A Multi-Country Investigation of the Impact of Intangible Social Attributes on Purchase Intentions

Submitting author: Pat Auger
Affiliation: Melbourne Business School
OtherAuthors: Devinney, Timothy; Louviere, Jordan
Affiliations: Asutralian Graduate School of Management; University of Technology, Sydney

Abstract: the emergence of global media and information availability has increased the importance of intangible attributes in consumer purchase decisions. The present paper utilizes choice experiments to examine the relative importance of three categories of intangible attributes—brand, country-of-origin, and social attributes—on a sample of consumers from 6 countries.

Keywords: Intangible attributes, Cue evaluation, Choice experiments, Global marketing.

Track**: Consumer behaviour**

Many observers argue that consumers in the developed (and developing) world are changing and that these changes are having a profound impact on the way organizations market their products and services globally. For the most part, these changes are the result of globalization, the emergence of multinationals, and the ubiquity of global media, among others. Simply put, today's consumers: (1) have more product choices available than at any other time (and these choices tend to be of higher and more uniform quality), (2) are wealthier and better educated, and (3) are increasingly brand conscious (Harrison, 2003).

The ubiquity of global media (e.g., the Internet, etc.) also means that consumers worldwide are exposed to a growing amount of information about products and services. As a result, consumers have become better informed about products and services, which has placed, and is continuing to place, a lot of pressure on organizations to improve the range, quality, and innovativeness of the products and services they offer. In many ways, the vast amount of information available to consumers has empowered them and enable them to be more selective about their preferred brands and suppliers.

Recent evidence suggests that it is not only the volume of information available to consumers that is impacting their behaviour, but also the type of information available to them. For example, the growth in the popularity of fair trade coffee in the UK strongly suggests that consumers are not only receiving (or seeking) information about the tangible attributes of coffee but also about its intangible attributes (e.g., the price paid to farmers in developing country markets). Compared to tangible attributes (e.g., price, color, materials, etc.), intangible attributes are inherently difficult to describe and characterize. However, as products become more similar and difficult to compare, intangible attributes are expected to play a more important role in consumer purchase decisions (Lefkoff-Hagius & Mason, 1990).

In this research, we focus our attention on three categories of intangible attributes that have received a lot of attention in the academic literature: 1) brand, 2) country of origin, and 3) social attributes. Previous research has shown that all three groups of intangibles have an impact on purchase intentions and that individuals from different countries tend to value these intangible attributes differently (e.g., Auger, Burke, Devinney, & Louviere, 2003; Erdem, Swait, & Valenzuela, 2006; Gurhan-Canli & Maheswaran, 2000). However, most previous research has focused on a single group of intangibles, which severely limits the generalizibility of the findings (Lee & Lou, 1995; Ulgado & Lee, 1998). We partly remedy this weakness by incorporating a broad range of tangible and intangible attributes to create conditions that are closer to actual shopping situations.

Specifically, we used choice experiments to investigate the relative importance of three groups of intangible attributes versus tangible attributes. We conducted the choice experiments in six countries (3 developed and 3 developing countries) to allow for cross-country comparisons.

Three research questions drive this research and are the focus of this paper:

1. Do consumers know about the intangible attributes of the products they purchase? If so, are they better informed about some of the attributes versus others?

2. Do intangible attributes have more impact on the purchase intentions of consumers from developed versus developing countries (and vice versa)?
3. Do different intangible attributes affect the purchase intentions of consumers from developed and developing countries differently?

We follow the basic premises of information processing theory and treat the information presented to consumers as an array of cues (Hansen, 2005). That is, pieces of information available to consumers can be regarded as cues, which can be either intrinsic or extrinsic. Intrinsic cues involve the physical composition of a product whereas extrinsic cues are not part of the physical product itself (Ulgado & Lee, 1998). In effect, we treat tangible attributes as intrinsic cues and intangible attributes as extrinsic cues.

Table 1: Functional and Intangible Attributes for Athletic Shoes and Batteries

Athletic Shoes	AA Batteries
Functional Attributes (levels of attribute):	
Shock absorption/cushioning (Low or High)	Useful life (15 Hours or 30 Hours)
Weight (Lighter or Heavier)	Storage life (3 Years or 5 Years)
Ankle support (Low Cut or High Cut)	Is the expected spoilage date on the battery? (No or Yes)
Sole durability (Short or Long)	On-battery or on-package tester (No or Yes)
Breathability/ventilation (Low or High)	Money-back guarantee (No or Yes)
Fabrication materials (Synthetic or Leather)	Rechargeable (No or Yes)
Reflectivity at night (No or Yes)	
Comfort/fit (Low or High)	
Price ($40, $70, $100, $130)	Price ($1.30, $3.30, $5.30, $7.30)
Intangible Attributes (levels of attribute):	
Brand	
Brand of shoe (Nike, Adidas, Reebok, Others)	Brand of battery (Energizer, Duracell, 2 others varied by country)
Country-of-Origin	
Country of origin (Poland, China, Vietnam, domestic)	Country of origin (Poland, China, Japan, domestic)
Social Attributes (all are either Yes or No):	
Is child labour used in making the product?	Is the battery Mercury/Cadmium free?
Are workers paid above minimum wage?	Is the battery made from recyclable materials?
Are workers' working conditions dangerous?	Is the package made from recyclable materials?
Are workers' living conditions at the factory acceptable?	Was hazardous waste created from the production process?
Are workers allowed to unionize?	Is safe battery disposal information contained on the package?

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The functional (tangible) product attributes were pre-tested to ensure their relevance to consumer purchase decisions and price levels were consistent with prices in all six markets at the time of data collection (see Table for a list of attributes). Based on the literature, we chose three categories of intangible attributes: 1) brand, 2) country-of-origin, and 3) social attributes. Subjects were given definitions of all product attributes (both tangible and intangible attributes) to ensure that they understood the nature of these attributes. The surveys were translated into the appropriate languages and back-translated for consistency.

RESULTS

Due to space limitations we present the most complete set of results for athletic shoes and make only brief reference to the results for batteries. Our first research question deals with the knowledge of consumers with respect to the intangible attributes of their most recent purchases. Table 2 summarizes the differences between the knowledge of functional and intangible attributes for both products by country market. Several interesting results emerge from the analysis.

First, knowledge about the nature of intangible attributes varies massively depending on the type of intangible. For example, most consumers remembered the brand of their most recent purchase for both products (87% for shoes and 79% for batteries), but very few knew about the nature of the other two groups of intangibles (ranges from 27% to 40%). In fact, knowledge of the brand for batteries was higher than knowledge of the functional attributes for every country. Second, knowledge of most recent purchases was higher for shoes (a higher involvement product) than for batteries with the exception of the social attributes. For the latter group of intangible attributes, consumers were more knowledgeable about the social attributes of batteries than those of shoes.

Table 2: Knowledge of Last Purchase (Percentage Who Remembered Attributes)

		USA	Germany	Spain	Turkey	India	Korea	Total
Functional Attributes (excluding Price)								
	Shoes	89.9	87.1	91.7	91.8	91.9	92.4	91.0
	Batteries	66.2	62.4	58.6	53.8	73.0	54.0	60.4
Brand								
	Shoes	83.8	81.0	96.2	90.0	97.0	71.0	86.6
	Batteries	76.0	64.6	84.6	77.6	94.0	74.0	78.7
Country-of-Origin								
	Shoes	20.6	28.6	24.8	36.0	66.0	61.0	39.5
	Batteries	20.0	16.3	5.8	14.6	76.0	38.0	26.8
Social Attributes								
	Shoes	30.7	21.6	25.8	10.6	23.0	51.2	27.3
	Batteries	41.2	43.8	40.5	33.5	32.8	58.4	38.0

We conducted a series of binomial regression analyses to answer our second research question and test for differences in the importance of intangible attributes by country market. We did four regression analyses for each product and country. We first created a base model that only included the functional attributes. We then created additional models by adding the three groups of intangible attributes to the base model, one at a time. Table 3 presents the results of the full model for athletic shoes that all includes all attributes (both functional and intangible). Though the results are interesting, they are relatively difficult to interpret due to the large number of coefficients presented. For example, a quick examination of the results clearly show that consumers from Korea placed much greater importance on country of origin and price than consumers from the other country markets. Similarly, the analyses revealed that Turkish consumers were much more concerned about the brand of shoes than consumers from other countries. Nonetheless, a more comprehensive comparison of the regression results requires a simplification of the presentation.

Table 3: Logit Estimates for Shoe Choice by Country—Full Model

	Germany	Spain	Turkey	USA	India	Korea
Intercept	2.994**	2.141*	0.929	3.874***	3.851***	9.037***
Functional Attributes						
Shock Absorption	0.341**	0.195*	0.056	0.000	0.055	0.012
Weight	-0.188*	-0.314**	-0.148*	-0.131	-0.201*	-0.506***
Suppleness (Ankle Support)	-0.104	-0.085	-0.171*	-0.149	0.029	0.184*
Sole Durability	0.242*	0.136	0.352***	0.083	0.009	0.283**
Breathability	0.167	0.254**	0.299**	0.083	0.258**	-0.043
Fabric	0.264*	-0.111	0.225**	0.025	0.037	-0.158
Reflectivity	0.162	0.014	0.045	-0.065	-0.185*	0.071
Fit	0.082	0.235*	0.332**	0.145	-0.031	0.045
Price (log)	-1.198***	-1.083***	-0.767***	-1.205***	-1.174***	-1.965***
Brand						
Nike	0.195	-0.001	0.447**	0.103	0.212	0.041
Adidas	0.184	0.096	0.480**	0.144	-0.118	0.180
Reebok	-0.261	-0.138	-0.225	-0.093	0.264*	0.053
Other	-0.118	0.043	-0.703***	-0.155	-0.358**	-0.274
Country of Origin						
Poland	0.165	-0.490**	-0.110	-0.022	0.001	-0.120
China	-0.076	0.080	0.032	-0.160	0.073	-0.320*
Vietnam	-0.337*	0.183	0.048	-0.125	-0.235	-0.260
Domestic	0.248	0.228	0.030	0.307*	0.161	0.700***
Social Attributes						
Child Labor	-0.676***	-0.495***	-0.196*	-0.422***	-0.165*	-0.237*
Minimum Wage	-0.028	0.161	0.046	0.091	0.166*	0.062
Dangerous Working Conditions	-0.212*	-0.325**	-0.322**	-0.212*	-0.086	-0.073
Living Standards	0.177*	0.113	0.119	0.053	-0.008	-0.141
Unions Allowed	0.113	0.101	-0.004	-0.026	0.085	0.217*
Information						
Article (ethical mentioned)	-0.222	-0.199	-0.103	-0.089	0.136	-0.065
Demographics						
Age	0.035*	0.002	0.002	0.005	0.006	0.021
Income	-0.006	0.005	0.011	0.005	0.004	0.022
Gender	-0.220	0.053	-0.081	0.318	-0.116	-0.406
Education	-0.165	0.535	-1.294	0.564	0.320	0.833
Marital Status	0.792*	0.725	1.137*	0.241	-0.462	-0.994
Children	0.542	1.022	0.839	-0.006	-0.115	-1.521
R^2	0.3352	0.3438	0.3283	0.3741	0.2184	0.4299
N=	800	832	800	776	800	800

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

We accomplished this by conducting a series Likelihood ratio tests that compared each group of intangible attributes to the base model. The results of these analyses are presented in Table 4 for shoes. A number of interesting results emerge from these analyses. First, intangible attributes have a relatively large and consistent impact on the purchase intentions of consumers across the six countries in our sample. Overall, our three categories of intangible attributes were highly significant ($p < .001$) for all countries with the greatest impact on the purchase intentions of German consumers and the lowest impact for Indian consumers. Though not presented here, the results for batteries show a similar pattern (with more variability and slightly different ordering of countries), which strongly suggests that intangible attributes affect purchase intentions for both high involvement products (athletic shoes) and low involvement products (batteries).

Second, there is a great deal of variability in the importance of the different categories of intangible attributes by country market. For example, brand appears to have a much grater impact on purchase intentions for Turkey and India (two developing countries) than for the remainder of the countries (i.e., the more developed economies). These results are consistent with previous research that has found brand to be more important in developing countries since the usual product information is less available or less reliable

(Erdem et al., 2006). Hence, brand can be seen as a way to reduce uncertainty due to the relative paucity and/or poor quality of product information available in developing countries. This is an interesting result given that our choice experiments presented all relevant product information including information about functional attributes. Hence, Turkish and Indian consumers still preferred to rely on brand to a relatively large extent even when supplied with a large amount of information about product attributes.

Third, the results show that the social attributes had a much larger impact on the purchase intentions of consumers in Western developed countries (i.e., Germany, Spain, and the USA). In the case of shoes, the social attributes revolved around labor issues such as the use of child labor and the safety of working conditions. This is consistent with Harrison (2003) who proposed that the emergence of ethical consumerism is primarily a developed country phenomenon that is partly driven by the recent availability of more socially conscious products (e.g., green and fair trade products, etc.). Furthermore, these products tend to be of relatively high quality making them a genuine alternative.

Table 4: Model Comparisons for Shoes

	Germany	Spain	USA	Turkey	India	Korea
Functional attributes and demographics (base model)						
Log-Likelihood	657.54	702.92	856.61	847.61	906.75	734.83
R^2	0.2693	0.2757	0.3412	0.2541	0.1918	0.3897
Brand						
Log-Likelihood	655.88	702.32	855.53	820.76	897.88	733.10
R^2	0.2717	0.2776	0.3420	0.2997	0.2000	0.3924
λ^2 (Δdf = 3)	3.32	1.20	2.16	**53.70*****	**17.74*****	3.46
Country of origin						
Log-Likelihood	653.65	693.80	850.72	820.11	895.22	714.41
R^2	0.2736	0.2936	0.3498	0.3002	0.2064	0.4178
λ^2 (Δdf = 3)	4.46	**17.04*****	**9.62***	1.30	5.32	**37.38*****
Social attributes and information						
Log-Likelihood	609.55	663.85	828.07	812.32	882.87	702.41
R^2	0.3352	0.3438	0.3741	0.3283	0.2184	0.4299
λ^2 (Δdf = 6)	**88.20*****	**59.90*****	**45.30*****	**15.58***	**24.70*****	**24.00*****
Full versus base model (effects of all intangible attributes)						
λ^2 (Δdf = 12)	**95.98*****	**78.14*****	**57.08*****	**70.58*****	**47.76*****	**64.84*****

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; $\lambda^2 = 2 \times (LL_n - LL_{n-1})$

Finally, Korean consumers exhibited a very strong domestic country bias making the country-of-origin intangible attribute highly significant. These results are consistent with previous work that has found Korean consumers to place as much importance on country-of-origin as tangible attributes (Ulgado & Lee, 1998). Interestingly, Korean consumers had similar preferences for batteries with domestically-produced goods being highly preferred over goods from other countries. The country-of-origin effect was not unique to Korean consumers. For example, both Spanish and American consumers were significantly influenced by the country in which the athletic shoes were produced. What is unique about the Korean sample is that the country-of-origin had a much higher impact on their purchase intentions than the other categories of intangible attributes. Overall, our results show that different groups of consumers are differentially influenced by different information cues. Specifically, our results show that extrinsic cues (in the form

of intangible attributes) have a significant impact on purchase intentions and that significant variations occur with respect to the impact of specific cues in specific country markets (brand in developing countries, social attributes in Western developed countries, and country-of-origin in Korea).

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