

Assessing the Value Consumers Ascribe to Corporate Social Involvement in Product Choice

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Abstract

This paper deals with the demand side when regarding corporate social involvement. It seeks to determine the value consumers ascribe to socially concerned products and firms. Several studies have been done in this venue. However, most of them are attitudinal studies and assess only consumer intention, not choice. This research faces the quest by using choice conjoint tasks, thus avoiding attitudinal measures. It analyses the value consumers ascribe to corporate social involvement through the parameters cross-elasticity. The analysis assumes a two-phased consumer decision process—alternative consideration followed by choice conditioned to the inclusion of the alternative in the consideration set. Results reveal large cross-elasticity between the level of social involvement and the functional attributes, in both consideration and choice phases. This is observed consistently across four product and service categories. The magnitude of the effect of being socially responsible is similar to excel in important functional attributes.

Key-words: corporate social responsibility; choice models; cross-elasticity.

1. Introduction

Literature has emphasized the possible antagonism between corporate social involvement and the generation of value for shareholders. For example, “the leaders of a chemical company may believe that investing heavily in the reduction of greenhouse gases can be the right thing to do, but if their competitors refuse to join its efforts, it can end up mining its own competitiveness without obtaining a significant reduction of the greenhouse emissions in the industry” (Martin, 2002). Such concern about actions of social involvement and profitability is not new. Managers constantly have to decide whether and how much they should invest in socially responsible actions. Lack of investment may represent hard to overcome threats to the image, hard to recover losses of markets, reduction of support by stakeholders and consequently the eventual death of the organization (Wood, 1991). In contrast, over-investment in social actions can cause reduced competitiveness, given higher incurred costs. In fact, this is reason for explicit and growing concern (Levin, 1993). As executives facing decision point out, there is “a fundamental decision, to be ahead or behind the competition; it is a hard decision: to be ahead may mean higher costs of production, leaving the firm vulnerable to the competitors” (Walley & Whitehead, 1994).

Under a strategic perspective, there are two different situations for which the decision problem of adopting social actions has a natural solution. The most obvious is when the socially oriented investment results in a direct or indirect reduction of costs. Turning off the lights of a store at night for energy conservation saves money from the utility bill, and can additionally be used as an argument for good image. Furthermore, attempts to control pollution sources or to save energy induce actions of re-engineering of the technology and re-studies of processes that may well contribute to lower costs and to improve quality (Porter, 1991). Such cases direct the problem to the area of production management. Moreover, indirect cost reduction may be granted by higher employee commitment in socially involved companies. Socially sensitive people may be willing to work harder or even at lower pay in corporations that are socially involved.

The other kind of situation refers to the case in which a specific group of consumers highly sensitive to social matters is targeted by some product program. These consumers may be willing to pay more for products marketed by socially corporations. Some consumers may even be more sensitive to specific social issues.

This is case of environmentally sensitive consumers, who may demand environment friendly products – e.g., “ecotourists” reported they will pay up to 8.5% more for environment friendly “eco-hotels”, or ecotels (Rushmore, 1993), and companies such as Radisson are already offering premium priced “green suites” (Wolff, 1994). Market segmentation is the framework to study these cases and to point out how far these markets are worth exploring.

However, there are many cases in which the decisions on if and how much to spend on socially responsible actions do not fall into these two situations. For instance, the retailing discounter Wal-Mart invested an additional \$6 per square-foot to make a new store more environmentally sound, and has no expectations of recovering more than only a fraction of the additional investment by cost reductions (Wieffering, 1993). Furthermore, social consciousness does not necessarily translate into higher likelihood of consumers putting more effort in selecting a socially responsible product or provider (e.g., Watkins, 1994). Take the case of social involvement in environmental protection. Even though a profile of the American consumer in 1991 indicated that only 28% of the population were environmentally indifferent and would buy green products only if they were perceived as the best price or quality option, the majority of the population showed explicit concerns for the environment (Schwartz & Miller, 1991). Therefore, in between the adoption of measures that reduce costs and the exploration of a specific market segment of consumers willing to pay at least for cost increases, there is number of decisions that are backed by a relevant portion of the total market.

This paper focuses on the demand effects of actions of social involvement. The approach here is to evaluate the effects of a firm’s social engagement on consumer behavior. In order to achieve it, a model of the effects of social involvement on consumer utility is presented. Next, a analytical model of social involvement affecting choice is developed, and the study’s hypotheses are offered. The model is developed to capture the effects of social involvement both on the consideration and choice phases of the consumer decision process. A method section presents a conjoint choice in four product categories capable of capturing the main effects relevant to this research. The results section brings up the data analysis. Finally, a discussion section comments the managerial implications and research limitations, to conclude the paper.

2. Theoretical Framework

A framework to depict the effects of social involvement on consumer utility formation has been devised by Menck (1998; Menck and Oliveira, 2014). A simplified framework is presented in Figure 1. It basically suggests is that the firm’s social involvement affects directly the utility of a product for a consumer. Consumer utility accrues directly from the product’s functional attributes, its symbolic social value, and—negatively—its price.

Consumers’ utility reflects the value consumers ascribe to the social action *per se*. Such value arises because they feel good about buying a product that is contributing to society, because society has enculturated its importance in the individual, or because of the symbolic social value it has (Sheth et al., 1991). In any case, this means that social involvement of a firm can be regarded as an additional attribute of the firm’s product, adding to the utility of its functional attributes. Support for this effect is provided by the product’s symbolic and social value literature (e.g., McCracken, 1986). Moreover, previous research (Brown & Dacin, 1997) has found that a firm’s social involvement affects the products’ overall evaluation.

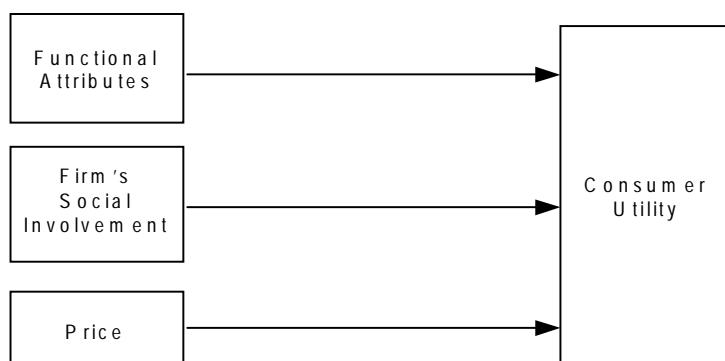


Figure 1: Consumer Utility Formation in the Presence of Firm’s Social Involvement

3. A Model of Social Involvement Affecting Choice

This paper deals with the effects that any action of social involvement may have on the firm's competitive performance. In particular, it is concerned with the effects on the stakeholder consumer, to the extent that actions of social involvement represent value for consumers who control resources on which the firm depends. Therefore, actions of social involvement can affect the value that consumers assign to the firm's products. Literature indicates that social involvement affects directly the utility of a product for a consumer. This direct effect of social involvement on utility adds to the utility accrued from the product's functional value.

However, an effect of a non-compensatory nature can also be present. One way by which this can occur is when consumers require a certain minimum level of social involvement by the firm in order even to consider buying a product, that is, to include the product in their consideration set. Consumers tend to restrict the amount of time and energy they devote to decision-making. Specifically, due to the short-term memory restricted capacity, only a few brands are likely to come to the consumer's mind when a purchase is in order (Wilkie, 1994). A consideration or evoked set is formed in consumers' minds (Wilkie, 1994). Any effect that a firm's social involvement may have on the consumer's utility has to show up in his/her choice behavior. A model of choice behavior capturing the proposed effects of social involvement on consideration set formation and on choice is presented in Figure 2.

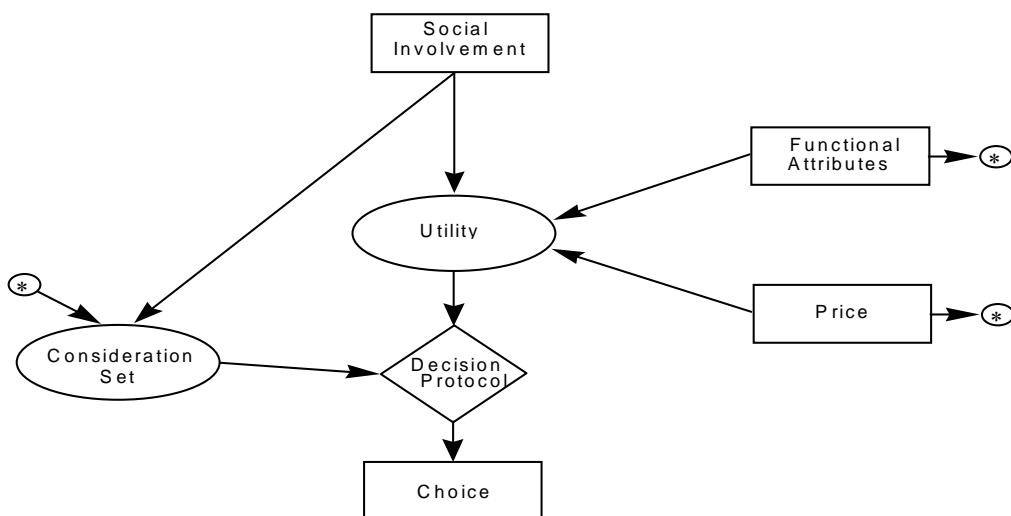


Figure 2: Effects of Social Involvement on Consumer Consideration and Choice

In this model, observed variables are in boxes, and unobserved or latent variables are in ellipses. The utility and the consideration set are latent variables, i.e., they depend on how consumers perceive them. Therefore, they cannot be observed, only inferred (through choice). In this model, the product's price and functional attributes, as well as the actions of social involvement, plus the choice behavior constitute the observables.

In this model, constraints of diverse kinds (such as physical accessibility of or psychological restrictions to an alternative) shape a consideration set for an individual. Then, the individual assesses the utility of the alternatives i which s/he considers choosing and uses some decision protocol to make a choice. Choice behavior can be affected in one or more of the three instances (decision protocol definition, choice set formation, and utility composition).

3.1 Decision protocol

The decision protocol usually assumed in choice modeling is utility maximization. However, consumers may differ in the way they make their choices. Information gathering costs and other limitations, and varying processing abilities affect the way choice decisions are made. Hence, consumers may adopt rules other than utility maximization, such as dominance, satisfaction, and even random choice (Gopinath, 1995). It is possible that social involvement affects the adoption of a specific decision protocol over another one. However, the selection of the decision protocol is probably more susceptible to the effects of personal constraints, such as those related to information acquisition and processing capability, than by characteristics of the alternatives, such as social involvement. Therefore, this study assumes utility maximization as the decision protocol.

3.2 Consideration set formation

Actions of social involvement may affect the consideration set formation. It is possible that an individual considers purchasing a product only if a firm with at least some level of social involvement markets it. This way, the lack of social involvement may constrain a consumer's consideration set. Consumers may have thresholds below which they do not consider buying a product (e.g., Swait & Ben-Akiva, 1987). Hence,

H1: In the presence of a firm's actions of social involvement the probability the firm's products are included in the consumer's consideration set is higher.

3.3 Utility composition

Social involvement can affect the consumer's utility in a compensatory scheme. Consumers may regard social involvement as a source of utility *per se*. They may value the firm's social involvement in addition to the functional attributes of the product. Social involvement acts as a separate attribute of the product, adding to the utility of its functional attributes. Support for this effect is provided by the product's symbolic and social value literature, as reviewed above. Hence,

H2: In the presence of a firm's actions of social involvement the probability the firm's products are chosen is higher.

One appropriate analytical tool for categorical data such as choice is the logit model. It models individual behavior and belongs to the class of models known as random utility models. The individual is assumed to always make the choice that maximizes her/his utility. However, the individual's utility is a latent, unobservable variable. The observer's observational deficiency leads to apparent inconsistencies in the observed choice behavior. These inconsistencies can be credited to nonobserved attributes, consumer heterogeneity, measurement errors, and functional specification (Manski, 1977). Therefore, the observer can regard utility as a random variable. Specific assumptions about the probability distribution of the random component of the utility lead to the logit model.

4. Method

The data were collected via a mail survey. The questionnaire comprised a series of conjoint stated choice tasks. Respondents faced sixteen choice scenarios in a single product category. In each scenario, they were prompted to make a choice from a set of three existing brands. Each choice task represented a scenario unique in the levels of the product's price and four functional attributes.

Airlines, computers, health care plans, and mattresses were the four out of twenty-five product categories selected after pretests. The pretests selected categories where existing brands would not have strong *a priori* social involvement and expertise image differences. In each category, three brands were picked such that *a*) they should not significantly differ in terms of their existing social involvement and expertise images; *b*) they should be similarly rated by expert consumer evaluation sources; and *c*) their market shares should be similar.

4.1 Sampling details

The data collection was accomplished via a mail survey with conjoint choice tasks. Each questionnaire dealt with one of the four selected categories. A total of 5,800 questionnaires were mailed to a random sample of households in Central and North Florida. The number of respondents was 660 (response rate of 11.4%). Of the returned questionnaires, 593 were usable (21 arrived late, and 36 were discarded due to multiple choices made), 165 corresponding to airlines, 124 to computers, 153 to health care plans, and 151 to mattresses.

4.2 Questionnaire structure

The questionnaire presented the social involvement profiles of three choice alternatives (brands). Respondents were asked to state their choices and considered alternatives under different attributes' scenarios. Manipulation check for social involvement was performed. The questionnaire also got information on demographics and personal values.

4.3 Company profiles

The manipulation of the level of social involvement was between-subjects. Respondents were told that an independent publication rated the companies. Social involvement was presented as "the company's activities to protect the environment, donate money to charities, have employees volunteer for community programs," plus some category-specific type of social involvement, such as "donating transportation to needy people requiring travel for medical reasons" (in the airlines category).

Each of the three companies were rated either as “the company is average” (manipulation for low), or “the company is exceptionally good” (for high). To grant realism, the three alternatives were real companies, similar in size and overall quality (as rated by the *Consumer Reports* magazine). To avoid undesirable effects related to different company’s technical expertise level, this variable was controlled by manipulation in a similar fashion. Of the sixty-four possible combinations of the three companies described as high or low in social involvement and expertise, eight are enough to contrast the main effect of brand and the two variables of interest, using a fractional factorial design (Hahn & Shapiro, 1966). From the eight potential sets, each respondent was presented with a single set of three firms’ profiles. In each category, this corresponds to a $3 \times 2 \times 2$ between-subject design (three brands, two levels of social involvement, and two levels of expertise). Of the usable questionnaires, the cell with the largest number of questionnaires had $n=31$ elements (in one of the airlines questionnaire versions), and the one with the smallest had $n=10$ (in one of the computer versions).

4.4 Choice tasks

In the questionnaire, choice tasks or scenarios were presented after the companies’ profiles. Across scenarios, the three alternatives varied in terms of two levels of price and four functional attributes. Dollar figures of the prices had one of two values, fifteen to twenty percent apart. The two levels of the functional attributes were “just meets industry standards” (manipulations for low), and “much better than industry standards” (high).

With three firms varying in two levels of price and four functional attributes, the choice tasks represented a 2^{15} within-subject design. A fractional factorial design with sixteen contrasts can estimate the main effect of price and the functional attributes varying across the three brands (Hahn and Shapiro, 1966). Since the within-subject design is embedded in the between-subject design, the full design in each category is $3 \times 2 \times 2^{15}$. Interactions among the variables inside the within and between-subject designs cannot be assessed with the design selected, but the parameters of the interaction terms between variables in each of the designs can be estimated (e.g., between social involvement and the functional attributes).

4.5 Measures

The dependent variable for the consideration set formation model is the stated consideration or non-consideration of each of the alternatives. For the choice model, the dependent variable is the stated choice among the three alternatives and the “none” option.

The explanatory variables social involvement, price, and functional attributes are the manipulated variables (plus company’s technical expertise). The social involvement manipulations were checked through four and six-item scales developed in the pretest, measured on 7-point scales anchored by strongly disagree—strongly agree. The four items measuring perceived social involvement have adequate internal reliability (Cronbach α s ranging from 0.85 to 0.88 across the four categories). The six-item scale for technical expertise also has adequate internal reliability in all four categories (Cronbach α s ranging from 0.87 to 0.94).

5. Results

5.1 Consideration set model estimation

The consideration of an alternative can be treated as a binomial variable—an alternative is either considered or not considered. Furthermore, in the choice setting employed in this research, the consideration of each of the three alternatives can be treated as a separate decision (this involves assuming that the consideration decision for a product is independent over preferences for other alternatives, what may not be realistic, but leads to consistent, though inefficient parameter estimates). Assuming consideration decisions to be independent across choice scenarios has similar effects on the parameter estimates.

In this research, the decision of the inclusion of a brand in (or, alternatively, the exclusion of a brand from) the consideration set is a function of its utility to the consumer. To assess the role of the variables of interest, utility is modeled as a linear function of price, the four investigated functional attributes, the firm’s social involvement (SI, hereafter) and expertise (E, hereafter). In addition, to check whether they play a role in the consideration set formation, all the interaction terms of social involvement and expertise with the attributes were introduced in the initial estimation.

Given that the effects may differ across brands, a different set of parameters is estimated for each brand. However, this full model can be simplified to some extent by testing the parameter equality across brands for each of the variables in the model.

The proper test for this—and subsequent—parameter constraint is the likelihood ratio test. It compares full models that allow individual sets of parameters for each brand with the nested models in which parameter equality across brands has been imposed. The likelihood ratio test-statistic is given by twice the difference between the log-likelihood of the restricted and full models, and is asymptotically chi-squared distributed with as many degrees of freedom as the number of constraints imposed on the parameters.

After several empirically supported simplifications via parameter equality across brands and exclusion of non-significant interaction terms supported by log-likelihood and χ^2 tests) on the most complete model, the models estimated for the four categories are presented on Table 1. Price and all functional attributes have highly significant parameters (except for the “leg room” attribute in airlines, which is marginally significant). Hence, all have a role in determining the consideration probability of a brand. As one can expect, price has a negative effect and functional attributes have a positive effect on consideration. The fact that all except one of the parameters have highly significant estimates ensures that the attributes selected for this research play a role in the consideration set formation.

Table 1: Consideration Set Formation Models

Variable	Category			
	airlines	computers	health plans	Mattresses
consideration constant	1.72 ***	1.81 ***	1.51 ***	1.77 ***
Brand A	0.24 ***	0.29 ***	0.21 ***	0.09
Brand B	0.09	0.00	0.17 **	-0.04
Brand C	0	0	0	0
Price	-0.36 ***	-0.09 **	-0.16 ***	-0.24 ***
Attribute 1	0.05 *	0.29 ***	0.22 ***	0.22 ***
Attribute 2	0.15 ***	0.50 ***	0.27 ***	0.34 ***
Attribute 3	0.21 ***	0.38 ***	0.52 ***	0.38 ***
Attribute 4	0.40 ***	0.19 ***	0.22 ***	0.25 ***
Expertise for brand A	0.24 ***	0.24 ***	0.33 ***	0.45 ***
Expertise for brand B	0.24 ***	0.40 ***	0.18 ***	0.22 ***
Expertise for brand C	0.36 ***	0.12 *	0.38 ***	0.52 ***
Social involvement for brand A	0.08	0.49 ***	0.29 ***	0.39 ***
Social involvement for brand B	0.18 ***	0.29 ***	0.17 ***	0.33 ***
Social involvement for brand C	0.13 **	0.10	0.37 ***	0.20 ***
McFadden's ρ^2 (AIC)	0.393	0.427	0.380	0.384
Number of decision sets	7764	6018	7368	7218

*** p<0.01

** p<0.05

* p<0.10

Technical expertise affects the consideration of a brand in the same direction and similar magnitude as the functional attributes. Unlike the functional attributes, the effects of expertise may vary across brands. In fact, the parameter equality across brands can be rejected for computers (likelihood ratio test-statistic of 9.4, compared to $\chi^2_{0.05}$ (2 d.f.) = 5.99), health plans (test-statistic of 7.2), and mattresses (14.0), although not for airlines (3.4).

The effect of social involvement on consideration set formation is also positive for all the brands. Most importantly, the parameters are of similar magnitude as the functional attributes and expertise. The effect is significant in all cases, except for one of the brands in two of the categories. As with expertise, the social involvement parameter equality across brands is rejected for some categories—computers (likelihood ratio test-statistic of 17.1, compared to $\chi^2_{0.05}$ (2 d.f.) = 5.99), and health plans (test-statistic of 7.1)—and not for others—airlines (1.5), and mattresses (5.2).

5.2 Choice model estimation

Empirical choice modeling work to date has assumed that the choice decisions are independently made across scenarios. This produces consistent, though inefficient parameter estimates. That is, the standard errors of the parameters may be underestimated; hence, their t-statistics can be inflated. As stated above, an individual's choice probability of a brand is assumed to be a function of the utility accrued by the brand relative to the utility accrued by each of the other alternatives.

The alternatives include the three brands, plus a “none of the alternatives” option. Utility is modeled as a function of price, four functional attributes, expertise, social involvement, the interaction terms of expertise and social involvement with price and the attributes, and the interaction terms of social involvement with the individual’s personal values. The intercepts correspond to the alternative-specific constants for the three brands (“none of the alternatives” is the baseline). In order to avoid biased estimates of the utility function parameters (Swait & Ben-Akiva, 1987), the individual’s choice of a brand is modeled conditional on the brand’s inclusion in the self-reported consideration set, assuming that the self-reported is the “true” choice set. That is, in each choice scenario, only the alternatives stated to have been considered by the respondent are included in the log-likelihood function constructed for the estimation of the parameters.

The full model has parameters that are specific to the three brands for each of the variables of interest. As before, such model can be simplified by examining the empirical question of whether the parameter estimates are equal across brands. This has been verified for each variable or set of variables.

Beginning with the interaction terms, the hypothesis of equality across brands of the interaction terms of social involvement and expertise with price and the attributes were tested. In all four investigated categories, it could not be rejected at the 5% confidence level. The test-statistics comparing the full model with the one constrained for the equalities are 24.9, 17.7, 30.8, and 26.9, all under the critical $\chi^2_{0.05}$ (20 d.f.) = 31.4. Therefore, all subsequent analysis is presented assuming an average “generic” brand for these interaction terms. On the other hand, parameter equality across brands is rejected in all four categories when imposed simultaneously on the parameters of price and attributes. Constraining the ten parameters reduces the log-likelihood such that test-statistics of 29.3, 35.9, 40.1, and 28.3 are generated; all are significant when compared to $\chi^2_{0.05}$ (10 d.f.) = 18.3. Hence, brand-specific parameters of price and attributes are retained in the models estimated next.

Expertise is a variable that affects choice in a homogeneous way across brands. The equality of the parameters across brands cannot be rejected in all four categories. The test-statistics are 1.1, 0.8, 1.8, and 1.0 respectively, compared to $\chi^2_{0.05}$ (2 d.f.) = 5.99. The same is not true for social involvement. The equality of the parameters across brands cannot be rejected for airlines (test-statistic of 2.6, compared to the critical value of $\chi^2_{0.05}$ (2 d.f.) = 5.99) and computers (test-statistic of 2.7) but is rejected for health plans (15.9) and mattresses (10.5). Given that the effect of social involvement is brand-dependent in some cases, the parameters for this variable and expertise are reported for each brand in the models below.

Table 2 presents the models estimated taking into consideration the empirical support for the equality across brands for some variables.

The estimated models involve choices made among four alternatives. One basic assumption to estimate the multinomial logit model is that the random components of the utility function are independently and identically distributed, which leads to the Independence of Irrelevant Alternatives (IIA) property of the model. Since more than two alternatives are present in the model, it is important to check whether this property holds. This can be done with the Hausman-McFadden test (McFadden, 1987). Violations of the IIA property occur if two or more alternatives share common unobserved characteristics not specified in the model. The Hausman-McFadden test checks the impact of the omission of cross-effects on characteristics of alternatives excluded from the choice set. In all four categories, this test reveals that IIA cannot be rejected for the exclusion of each of the alternatives or any grouping of the alternatives ($p>0.5$ in all tests).

The estimated models in the four categories have McFadden’s ρ^2 (AIC) varying from 0.31 (computers) to 0.44 (airlines), which are in the reasonable-to-good range (Intelligent Marketing Systems, Inc., 1994).

The alternative-specific constants (ASCs) for the three brands (“none of the alternatives” is the baseline) are all positive and significant, in all four categories (here, statistical tests are significant at the 5% level). This indicates simply that the probability of choosing each of the alternatives is greater than the probability of not choosing any alternative, all else being equal. Moreover, there is no big variation in the size of the alternative-specific constants across the three brands of each category, indicating that the probability of choice of the alternatives does not differ by much in each of the categories, all else being equal. Even so, only in the airline category the equality of the alternative-specific constants cannot be rejected (the likelihood ratio test-statistics are 0.6, 9.6, 12.7, and 10.4, compared to $\chi^2_{0.05}$ (2 d.f.) = 5.99).

Price and functional attribute parameters are mostly significant and all in the expected direction. So, in all categories and for all three brands the price decreases and the functional attributes increase utility and, hence, the probability of choice, as one would expect.

Table 2: Choice Models

Variable	Category			
	airlines	computers	health plans	mattresses
ASC brand A	2.40 ***	1.29 ***	1.82 ***	1.59 ***
ASC brand B	2.39 ***	1.44 ***	1.61 ***	1.37 ***
ASC brand C	2.44 ***	1.18 ***	1.55 ***	1.60 ***
ASC “none of the alternatives”	0	0	0	0
Price for brand A	-0.85 ***	-0.12 *	-0.23 ***	-0.29 ***
Price for brand B	-0.99 ***	-0.50 ***	-0.51 ***	-0.64 ***
Price for brand C	-0.92 ***	-0.46 ***	-0.48 ***	-0.51 ***
Attribute 1 for brand A	0.37 ***	0.43 ***	0.60 ***	0.36 ***
Attribute 1 for brand B	0.42 ***	0.30 ***	0.50 ***	0.51 ***
Attribute 1 for brand C	0.03	0.44 ***	0.31 ***	0.36 ***
Attribute 2 for brand A	0.38 ***	0.64 ***	0.32 ***	0.45 ***
Attribute 2 for brand B	0.42 ***	0.54 ***	0.20 ***	0.42 ***
Attribute 2 for brand C	0.27 ***	0.76 ***	0.40 ***	0.47 ***
Attribute 3 for brand A	0.12 **	0.35 ***	0.74 ***	0.53 ***
Attribute 3 for brand B	0.13 **	0.29 ***	0.69 ***	0.45 ***
Attribute 3 for brand C	0.26 ***	0.36 ***	0.61 ***	0.47 ***
Attribute 4 for brand A	0.76 ***	0.70 ***	0.71 ***	0.61 ***
Attribute 4 for brand B	0.77 ***	0.46 ***	0.46 ***	0.52 ***
Attribute 4 for brand C	0.65 ***	0.51 ***	0.48 ***	0.39 ***
Expertise for brand A	0.58 ***	0.57 ***	0.51 ***	0.69 ***
Expertise for brand B	0.63 ***	0.54 ***	0.51 ***	0.65 ***
Expertise for brand C	0.54 ***	0.62 ***	0.61 ***	0.73 ***
Social involvement for brand A	0.42 ***	0.24 ***	0.14 **	0.33 ***
Social involvement for brand B	0.29 ***	0.38 ***	0.45 ***	0.52 ***
Social involvement for brand C	0.32 ***	0.29 ***	0.38 ***	0.26 ***
McFadden's ρ^2 (AIC)	0.443	0.309	0.348	0.335
number of choice sets	2581	1978	2414	2368

*** p<0.01

** p<0.05

* p<0.10

A similar finding is true for expertise and social involvement. For all brands in the categories in the study, having a high level of these characteristics increases the brand's choice probability. Within each category, the magnitude of the effect for being “exceptionally good” on social involvement (as opposed to “average”) is similar to being “much better than industry standards” (as opposed to “just meets standards”) on the functional attributes. In comparing the effect-size of social involvement with price, one finds that their magnitudes are also similar across brands, in three of the categories. The exception is the airline category, in which the negative effect of price on utility is about twice as large as the positive effect of social involvement. This result may be due to the fact that among the categories in this study, the airlines category is the one with the lowest prices.

A direct comparison between the effect-size of social involvement and expertise indicates that some difference exists between the two. For all but one brand in the four categories, the importance weight of expertise is significantly greater than social involvement. In fact, across brands in all categories, the average ratio between the parameter estimates of expertise and social involvement is close to two, suggesting that the effect of being socially involved is about half of that of being an expert in the industry.

6. Discussion

The pretests succeeded in selecting real companies with *prior* images that do not seem to influence the results in any decisive way. The respondents were aware of the companies but did not carry *a priori* strong beliefs about the constructs of interest.

An evidence of this is given by the manipulation checks, which assure that the beliefs about social involvement and expertise were in fact shaped by the treatments, not by *prior* knowledge about the companies. This is an indication that even in the event of some self-selection—plausible in light of the low response rate—it should not have biased the results with respect to the variables of interest. Moreover, the selected companies are homogeneous enough—in terms of characteristics left out of the model—such that no evidence of violation of the IIA property could be found in any of the four categories investigated.

6.1 Consideration set formation decisions

The first hypothesis (H1) is supported by the data. When the companies are reported as being exceptionally good in activities denoting social involvement, their probability of being considered is higher than when they are reported as just average. This is true for an average consumer, across all brands in the categories. Among twelve cases, only two of the brands have non-significant parameter estimates for social involvement, which may denote brand idiosyncrasies. As a matter of fact, the two exceptions, Northwest airlines and Micron computers, have in common bearing the smallest market shares in their categories, at least in the area where the sample was collected. Although this is weak evidence, it may be that the consideration of brands with lower market presence is in fact less sensitive to social involvement. One possibility is that consumers simply do not demand excellence in social involvement from companies with relatively smaller market presence. Another explanation could be that when consumers have less experience with and knowledge about a brand, there are fewer negative past experiences and less negative information to be overcome by high social involvement. However, further research would be needed not only to assure that market presence moderates the effect of social involvement on brand consideration but also to investigate the mechanism by which this may happen.

It is a quite important result for this research's purposes that the effect size of a firm acting to preserve the environment and be socially responsible is of similar magnitude of a recognized overall technical expertise, and also of four important functional attributes. This means that the consumer decision of considering a brand for purchasing equally depends on important functional attributes' performance and on the firm acting with social responsibility. In the same way, acting with social responsibility and environmental concern is as important as the perceived technical expertise in deciding which brand to consider.

Further comparing the cross-elasticities with the main effect of price, the results in all the four different categories indicate that when the comparison is with price, consumers place half of importance on the firm being socially responsible as they do on a 15 to 20% of price change.

6.2 Choice Decisions

The main concern of this study is the effect size of the main effects of actions of social involvement on choice. Hypothesis H2 is the choice counterpart of H1 in consideration set formation. It predicts a main effect of social involvement.

A significant main effect of excellence in social involvement, contrasted to an average posture, supports H2 for each of the three brands in all four categories in this study. Moreover, with the treatments utilized in this research, the effect-size of social involvement is not just residual but reaches about half of the magnitude of the effect of technical expertise, a variable usually more regarded in managerial considerations. The size of the effect is also comparable to the average effect of being “much better than industry standards” in the functional attributes used in the study. It must be kept in mind, though, that while “excellence” in social involvement and expertise are treated in this research as information provided by an independent source, being “much better than industry standards” on the functional attributes is credited to company-reported information. This difference in treatment may have weakened the relative importance of the functional attributes.

The importance of social involvement, as treated in this study, is also comparable to the importance of a fifteen-to-twenty percent decrease in price, for all brands in three of the categories. The exception is the airline category, where the main effect of price is twice as large as that of social involvement. One possible explanation could be that the price elasticity of social involvement is smaller the smaller the prices in the product category involved. However, as other factors may be acting to differentiate the categories, further research is needed to address the issue. Even though these findings are not intended to claim a dollar-value for social involvement, given the specificity of the two-level manipulation employed, they serve as a first approximation for that figure, at least in situations that resemble the treatments used here.

In sum, the hypothesis about choice received strong support from the data. Social involvement does have a main effect on a product's choice probability. Moreover, the magnitude of the effect of excellence in social involvement on choice behavior can be comparable to the effect of relevant functional attribute performance reported by the company as "much better than industry standards." In addition, for the categories in this research, the main effect of social involvement offsets from approximately half to the full utility decrease from a 15 to 20% price increase.

6.3 Managerial implications

Managers have been making decisions on whether or not to become socially involved. Investment in socially oriented actions has to be weighed against their effects on business performance and competitiveness, even when managers are altruistically inclined to sponsor social causes. Social investments have been economically justified in terms of their positive effects on the workforce and on funding sources, but such justifications have limits. Moreover, in a number of cases there has been a conscious effort to communicate firms' social involvement beyond the workforce and funding pools. Firms' existing and potential consumers are particularly targeted by communication efforts. However, the literature lacks a better understanding of whether and to what extent consumers are willing to pay for the firms' social involvement. This research indicates that social involvement can have a substantial influence on consumer behavior.

The issue of how substantial it is relates to the specific manipulation levels utilized in the survey. Perfect awareness of social involvement is not always attained in the real world. Even less likely would be having such information backed by an independent source. However, the strength of the effect registered under such an ideal scenario indicates that the influence of social involvement on consumer behavior may be more than just marginal.

The effect of social involvement is significant both on consideration set formation and choice. This has strategic implications. Consumers probably have thresholds of social involvement level, below which they do not even consider an alternative. The average effect of these thresholds across respondents leads to the importance weight estimated in the consideration model. Therefore, firms may engage in social actions in order to stay above the threshold level of a certain number of consumers. On the other hand, choice is affected, and social involvement can be regarded as another attribute that adds utility to the product in the same fashion as other functional attributes do. Therefore, it can be offered as a product differential. The probability of choice increases when firms engage in social actions. Moreover, this seems to be true across a number of categories, even though there is some evidence that the dollar-value of social involvement may vary across categories. These results provide economic justification to engage in social actions, including environmental protection.

In sum, the results of this research provide economic justification for social involvement. The effect of social involvement can be substantial if compared with other attributes. Moreover, the effect seems to be present in a variety of product and service categories.

6.4 Limitations of the study and future research

This research supported the formulated hypotheses. Moreover, given the manipulations that were used, the effect size of a firm engaging in social actions such as environmental protection showed up to be quite relevant both in the consideration and the choice phases of consumers decision process. However, future research should address some aspects not covered in this research.

First, this research assumes that actions of environmental protection are relevant for being socially desirable. No differentiation was made between actions of environmental protection and other socially responsible behaviors at large. In fact, a socially responsible firm was introduced as a being "exceptionally good" in "activities to protect the environment, donate money to charities, have employees volunteer for community programs" etc. Future research will have to disentangle environmental protection from other socially responsible behaviors to access its individual role in the consumer choice decision process.

Second, the results are valid for the specific manipulations used in this research. The effect-size of the main effect of social involvement is very high when compared with the main effects of other more traditional variables, such as the technical expertise of the provider and the important functional attributes of the products. Nonetheless, only two levels of price and the functional attributes were used to differentiate the alternatives. Price differences used were in the 15-20% range. Functional attributes could either "just meet industry standards" or be "much better than industry standards". More focused studies could test for manipulations assuming a larger number of levels, in spite of the added complexity, to better mimic the real world.

Finally, even though four different product categories were tested for, covering widely differing goods (personal computers and mattresses) and services (airline transportation and health insurance), the results pertain to these categories. It is promising, though, that the results are quite consistent across such different product categories.

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