSRAI	0.89	2.04	3.05
(H3) CSR → WTP	0.08	0.04	1.98
(H4) CSR <sub>P</sub> → WTP	-0.02	0.47	-1.19
(H5) CSR <sub>P</sub> → CSRAI	-0.27	0.07	-2.25
(H6) CSRAI → WTP	0.16	0.25	2.27

**Table III.**  
Direct effects  
between constructs

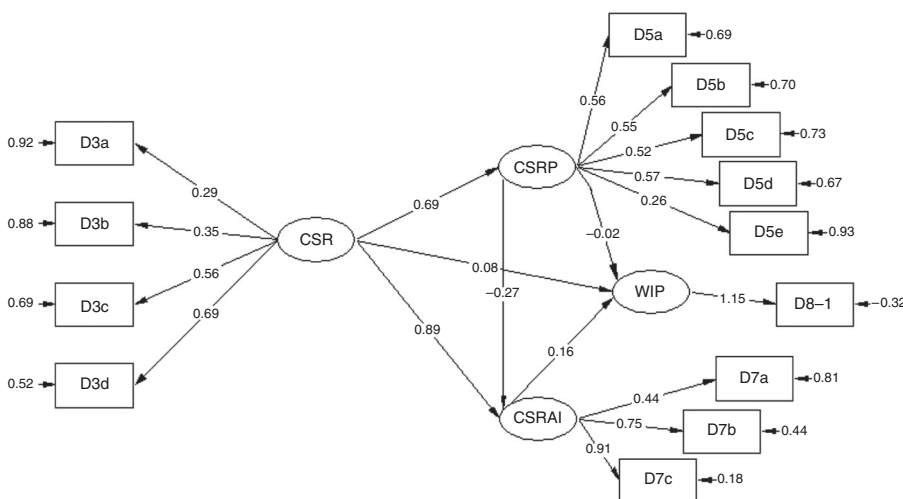
insights regarding model fit. Shifting attention to the RMSEA the value of 0.07 is an acceptable indicator of adaptation.

Of the six hypothesis, five are supported and one is rejected. The relationship between attitude of consumer towards CSR and consumer responsiveness to considering CSR as an enhancer of company performance is positively significant ( $\gamma = 0.69, t = 5.76$ ), supporting *H1*. The consumer's positive attitude towards CSR enhances consumer responsiveness towards considering CSR as an enhancer of company performance ( $\gamma = 0.89, t = 3.05$ ). The consumer's positive attitude towards CSR positively affects WTP for organic cotton clothing ( $\gamma = 0.08, t = 1.98$ ), supporting *H3*. The relationship between consumer responsiveness to considering CSR as an enhancer of company performance and WTP for organic cotton clothes is statistically not significant ( $\gamma = -0.02, t = -1.19$ ), failing to support *H4*. However, consumer responsiveness towards CSR as an enhancer of company performance positively affects WTP for organic cotton clothes ( $\gamma = 0.16, t = 2.27$ ). In supporting the hypotheses, the model depicts the particular responsivity of consumers to product attributes related to environmental sustainability, as expressed by the CSR initiative in the apparel industry.

Figure 2 presents the path analysis with its standardised estimates of the indicators of causal relationships between variables.

### 5. Conclusions

According to the results of the data analysis obtained via CFA, the four constructs have good reliability. The analysis conducted with LISREL made it possible to test the hypothesis proposed in the model via several fit measures, which suggested a good model fit, according to the thresholds proposed in literature. One of the key advantages of using an SEM is that it offers the possibility of estimating causal effects among the latent constructs (Bollen and Liang, 1989). Analysing the estimates of the causal relationships, the findings strongly support hypotheses *H1-H3, H5* and *H6* and may contribute to a better understanding of consumer behaviour in relation to organic cotton apparel. One of the direct implications of our study is that companies in the apparel industry should try to improve their social and environmental performance, and communicate their efforts to the public, if they want to



**Figure 2.**  
Path analysis of  
the proposed model

**Notes:**  $\chi^2 = 165.41$ ;  $df = 59$ ;  $p\text{-value} = 0.00000$ ;  $RMSEA = 0.070$



enlarge their presence in the organic cotton apparel market and elicit the desired consumer response of boosting their WTP a premium price. Another crucial implication is that companies can adopt a CSR programme and “over-comply” with environmental regulation for several reasons, two of which seem particularly strong. One main reason is to move ahead of a foreseeable trend in which both legislation and consumers’ preferences become stricter. This can be interpreted as risk management. The other main reason is to use environmental reputation to gain market share from less environmentally friendly competitors (Heal, 2005). As a result, a company may generate interest in environmental sustainability; the pure market effects emerge from a company that has done just what it was supposed to do. Market forces, in fact, include win/win opportunities to increase revenues with environmentally responsible consumers, such as consumers willing to pay a higher price as a premium for environment friendly products, cost reductions from improving the efficiency of resource use, labour market advantages with employees who have green preferences and opportunities to reduce the cost of capital from green investors (Arora and Gangopadhyay, 1995; Lutz *et al.*, 2000). For a firm to understand how to promote behavioural change, it needs to understand how people respond, sometimes imperfectly, to non-price factors. According with Cerin (2006), firms are usually reluctant to adopt a green technology because of its higher-than-average costs. However, small groups of environmentally minded consumers, who are willing to pay higher prices for green products, can provide a market niche for green firms with a small market share, eventually forcing overall adoption of the greener technology in an industry. Reinders and Bartels (2016) argue that organic brands have become increasingly important as an offering through which retailers can differentiate themselves. In this sense, organic farming and organic cotton apparel are relatively new phenomena and very few people around the world are aware of their beneficial impacts on the environment and human health. Besides, organic cotton is relatively expensive in comparison to conventionally produced cotton and hence WTP for the two types of cotton apparel differs among individuals. In order to encourage organic farming and the production of organic cotton clothes, a market for organic cotton depends on knowing what factors influence consumers’ awareness and their WTP for organic products. Once such factors are ascertained, farmers will be better equipped to market their organic products. These results will provide key information for the organic cotton apparel industry that will help to promote organic cotton products. Even if sustainability is a prominent issue that is increasingly affecting product development in the clothing sector, ultimately it has a relevant impact upon consumer behaviour in terms of selection, purchase, maintenance and disposal of apparel. Increasing awareness of both environmental and social sustainability impacts in recent decades has led to escalating concern, in business and in society in general, about the effect of current levels of consumption. As demonstrated by Low and Davenport (2006), sustainable consumption, as a significant aspect in the behaviour of ethical consumers, has the potential to change the world. Key methods of sustainable consumption are the selection of sustainable products, boycotts of unsustainable products (particularly with regard to social sustainability) and anti-consumption (Harrison *et al.*, 2005).

The purchasing of sustainable clothing may be an unattainable goal at present, and academics and practitioners need to recognise the complexity of the differences in purchasing behaviour for clothing and that for other product sectors. Finally, although consumer demand clearly contributes directly towards sustainable consumption, the clothing industry also has a key role to play in developing products that both meet and stimulate this demand, within and beyond the guidelines of governmental policies. These insights stress the need for a more interpretive approach to sustainable clothing. Relevant policies and legislation could be implemented to force the clothing industry to a form of apparel production that is environmentally sustainable. Defining sustainable

clothing as apparel that incorporates either environmentally or socially sustainable aspects during the product development or production stages of their life cycle could overcome certain barriers that prevent producers and consumers from engaging more widely with products that incorporate sustainable features based on life cycle thinking. This research has the aim of proposing insights into the complexity of buyer decision making in the clothing sector and the impacts of consumers and producers on the environment and society. Consumers' environmental preferences play an important role in environmental protection. If consumers' perception of CSR practices drives their behavioural intentions, firms will be motivated to be involved and to invest in socially responsible practices.

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