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ARTICLES

Moderating the Relationship Between Price and Perceived Value of Ethical Products

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Abstract Interest in ethical aspects associated to product acquisition and consumption is a growing trend among consumers. In this context, the concept of "product with ethical attributes" has arisen to refer to products with explicit social and environmental characteristics. However, one of the factors that most hinders the purchasing of these products is certainly price. Given the difficulty of reducing price, the question that arises is the extent to which other product attributes can attenuate the negative impact of price on perceived value. We assume that the special benefits associated to this type of products (ethics, quality and health) are, at a different level, attenuators of the relationship between price and perceived value. Focusing on Fair Trade organic coffee, hypotheses are tested regarding survey data from 407 customers. They were interviewed in an actual purchasing scenario. The models are tested using conventional Structural Equation Models and the Latent Moderated Structural Equation method. The results obtained shed some light on a highly generalised belief that the marketing of these products can only be improved by reducing their price. However, although a price reduction could be desirable,

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albeit complicated in this product category, its effects could be reduced by acting on other variables such as the ethical aspects, quality and healthiness of this product category.

Keywords Price · Moderating effects · Perceived value · Ethical products · SEM and LMS method

Introduction

Interest in ethical aspects associated to product acquisition and consumption is a growing trend among consumers. It is manifest in a concern for both the product itself and for the possible effects of its consumption, such as the environmental impact of a good's production, distribution and marketing (Davies et al. 2012).

Interest in ethics is also growing rapidly in the corporate field, due to the potential effect on consumers' purchasing decisions. This interest is due to underlying reputation-related aspects, the attempt to increase commercial success by identifying brands with ethical activities, or legitimacy factors, such as preventing potential harm to the company, and therefore to its sales, due to ethical problems (Aragón-Gutiérrez et al. 2012). Additionally, some studies have found how the next generation of decision-makers is most interested in sustainability and ethical issues, probably because it is part of his education (Maroušek, 2012).

In this context, the concept of "product with ethical attributes" has arisen to refer to products with explicit social and environmental characteristics. Social features are related to human rights, social corporate responsibility, questioning world trade rules, opposition to trade in weapons and/or the promotion of social enterprise, for instance. One clear example of such products are those referred to as "Fair Trade". Environmental concerns are associated to objection to genetically modified foodstuffs, reducing the ecological impact of human activities, combating environmental pollution, fostering animal welfare or biodiversity. Many of these concerns are part of the production and marketing of what are known as "organic" products. Pro-environmental and Fair Trade products are two typical examples of products with ethical attributes (Shaw et al. 2005).

In the case of fair trade products we have to go back to the 1960 s, when a non-governmental initiative arose in Holland and England to sell products from southern countries in small outlets with more direct and fairer trade relations with producers, eliminating unnecessary middle men. The goal was to relieve poverty and combat one of its causes, unfair international trade. According to Blowfield and Dolan (2010), this movement is based on "justice instead of charity" and aims to introduce "ethics" in international trade relations between the north and the south. Organic production, on the other hand, is based on the principles of health, ecology and precaution (IFOAM 2007). These two aspects, organic and fair trade, have often been grouped together in a single category known as "Fair Trade Organics".

Great expectations have been generated in the academic and business fields regarding the potential market for Fair Trade organic products, as supported by

different studies that report that a significant proportion of consumers show willingness to buy them (Mahé 2010). Despite their potential, the market is still small, either because of individual low purchasing frequency and volume (Pearson and Henryks 2008), or because of a large divide between intent and attitude and actual purchases (Davies et al. 2012). The reasons put forward for this low purchasing rate include lack of information (Durif et al. 2012), scepticism (Valkila et al. 2010) and specially the utility derived from the attributes of this type of products—according to economic approaches—(Andorfer and Liebe 2012).

However, one of the factors that most hinders the purchasing of these products is certainly price (Petljak and Brčić-Stipčević 2011). Consumers are required to pay a premium price to contribute to what is supposed to be a valuable social cause, assuming that their purchase is more due to a desire to make socially responsible choices than for price reasons. At the same time, Fair Trade importers explain that consumers' purchases will help to fund fairer ways of doing business. The reaction of customers to the price, however, is a delicate question. According to Browne et al. (2000), ethical products are perceived to be too expensive and consumers do not see that a premium price is justified. They appear to be more concerned about economic-financial aspects than about the ethical dimension of the products, especially when they are convenience items, as showed by Tagbata and Siriex (2008). High price has also been identified as one of the reasons most commonly provided by buyers for the gap between such products' acceptance and actual purchases (Tsakiridou et al. 2008).

The potential price obstacle in these cases is very interesting, as it is largely related to guaranteeing producers a fair price for their products. There is also evidence that Fair Trade systems help to sustain the most vulnerable producers (Bacon 2005). The same applies in the case of organic versus conventional products, for different reasons, including limited supply, higher production costs, post-harvesting manipulation, marketing and distribution (http://www.fao.org/organicag/oa-faq/oa-faq5/es/). Although efficiency and competitiveness have improved in the last few years, in the current productive context, the price gap is difficult to reduce if the social benefits claimed by such products are to be maintained. This structural characteristic could possibly only be overcome if such ethical features were generalised.

However, with a view to improving a marketing strategy hindered by higher price, it is worth contemplating whether the negative impact of price on consumers is attenuated, and to what extent, by the special attributes associated to this type of product, derived both from their organic nature and Fair Trade. This would help to focus strategies aimed at enlarging the market by enhancing precisely the features that counteract the price variable. Price strategy is certainly the most difficult marketing decision, and errors can have serious consequences; indeed, it is the most important variable for managers (Jobber and Shipley 2012). The objective of this study is therefore, with reference to perceived value, to analyse possible moderating effects of other attributes. We refer to the case of one of the most emblematic Fair Trade products, which is also organic: coffee.

We first describe the main aspects of the literature review that enable us to justify our hypotheses. We then approach the design of the research, providing details of

everything from the data collection proves to the methodology used, including operationalization of the study variables. This is followed by a description of the results obtained and a discussion of our conclusions.

Hypothesis

Perceived value has been shown to be an effective instrument for analysing consumer behaviour (Sánchez et al. 2009), and a good predictor of aspects such as product purchasing or re-purchasing or the generation of loyalty (Swaid and Wigand 2012; Hu and Chuang 2012). Perceived value is usually conceived as the consumer's global appreciation of a product's utility, a trade-off based on the perception of which is received, benefits, and what is delivered, sacrifices (Petrick 2002; Zeithaml 1988).

Benefits include aspects such as quality, efficiency, status, esteem, entertainment, aesthetics, ethics and spirituality (Petrick 2002; Sweeney and Soutar 2001; Holbrook 1999). On the other hand, the perceived price of a product or service is usually identified as the only sacrifice made by the purchaser, although other studies refer to additional sacrifices such as time, effort and risk (Chen and Dubinsky 2003; Berry et al. 2002).

Research to date appears to suggest that the perceived value concept should be adjusted for the specific type of product being considered (Sweeney et al. 1999), as it has been found that the presence and significance of the benefit and sacrifice dimensions differ according to the product being analysed. If we focus on products with ethical attributes, we have already seen the importance given by numerous studies to price as the main sacrifice involved; this is based on the premium price required from the consumer. Therefore, we can expect to find a significant, direct, negative relationship between price and perceived value. This is our initial hypothesis, formulated in the following terms:

H1: The price of organic Fair Trade products has a negative impact on perceived value by the consumer.

With regards to benefits, the specific characteristics of this product category lead us to consider three dimensions: quality, health and ethics. Consumers' perception of quality is particularly important in the consumption of all kinds of products. Some authors even believe that it is the only component included in the perceived value equation (Zeithaml 1988). The importance of quality as one of the most significant attributes is also found in studies of ethical products, either Fair Trade (Rotaris and Danielis 2011; Cranfield et al. 2010) or organic (Costanigro et al. 2011; Petljak and Brčić-Stipčević 2011). This evidence is found on the supply side in the fact that there has been a constant search for quality since organic products were launched on the market. In the last few years there has also been growing concern for adding value to Fair Trade products, due to the social value associated to their ethical dimension, which tended to naturally position them in consumers' minds as "humanitarian" but low quality products.

In relation to the "health" or "healthy" dimension, numerous studies show how many people buy organic products because they fear that traces of pesticide in non-organic produce are harmful to their health (Lusk and Briggeman 2009), as well as believing that organics are beneficial for human health (De Pelsmacker and Janssens 2007). The "health" aspect of organic food and beverages has significant relative importance in purchasing behaviour (Shaharudin et al. 2010). The importance of price in consumers' decisions has declined in industrialised countries in favour of attributes that ensure safety and reduce perception of risk (Villalobos et al. 2010). Healthiness is also attributed to Fair Trade more than to conventional products (Michaelidou and Hassan 2008).

If there is one attribute that could initially be particularly important in organic Fair Trade products, it is the ethical dimension. It is usually materialised in two aspects: fair payment to vulnerable producers and environmental protection. They are both *idées forces* in this product category, and form part of the intangible capital of these products, materialised in certifications and international labelling. Empirical studies, however, have provided critical evidence of the reduced or zero impact of this ethical dimension on value perceived by consumers in both organic (Costanigro et al. 2011) and Fair Trade products (Rotaris and Danielis 2011).

This evidence of the reduced or zero impact of the ethical dimension on perceived value is surprising if we consider that the premium price paid for this product category is justified precisely because of this ethical dimension. This leads us to think that the effect of ethical aspects on perceived value could not only be due to a direct effect but also to a moderating effect that reduces the negative impact of price, something that has not been approached much in previous research. Our second hypothesis is therefore as follows.

H2: Ethical attributes of organic Fair Trade products attenuate the relationship between price and perceived value. In case of perception of high price, perceived value will be greater among people who see more ethics in the product.

Assuming that the ethics dimension has a moderating effect on the negative relationship between price and perceived value, the other two dimensions that are characteristic of this type of product, quality and health, could well have a similar effect, in addition to the direct effect on perceived value shown in other studies. This leads us to formulate the following two hypotheses (Fig. 1):

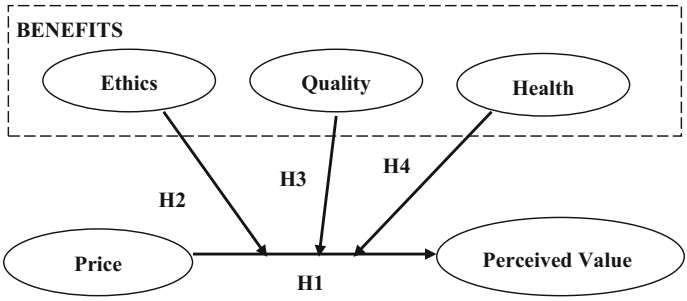

Fig. 1 Theoretical model

H3: The perceived quality of organic Fair Trade products attenuates the relationship between price and perceived value. With a perceived high price, people who see more quality in the product will perceive greater value.

H4: The perceived healthiness of organic Fair Trade products is a factor that mitigates the relationship between price and perceived value. With a perceived high price, people who believe that the product is healthier will perceive greater value.

Materials and Methods

Data Collection and Operational Measures

The empirical study focuses on the consumption of organic Fair Trade coffee. This product was chosen because coffee is the pioneer and most representative product of the Fair Trade movement, and approximately half of the coffee production certified with this property is also certified as organic. Mexico was chosen for this empirical study because of its significant production of conventional and ethical coffee. There are 128,000 certified organic farmers in Mexico, which is third in the world ranking (Willer and Kitcher 2011). The country is also one of the main exporters of certified Fair Trade coffee, and its coffee growers were pioneers in this movement. At the same time, products with ethical attributes have a potentially important niche on the Mexican market, comprising the decile of household that receives 34 % of the national income (INEGI 2012), which represents 2.9 million households with high purchasing power.

We decided to conduct the study with actual organic Fair Trade coffee consumers in an actual purchasing situation.[1] The target population comprises consumers of organic Fair Trade coffee in Puebla (Mexico), the fifth largest city in the Mexican Republic (INEGI 2011). The identification of consumers of the product for the sample was complex, as: (1) sales of this type of coffee in supermarkets are highly sporadic, and (2) very few of the outlets that sell ready-to-consume coffee stock the product. We therefore visited Starbucks coffee shops where this type of coffee is sold as part of their policy. They also provide significant information about the product's ethical attributes (posters and leaflets). The seven Starbucks franchises in the city of Puebla were therefore used. A total of 464 questionnaires were completed, 407 of which were valid. The sociodemographic profile of the surveyed population was as follows: similar percentages of women and men (47 and 53 %, respectively), 90 % were from 17 to 45 years of age, 90 % had a graduate or postgraduate degree, 70 % fell into medium or high socioeconomic levels and 89 % had a medium or high frequency of coffee consumption (Table 1).

The study variables were operationalised by a set of items measured on 7-point Likert scales (1 = strongly disagree, 7 = strongly agree). For perceived value there were two global items related to overall evaluation of the purchase (Teas and Agarwal 2000) and a cost-benefit comparison (Tam 2004). Perceived price was

[1] This study forms part of a broader study about consumer behaviour with regards to ethical products, in order to analyse the importance of the different dimensions of their perceived value.

Table 1 Description of the sample

Variable	Description	%*
Sex	Women	48
	Men	53
Age	From 17 to 25	33
	From 26 to 35	32
	From 36 to 45	25
	More than 45	10
Studies	Undergraduate	10
	Graduate	66
	Postgraduate	24
Socioeconomic levels	Low	30
	Medium	45
	High	25
Coffee consumption frequency	Low	3
	Medium	59
	High	30
	Very high	8

* Percentages calculated based on the number of responses obtained for each variable

evaluated by comparing with other types of coffee (Chen and Dubinsky 2003) and the product's quality (Petrick 2002). The Quality dimension was measured with items related to flavour (Lusk and Briggeman 2009) and aroma (Ross et al. 2006). Ethics were operationalised through conviction regarding environmental protection (Lusk and Briggeman 2009; Verhoef 2005) and higher price paid to producers (Auger and Devinney 2007). Finally, the health dimension was measured considering both the beneficial (Krystallis et al. 2006) and the harmful aspect of the product (Lusk and Briggeman 2009).

Methods

We use Structural Equation Modelling (SEM) in this research. SEM enables us to simultaneously analyse our observed and latent variables to test our measurement model (Jöreskog 1993; Bollen 1989). It also allows us to analyse the latent variable interaction model through the Latent Moderated Structural Equations (LMS) method, which explicitly takes into account the non-normality caused by latent nonlinear terms. The LMS method thus provides efficient parameter estimators and unbiased standard errors (Kelava et al. 2011). We use Mplus as it is one of the most powerful SEM packages (MPLUS 7.11; Muthen and Muthen 1998–2012). The estimation method for SEM is MLR (Robust Maximum Likelihood), and ML (Maximum Likelihood) for the non-linear structural equation model.

Several statistics and indices are analysed to evaluate the proposed SEM: robust Chi square, RMSEA, SRMR and CFI (Browne and Cudeck 1993; Jöreskog 1993). Well-fitting models obtain RMSEA and SRMR values of below 0.08 and 0.05,

respectively (Hair et al. 2006). A CFI value of more than 0.95 is currently recognised as indicative of good fit (Lance et al. 2006). Model goodness-of-fit Chi square statistics and Lagrange multiplier tests are not currently available in the LMS method, the Akiake's Information Criterion (AIC) and the Bayesian Information Criterion (BIC) are used to choose among models. As both AIC and BIC are smaller in non-linear models, non-linear models are preferred (Bollen 1989).

For assessing our measurement model we follow the approach suggested by Bagozzi (1980, 2010) for the validation of multidimensional constructs: reliability, convergent and discriminant validity. The standardised factor loadings will be statistically significant and sufficiently large (>0.70), so the R^2 will be above 0.50. We used the following to measure precision for each of the latent variables: Composite Reliability Coefficient (CRC) (McDonald 1985) and Average Variance Extracted (AVE) (Fornell and Larcker 1981). The recommended CRC and AVE values were above 0.70 and 0.50, respectively (Bagozzi 2010). With a given measurement model, the parameters of interest for the evaluation of discriminant validity are AVE and estimation of the squared correlations among the latent variables. Furthermore, an analysis is performed to determine whether 1 lies within all the confidence intervals around the correlation estimate between any two factors (Anderson and Gerbing 1988).

Our structural models contain latent variables that predict a latent variable where, as well as the main effects of the predictors, there is also an interaction effect. Therefore, we first estimated and evaluated the models without interactions, and then we introduced the interaction effects -the latent variable interaction model-. In order to test H1 we evaluated the main effect of price on perceived value. To test H2, H3 and H4, we evaluated the significance of the Price × Ethics, Price × Quality and Price × Health interaction parameters on perceived value. These models are non-linear if the interaction parameter is not equal to 0. We cannot evaluate the amount of incremental percentages of explained variance because the standard SEM statistics are not currently available in the LMS method (Muthen and Muthen 1998–2012). Thus, after assessing their fit we consider the statistical significance of these estimated parameters.

Results

We conduct our analysis in two steps. First, we analyse the descriptive statistics of the observed variables and assess their factor structure. Secondly, to test our hypothesis we evaluate the results of the structural equation models using the LMS method.

Table 2 shows the mean scores of the indicators of the observed variables. The mean value of the 10 variables is above 3.90. Moreover, the mean values of the *Price* and *Quality* variables are seen to be higher and less variable than those of the *Ethics* and *Health* variables. In the case of the *Price*, *Quality* and *Perceived Value* scales, higher scores—much more than 5—are found for all the items. Finally, the greatest variability is found on the *Ethics* and *Health* scales (>1.50).

Table 2 Descriptive analysis and results of the measurements model

	Mean*	SD	λ**	R^2	CRC	AVE
Price by						
Price versus other types of coffee	5.64	1.16	0.91	0.83	0.71	0.54
Price versus quality	5.95	1.03	0.51	0.26		
Ethics by						
Environmental protection	4.67	1.69	0.79	0.62	0.72	0.52
Higher price paid to producers	3.92	1.90	0.65	0.42		
Quality by						
Flavour	5.92	0.92	0.79	0.62	0.84	0.70
Aroma	5.83	1.03	0.88	0.77		
Health by						
Harmless effect	4.93	1.66	0.77	0.59	0.83	0.69
Beneficial effect	4.64	1.58	0.89	0.79		
Perceived value by						
Global evaluation	5.63	1.06	0.81	0.66	0.82	0.66
Cost-benefit comparison	5.29	1.39	0.82	0.67		

* Items measured on 7-point Likert scales (1 = strongly disagree, 7 = strongly agree)

** Standardized *parameter* estimates, $p < 0.00$

The surveyed consumers therefore perceive that price and quality are more important in these products than ethics and health. For the last two attributes there is also less agreement among consumers. High perceived value is also confirmed.

A Confirmatory Factor Analysis (Table 2) was performed in order to evaluate the dimensional structure of the constructs. The five-factor model fits the data reasonably well ($\chi^2_{[25]}$= 44.83, RMSEA < 0.05, SRMR < 0.03 and CFI > 0.98). The standardized parameter estimates obtained, together with the Fornell and Larcker's coefficients and McDonald's omega, are evidence of reliability and convergent validity (AVE > 0.50 and CRC > 0.70). The AVE values are above the squared correlation among the latent variables and 1, of course, is outside the confidence intervals around the correlation estimate between any two latent variables.

After evaluating the models measuring the latent variables (Price, Ethics, Quality, Health and Perceived Value) we analyse the structural models without interactions. The goodness-of-fit statistics of these models provide evidence of reasonable fit (Model_Price-Ethics: $\chi^2_{(6)}$: 9.48 p value: 0.15, RMSEA: 0.038, SRMR: 0.020, CFI: 0.994, AIC: 7796, BIC: 7880; Model_Price-Quality: $\chi^2_{(6)}$: 19.73, RMSEA: 0.075, SRMR: 0.035, CFI: 0.982, AIC: 6553, BIC: 6638 and Model_Price-Health: $\chi^2_{(6)}$: 11.32 p value: 0.08, RMSEA: 0.047, SRMR: 0.025, CFI: 0.992, AIC: 7520, BIC: 7605). Table 3 shows the results of the three structural models with interaction effects—the latent variable interaction model. In all three cases, when we compare the AIC and BIC indices, we can conclude that the models with interaction are superior to the models without interaction. In order to test H1, we observe on Table 3 that the main effects—price on perceived value—are

Table 3 Results of the structural models

	Estimate*	SE	*p* value	Goodness-of-fit measures
Model_Price-Ethics:				AIC: 7764/BIC: 7852
Perceived value on				
Price	−0.27	0.06	0.00	
Price × Ethics	0.27	0.07	0.00	
Model_Price-Quality:				AIC: 6549/BIC: 6637
Perceived value on				
Price	−0.27	0.09	0.00	
Price × Quality	0.21	0.13	0.09	
Model_Price-Health:				AIC: 7515/BIC: 7604
Perceived value on				
Price	−0.28	0.08	0.00	
Price × Health	0.11	0.06	0.06	

* Non standardized *parameter* estimates

significant and stable across the three models: −0.27 for Model_Price-Ethics (p value < 0.00), −0.27 Model_Price-Quality (p value < 0.00) and −0.28 for Model_Price-Health (p value < 0.00), confirming H1. The interaction effects are positive and significant: 0.27 for Price × Ethics (p value < 0.00), 0.21 for Price × Quality (p value < 0.10) and 0.11 for Price × Health (p value < 0.07). There is therefore evidence supporting H2, H3 and H4. In other words, the association between Price and Perceived Value is negative and not the same on all Quality, Ethics and Health levels. In the analysed sample, the order of importance in interaction effects is as follows: *Ethics, Quality and Health.*

Discussion and Conclusions

This study contributes to the investigation of perceived value in general, and particularly in organic Fair Trade product, by considering the perceived benefits of a product not as direct generators of value but as attenuators of the negative effects of perceived sacrifice (price). These moderating effects are not commonly found in the literature about perceived value. At the same time, we extend the study field to include a product category with important social repercussions, as it seeks to balance the social inequalities and environmental damage caused in conventional trade.

The results obtained show the complexity of the relationship between price and perceived value, with many different interactions involved. At the same time, if the validity of its conclusions is accepted, they also shed some light on a highly generalised belief that the marketing of these products can only be improved by reducing their price. However, although a price reduction could be desirable, albeit complicated in this product category, its effects could be reduced by acting on other

variables such as the ethical aspects, quality and healthiness of organic Fair Trade products.

This suggests other possible ways of overcoming the constraint represented by the higher relative price of these products. In view of the significant attenuating effect of the ethical dimension, organisations should increase both knowledge (information) of and confidence in these attributes among consumers. It has often been said that most consumers have little confidence in said products' social and environmental benefits. Therefore, more emphasis should be placed on information and consumer education strategies, based on clear evidence of the ethical aspects involved. In this context, certification and labelling processes based on international standards could be important. On the other hand, focus should not only be on the management and development of ethical and healthy attributes, as we have seen that perceived quality also plays a significant role. Functional attributes should also be highlighted to increase perceived quality, an aspect that is often of secondary importance in this product category, while at the same time emphasising its social and environmental benefits. Finally, greater attention should be paid to the health attribute. In view of the trend found in multiple studies that highlight the significance of healthy attributes in consumers' purchasing choices, its attenuating effect on price could increase in the future.

Some limitations of our research are worth noting. The research was conducted in relation to one specific Fair Trade organic product: coffee. Although the results are very consistent for this category, the empirical model should be tested, on the one hand, on other products with ethical attributes, to see whether the effects found are also found in food, clothing or crafts. On the other, it would also be interesting to analyse moderating effects in other product categories, in order to detect potential attributes that attenuate the effect of sacrifice on perceived value, including both price and other non-monetary sacrifices.

Another limitation of our study is the use of a cross-sectional study. Cross-sectional research cannot fully capture the dynamic and interactive nature of many relationship variables. Moreover, as the study was conducted in a geographical context (Mexico) characterised by a great coffee-growing and drinking tradition. It would be interesting to analyse whether the same interactions are found in other markets-countries.

Finally, the set of surveyed consumers was homogeneously treated in our study; however, this could be enriched by introducing sociodemographic variables that could show different sensitivities to the price variable, favouring better market segmentation.

In sum, this study provided an answer to the question of how to approach the price barrier in a growing product category where there are serious problem for direct modification of this variable, at least in the short term. Our goal was to provide insights for improving the marketing of a product category that, economic profits aside, seeks to help the environment and reduce the poverty of millions of small producers in developing countries.

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