# Consumer Reaction to Social Issues: A Six Country Study

**Abstract:** The importance of ethical consumerism to many companies worldwide has increased dramatically in recent years. The present paper utilizes examines the importance of social issues in six countries and generates implications for global segmentation.

## INTRODUCTION

There has been increasing debate on the importance of ethical consumerism to the marketing of products and the day-to-day strategic management of business. Although recent studies on ethical consumerism suggest that consumers increasingly care about the ethical components of products and business processes and that these concerns have financial implications for the businesses involved (Elliot and Freeman 2001; Marymount University, 1999), most of the conclusions from these studies are based on survey results that ask respondents to simply rank the importance of a list of ethical issues, and hence do not force consumers to trade-off ethical features of products against traditional features. One notable exception to this is a series of studies by Auger, Burke, Devinney and Louviere (2003a,b) that utilize a choice modeling approach to provide more accurate willingness-to-pay estimates along with some implications for segmentation.

This work utilizes two methodologies (choice modeling and best-worst experiments) and expands on Auger, et al. by looking at a greater number of products, a larger number of social issues and a wider variety of countries (Auger, et al. examined only Hong Kong and Australia). The discussion below describes only the best-worst experiment and concludes with a window on how this is used in the estimated based on the choice modeling data.

## RESEARCH METHOD AND SAMPLE

This study examined three product categories—athletic shoes, laundry detergents and batteries—in six countries—USA, Spain, Germany, Turkey, India and Korea. Each respondent was recruited by a professional research firm and was representative of the middle class in each country. They completed a survey with gathered information in four sections: (1) information about their last purchase, (2) a series of 8 choice tasks, (3) a best-worst experiment with 20 blocks of options, and (4) demographics. All subjects answered sections (1) and (2) for two products. Everyone received an experiment dealing with athletic shoes and was randomly assigned to either the battery or detergent product category. In some cases, women were over-represented in the detergent category as a screening criterion was familiarity with the product category. Table 1 presents the respondent characteristics.

**Table 1:** Sample Demographics

|  | USA | Germany | Spain | Turkey | India | Korea | Total |
|---|---|---|---|---|---|---|---|
| Age (Median Grouping) | 30–39 | 30–39 | 30–39 | 30–39 | 30–39 | 30–39 | 30–39 |
| *Age (Percent 19)* | 9.10 | 6.00 | 17.00 | 16.20 | 17.00 | 2.00 | 11.33 |
| *Age (Percent 50)* | 29.33 | 17.00 | 32.10 | 14.10 | 11.00 | 22.00 | 21.00 |
| Gender (Percent Female) | 60.6 | 52.5 | 59.4 | 50.5 | 49.0 | 70.0 | 57.0 |
| Income (Median Grouping, $000) | 25–40 | 15–25 | 15–25 | 15–25 | 15–25 | 15–25 | 15–25 |
| *Income (Percent $15,000)* | 7.20 | 26.10 | 15.70 | 54.63 | 27.80 | 5.00 | 22.70 |
| *Income (Percent $40,000)* | 51.47 | 28.40 | 19.10 | 11.30 | 3.10 | 7.00 | 19.90 |
| Education (Percent Univ Educated) | 20.70 | 8.90 | 22.60 | 62.70 | 60.80 | 39.00 | 35.70 |
| Marital Status (Percent Married) | 39.80 | 33.33 | 50.90 | 31.33 | 50.00 | 66.00 | 45.30 |
| Percent Muslim | 0.00 | 1.20 | 0.00 | 94.90 | 11.00 | 0.00 | 17.70 |
| Percent Non-White | 35.10 | 3.60 | 2.70 | 98.20 | 100.00 | 100.00 | 56.10 |
| Sample Size | 99 | 100 | 106 | 100 | 100 | 100 | 605 |
| Sample Method |  | Mall Intercept |  | Home | Mall Intercept |  |  |

The best-worst experiment examined sixteen social issues: (1) animal rights in product testing, (2) use of animal byproducts in products; (3) product biodegradability; (4) products made from recyclables; (5) product safety information provided (6) human rights; (7) packaging recyclability; (8) product disposability; (9) payment of minimum wages; (10) unions allowed; (11) minimum living conditions met; (12) sexual orientation rights; (13) safe working conditions guaranteed; (14) child labor; (15) genetically modified material usage; (16) gender, religious and racial rights. These sixteen overlapped with those used in the choice experiment but four were never mentioned in the choice experiment—human rights, sexual orientation rights, genetically modified material usage and gender, religious and racial rights. In each case, the social issue was defined specifically and where there was overlap with the choice experiment, the definitions were identical. The best-worst experiment required the individual to examine four issues and indicate which issue of the four they considered "most important" and which they considered "least important". Table 2 provides an example of three of the sets.

**Table 2:** Example of the Best-Worst Experiment

| Question No. | Which issue matters LEAST to you? (tick ONLY ONE box for each question) | Sets of social and ethical issues for you to consider | Which issue matters MOST to you? (tick ONLY ONE box for each question) |
|---|---|---|---|
| 1 | ☐<br>☐<br>☐<br>☐ | Animal rights<br>Product biodegradability<br>Products made from recyclables<br>Product safety information provided | ☐<br>☐<br>☐<br>☐ |
| 5 | ☐<br>☐<br>☐<br>☐ | Gender, religious, racial rights<br>Product biodegradability<br>Child labor not used<br>Genetically modified material used | ☐<br>☐<br>☐<br>☐ |
| 18 | ☐<br>☐<br>☐<br>☐ | Human rights<br>Safe working conditions<br>Unions allowed<br>Genetically modified material used | ☐<br>☐<br>☐<br>☐ |

## RESULTS

Because of their design structure, best-worst experiments allow for simple examination of the relative value of an issue by simply scaling the number of times an issue is considered "best" against the number of times it is considered "worst". Figure 1 provides an examination of the relative position of different social issues across the six countries based on this assessment. What we see is quite stark. First, four issues clearly receive consistently high ratings across all countries—human rights, child labor (although Koreans give it a neutral rating), safe working conditions and good living conditions. Second, four other issues clearly and consistently receive low ratings across all countries—recycled packaging, use of animal byproducts, recycled material usage, and genetically modified materials. The remaining seven issues are viewed quite differentially by country.

One question that is at issue is whether there is any pattern in the ratings that we see. To address this we cluster analyzed the ratings using K-means clustering. This leads to an intricate series of results that we can only summarize here. The data is best represented by eight segments that are not country centric. The mixture of issues that matters to the different segments is quite complex as exhibited in Table 3. This presents the t-statistics of the best-worst ratings for each segment against the grand mean. What it indicates is that some segments are fairly clear in their orientation while others are more convoluted. For example, segments 6 and 7 are similar in their emphasis on animal, human and gender rights. Segment 2 is quite strong on environmental issues. What is interesting about best-worst experiments is they also show quite clearly which issues are people are willing to abandon. For

example, segment 5 is quite anti animal rights and opposed to gender and racial rights.

**Figure 1:** Best-Worst Ratings of Social Issues
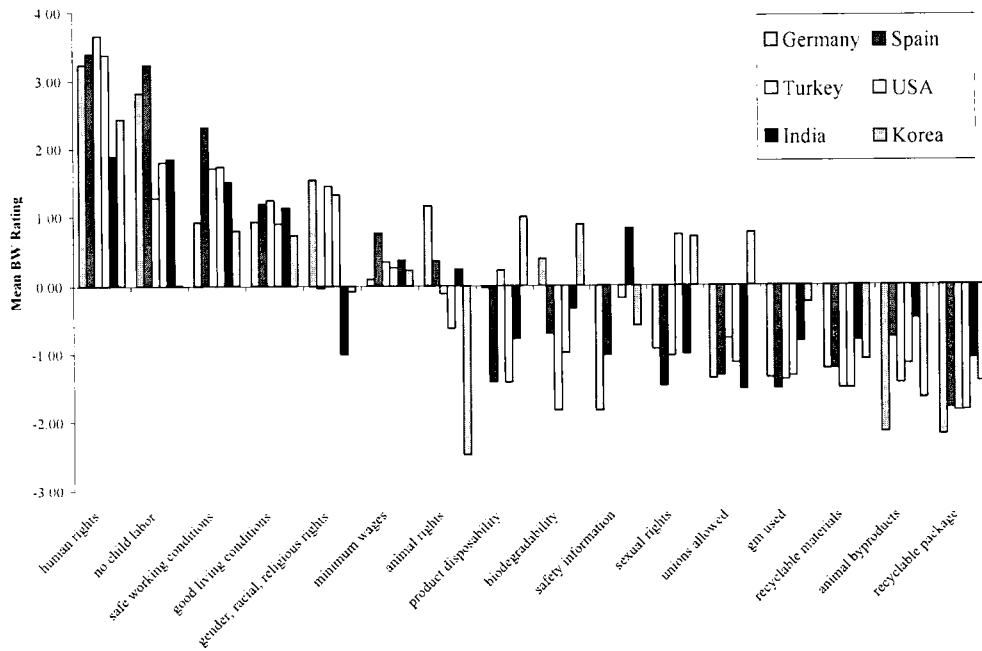


**Table 3:** T-Statistics of Best-Worst Ratings by Cluster

| Cluster | Animal rights | Animal by-products used | Product biodegradability | Recyclable materials used | Safety info provided | Human rights | Recyclable package | Product disposability | Minimum wage paid | Unions allowed | Minimum living conditions | Sexual rights | Safe working conditions | No child labor | Genetically modified materials used | Gender, religious, racial rights | Percent of Sample |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.76 | 4.08 | -7.28 | 4.48 | 2.32 | **4.44** | -4.21 | -3.21 | 2.71 | **8.88** | 1.54 | -10.55 | **6.97** | 1.77 | -2.82 | 3.76 | 12.1 |
| 2 | -2.69 | 0.83 | **12.53** | **12.29** | **6.77** | 7.86 | **13.49** | **11.43** | -8.62 | -2.38 | 8.76 | -6.50 | -6.42 | 6.43 | **4.84** | -2.69 | 10.4 |
| 3 | 2.76 | 1.61 | **3.50** | 2.65 | 1.74 | -3.62 | **4.95** | 2.97 | **3.11** | -8.34 | 0.64 | -10.30 | **3.90** | **7.61** | 3.21 | 2.76 | 16.3 |
| 4 | **3.03** | -1.80 | 3.40 | -5.95 | -6.85 | **6.88** | -7.31 | 5.77 | 0.70 | -6.01 | **5.58** | **8.31** | 0.80 | **3.78** | 5.26 | 3.03 | 18.4 |
| 5 | 15.40 | 1.11 | -2.00 | 8.03 | -6.94 | 0.62 | 5.09 | -1.15 | 1.12 | **8.82** | 1.03 | **13.18** | -3.02 | -1.89 | **8.09** | 15.40 | 8.5 |
| 6 | **8.38** | 3.70 | 2.44 | 4.07 | -4.11 | **3.67** | 1.78 | 2.25 | 4.71 | -3.66 | 11.61 | **8.23** | -5.82 | -3.31 | 3.07 | **8.38** | 10.1 |
| 7 | **6.39** | **5.81** | 6.44 | -6.16 | -4.12 | **4.27** | -10.46 | 11.01 | **7.67** | -1.32 | **7.00** | -0.31 | 2.96 | **8.99** | -1.61 | **6.39** | 11.9 |
| 8 | -5.35 | 0.09 | -1.95 | 2.32 | **10.80** | 4.11 | 2.61 | 2.30 | -0.75 | **4.97** | **4.67** | -1.55 | 2.43 | -6.82 | 2.47 | -5.35 | 12.3 |
| Total | 0.11 | -0.02 | -0.33 | -0.41 | -0.05 | 0.54 | -0.53 | -0.28 | 0.15 | 0.12 | 0.01 | 0.06 | 0.23 | 0.46 | -0.07 | 0.11 | |
| Rank | 6 | 9 | 13 | 14 | 10 | 1 | 15 | 12 | 4 | 5 | 8 | 7 | 3 | 2 | 11 | 6 | |

*Note:* Total is the average best – worst score for the issue. Rank is the rank order based on Total. **Bold** indicates a t > 3.00. *Italics* indicates a t < -3.00.

In addition, there appear to be observable differences between these groups. Table 4 shows that the segments different (based on simple univariate comparisons) based on demographic characteristics. For example, Koreans dominate segment 5 (the anti animal, anti gender and racial rights segment). The strong environmentalist segment (group 2) is difficult to typecast but certainly is under-represented by Americans, Turks and Spaniards. The highest income segment is group 4 and it is quite broad in support of specific rights—human, animal, child, sexual, gender and racial. People in this group are unlikely to be from the Indian subcontinent. To get at the complicated nature of these relationships more effectively we conducted a multinomial logit analysis to determine both the relationship between issues across the segments but also the country and demographic effects.

# Table 4: Demographic Differences by Cluster

| Cluster | Age | Income ($000) | Gender (percent female) | University Educated (percent) | Germans (percent) | Spaniards (percent) | Turks (percent) | Americans (percent) | Indian (percent) | Koreans (percent) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.30 | 20.02 | 53.42 | 19.18 | 17.81 | 9.59 | 38.36 | 13.70 | 16.44 | 4.11 |
| 2 | 35.17 | 26.65 | 52.38 | 38.10 | 15.87 | 7.94 | 6.35 | 7.94 | 23.81 | 38.10 |
| 3 | 39.04 | 27.68 | 61.22 | 35.71 | 21.43 | 30.61 | 6.12 | 5.10 | 28.57 | 08.16 |
| 4 | 37.30 | 32.17 | 60.91 | 20.72 | 27.03 | 24.32 | 20.72 | 26.13 | 1.80 | 0.00 |
| 5 | 36.63 | 21.86 | 64.71 | 19.61 | 1.96 | 1.96 | 7.84 | 11.76 | 3.92 | 72.55 |
| 6 | 37.26 | 29.69 | 49.18 | 29.51 | 26.23 | 9.84 | 21.31 | 19.67 | 8.20 | 14.75 |
| 7 | 36.38 | 29.82 | 59.15 | 36.11 | 12.50 | 31.94 | 9.72 | 22.22 | 22.22 | 1.39 |
| 8 | 35.58 | 25.02 | 52.70 | 20.27 | 0.00 | 9.46 | 20.27 | 18.92 | 27.03 | 24.32 |
| Mean | 36.59 | 27.12 | 57.00 | 35.70 | 16.50 | 17.50 | 16.50 | 16.40 | 16.50 | 16.58 |
| $\chi^2$ | | | 5.77 | 17.13** | 38.08*** | 46.97*** | 45.89*** | 24.91*** | 46.59*** | 187.21*** |
| F | 0.97 | 2.74*** | | | | | | | | |

$* p < 0.10, ** p < 0.05, *** p < 0.01$

The MNL estimate was done using a mixture of measures and all the results cannot be reported here. However, what is most of interest are the cross-sectional differences between individuals and countries. To capture this we utilized both dummy variables to indicate the country of origin and Hofstede's measures of cultural distance. The latter are quite commonly applied (see, e.g., Hofstede, 1993) and measure four basic cultural characteristics: power-distance (PD)— the degree of inequality that people in a culture consider normal—individualism(I)— the degree to which people in a culture prefer to act as individuals rather than as members of a group—masculinity (M)— The degree to which 'assertiveness', 'performance', 'success' and 'competition' matter—and uncertainty avoidance (UA)— The degree to which people prefer 'structured' over 'unstructured' situations. Within the countries studied here, the US is highest on I, Korea and India are highest on PD, Spain and Turkey are highest on UA, and the USA and Germany are the highest on masculinity. The results using the Hofstede measures are shown in Table 5 (the other analyses are excluded for simplicity).

# Table 5: MNL Estimates of Cluster Segments versus Demographics and Country Aggregates

| Cluster | Age (Mean Centered) | Income (Mean Centered) | Gender (Female Dummy) | High School Dummy | University Dummy | White Ethnicity | Muslim Ethnicity | Married Dummy | Power Distance | Individualism | Masculinity | Uncertainty Avoidance | Percent Classified Correctly |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.025 | 0.002 | 0.138 | 0.891*** | 0.592 | 0.094 | -0.235 | -0.206 | 0.108*** | 0.044*** | 0.247*** | 0.128*** | 32.8 |
| 2 | -0.010 | 0.000 | 0.003 | 0.577 | 1.554*** | 1.168 | -0.865 | 0.383 | -0.041 | -0.064*** | 0.072 | -0.010 | 12.9 |
| 3 | 0.013 | 0.000 | 0.393 | 0.459 | 1.250*** | 1.689** | -1.060 | 0.648 | 0.072*** | 0.010 | 0.137** | 0.060** | 45.1 |
| 4 | 0.004 | 0.000 | 0.610* | -0.080 | 0.174 | 0.360 | 0.761 | -0.644 | 0.122* | 0.128*** | 0.374*** | 0.234*** | 63.6 |
| 5 | 0.006 | -0.002 | -0.031 | 0.060 | 0.090 | -1.617 | -0.702 | 0.143 | -0.142*** | -0.043* | -0.126 | -0.061 | 66.0 |
| 6 | 0.018 | 0.000 | 0.027 | 0.554 | 1.036** | -0.827 | 0.163 | -0.045 | -0.006 | -0.015 | 0.196*** | 0.076*** | 10.3 |
| 7 | 0.012 | 0.000 | 0.548 | 0.349 | 1.043*** | 0.855 | 0.266 | -0.127 | 0.091** | 0.045* | 0.166* | 0.086** | 6.1 |
| 8 | | | | | | | | | | | | | 11.1 |
| $\rho^2$ | 15.7 | | | | | | | | | | Total Classified Correctly | | 32.7 |
| -2LL | 2094.24 | | | | | | | | | | | | |

$* p < 0.10, ** p < 0.05, *** p < 0.01$

The results are clear in indicating that country specific effects, in combination with education, are strong in determining social issue orientation. The other demographic are less important. Of the more

identifiable segments we see some patterns. The environmentalist group (segment 4) is more likely to be female, more individualist (I), more 'masculine' (M) and more demanding of structured environments (higher UA). The rights segments (6 and 7) are both represented by high education levels but differ in their mixture of cultural measures. Segment 6—which is very much anti-labor— is higher on masculinity (M) and UA. Segment 7—which is more positively disposed to labor and strongly against child labor—is more individualistic and higher on PD.

## CONCLUSION

This study provides a window on global differences in social issue orientation. Unlike prior studies, it relies on a methodology that provides more robust estimates and allows us to determine which issues will be abandoned when the individual is forced to make a choice. We find that based on this analysis there is quite a lot of homogeneity across cultures in aggregate preferences but that there is a good deal of heterogeneity across individuals that is unobservable. This implies that gross segmentation based on observable demographic provides some information but quite limited information. The intent of this analysis is not to stop with these conclusions. As noted earlier in the paper, embedded within this study are additional choice modeling tasks which can be analyzed taking into account the general orientation groupings discussed here. This would allow us to provide more accurate assessments of segmentation determinants when examining products where social issues are relevant to the purchase.

## REFERENCES

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