

The importance of social product attributes in consumer purchasing decisions: A multi-country comparative study

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Abstract

This paper examines the role that social attributes—environmental and labour conditions—play in product choice across a range of developed and emerging economies. We use a multi-attribute design to force consumers to not only trade-off social attributes with tangible attributes but also make trade-offs with other intangible attributes, namely brand and country of origin. Our results show that: (1) social attributes are generally more influential in developed than in emerging economies, (2) the importance of social attributes holds across high and low involvement products, and (3) social attributes can influence product choice even when other intangible attributes are included in the design. We believe that our results offer a more accurate picture of the role of social attributes since they are based on a multi-cue, multi-product design that forced consumers to make trade-offs between tangible and intangible attributes.

1. Introduction

A number of academics and observers believe that a rising social consciousness of consumers across the globe is having a profound impact on the way organisations market their products and services both locally and globally. These changes are partly the result of increased globalisation, the emergence of multinationals, the ubiquity of global media, and the increasing salience of global social issues such as environmental degradation and climate change. 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, (3) are increasingly brand conscious (Harrison, 2003), and (4) have more opportunities to reveal their social preferences when engaging in purchasing should they choose to do so. It is this latter aspect of this impact—the environmental and social impact of products—and their importance to consumers that is the focus of this paper. In effect, this paper investigates the demand side of sustainable development by focusing on consumer demand for products with social attributes across both developed and emerging country markets.

The ubiquity of global media and the expansion of the distribution of global brands also mean that consumers worldwide are exposed to a growing amount of information about an expanding market of international and local products and services.

As a result, consumers have the opportunity to become better informed about products and services, placing greater pressure on organisations to improve the range, quality, and innovativeness of the products and services they offer and to take into consideration the environmental and social impact of the products they produce and market (e.g., Devinney, Auger, Eckhardt, & Birtchnell, 2006). Evidence also 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 (e.g., type of coffee bean, whether or not the coffee is decaffeinated, etc.) but also about its other attributes that are not tangible in nature (e.g., the price paid to farmers in emerging country markets). The challenge for business is that these intangible attributes are inherently difficult to describe and characterise compared to tangible attributes. 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).

The primary focus of our research is on a group of intangible attributes that we refer to as social attributes. Specifically, we investigate the influence on consumer

purchase intentions of two groups of social attributes: environmental and labour conditions. We also include two other intangible attributes, brand and country-of-origin, so that we can study the relative importance of social attributes versus other types of intangible attributes. This is important as most previous research has studied the importance social attributes (as well as other intangible attributes) in isolation, limiting the generalisability of their findings (Lee & Lou, 1995, Ulgado & Lee, 1998). We believe that the inclusion of a broader range of intangible attributes (beyond simply the social attributes) provides a more realistic purchase situation and enables us to better understand the importance of social attributes in the consumer decision making process. Furthermore, previous research has shown that all three groups of intangible attributes (i.e., social, brand, and country-of-origin) 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; Auger, Devinney, Louviere, & Burke, 2008; Erdem, Swait, & Valenzuela, 2006; Gurhan-Canli & Maheswaran, 2000).

We used choice experiments to investigate the relative importance of the social attributes in a manner that forces consumers to trade off these attributes against the functional attributes, price, and the other two intangible attributes. We conducted the choice experiments in six economies that differ based on socio-economic development and a range of social characteristics to allow for cross-country comparisons.

The primary research question driving this research is:

1. To what extent do social attributes influence the purchase intentions of consumers? If so, how much influence do those social attributes have on the purchase intentions of consumers in comparison to other intangible attributes, namely brand and country-of-origin?

The goal of question 1 is in addressing the matter that giving consumers the chance to reveal their social preferences through purchasing does not immediately or necessarily translate into their intentions to purchase such a product or service.

In addition, we are interested in two subsidiary questions:

2. Are there substantive differences between developed and emerging economies with respect to the degree to which these social attributes matter?

3. To what extent do consumers know about the social attributes of the products they purchase? If so, are they better informed about some of the attributes versus others? And are consumers better informed about social attributes than about brand and country-of-origin?

Question 2 focuses on the supposition that consumers in emerging market countries cannot afford to be socially conscious; in other words, a social consciousness at the checkout counter is a luxury. Question 3 raises the oft-banded issue that the better informed will behave “better” and hence a major impetus behind creating more social purchasing is knowledge.

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). We used this concept to classify attributes into two categories: tangible and intangible. To a certain extent, we treat tangible attributes as intrinsic cues and intangible attributes as extrinsic cues. Our basic thesis is that the social attributes, and more broadly the intangible attributes, will affect consumer purchase intentions differently in different countries (questions 1 and 2).

Our research makes five important contributions to the literature. First, our experiments include a variety of tangible and social attributes (as well as other intangible attributes). Most of the previous research on social attributes (and intangible attributes) has included a single set of attributes as well as a limited set of tangible attributes (e.g., Didier & Lucie, 2008). This potentially biases consumers favourably towards the social attributes since it limits the number of tradeoffs in the decision-making process. That is, these studies have investigated the role of social attributes in isolation, which can lead to an overestimation of their importance. Our experiments allow us to not only investigate the importance of social attributes versus tangible attributes, but also to compare the relative importance of social attributes versus other intangible attributes. In effect, the inclusion of other intangible attributes enables us to calibrate the importance of the social attributes against well-researched and relatively well understood intangible attributes such as brand and country-of-origin (in other words, controlling to a degree for the “intangibility” of the attributes).

Second, our work, by concentrating on two very critical topics in the social responsibility sphere—environmentalism and labour rights—permits us to get a prioritisation of these issues. This does not imply that what we find can guide policy but that it provides a picture of the extent to which individuals are willing to pay for the social facets of a company’s product positioning. It sometimes appears that the debate over the role of corporations in society is between social issues and the corporation; however, it is equally important to distinguish those social issues that reveal themselves in a purchasing context (Devinney, 2009). Together points 1 and 2 should help to position Corporate Social Responsibility (CSR) initiatives that

aim to improve the social attributes of products within a broader set of intangible attributes, such as brand and country- of-origin that have been shown to matter to consumers.

Third, we include two product categories, a higher and lower involvement product. This brings in the issue of purchasing context and the nature of the product into the investigation, which enables us to determine if the importance of social attributes varies across product categories.

Fourth, we conducted our experiments across a wide range of countries and cultures. The countries in our sample are different with respect to their level of economic development (developed and emerging economies) as well as with respect to geographic location, language, religion, and other cultural traits. This diversity allows us to make more effective comparisons between consumers who purchase within a product category but are embedded in different market and cultural contexts. This increases the extent to which we can be confident that our results are less dependent on a country or cultural context.

Fifth, and finally, the multi-country aspect of our study also enables us to investigate areas that have been under- researched in the International Business (IB) and CSR literature. Specifically, we focus on the consumer aspects of CSR, considering both developed and emerging economies. This combination brings new perspectives to the IB and CSR literatures and begins to fill gaps that have been mentioned by researchers in several areas such as a lack of research on CSR in emerging markets (Egri & Ralston, 2008) and more generally on consumers in emerging economies (Steenkamp, 2005). Hence, our research brings together a number of areas that have not received a lot of attention individually to say nothing about being investigated together.

2. Theoretical development and hypotheses

2.1. Information procession and cue evaluation theory

Our study revolves around the issue of consumer decision making with respect to the purchase of products. This is a core concept in marketing and business since it ultimately determines the success or failure of most organisations. The importance and complexity of this topic is exemplified by the plethora of studies examining the way consumers make purchase decisions. A number of theories and perspectives have emerged from this research with most researchers believing that consumers use a variety of approaches depending on the purchase situation (Bettman, Luce, & Payne, 1998; Bettman & Zins, 1979). For example, Hansen (2005) developed a model using four different perspectives: the value perspective, the emotional perspective, information processing perspective, and cue evaluation theory

perspective. Our purpose is not to specifically test which of these perspectives consumers use in their purchase decisions. However, we do use these different perspectives as the theoretical foundation for our hypotheses. We assume, like most previous research, that consumers use a variety of perspectives when making decisions about purchases.

Briefly, the value perspective proposes that consumers make purchase decisions based on what they are receiving versus what they are giving; a factor implicit in all economic models such as the choice experiments we are conducting. For example, consumers often make tradeoffs between price (what they are giving) and different product attributes such as quality (what they are receiving). From a business point of view, the value perspective implies that suppliers that offer consumers “greater value” will be more competitive than suppliers who offer less value. Hence, the implications of the value perspective for our research questions can be phrased in two, slightly competing and complementing ways. First, what is the degree to which environmental and labour positioning of products create value relative to the functional aspects of the product and the brand and where it is produced? And, second, what is the degree to which the consumer is willing to pay for the “giving” associated with purchasing a more socially acceptable product.

The emotional perspective takes a very different angle and primarily considers the affective aspects of consumer decision making; that is, it accounts for the feelings of consumers as a complement to cognitive processes dominant in the value perspective. Research has shown that both positive and negative feelings can have a significant effect on purchase intentions (e.g., Holbrook & Hirschman, 1982; Richins, 1997). The emotional perspective is less relevant to our study and we do not include it in any measured component of our research.

The last two perspectives, cue evaluation theory and information processing, are relevant to the present study given the nature of our experimental methodology. Both of those perspectives assume that consumers have limited cognitive capacity and must rely on a limited number of information cues (or stimuli) to make decisions. The information processing perspective focuses more specifically on limitations of memory and computational ability (Bettman et al., 1998). The assumption of information processing theory is that consumers are problem-solving individuals trying to reach a reasoned decision (Hansen, 2005).

Finally, cue evaluation theory (e.g., Jacoby, Olson, & Haddock, 1971; Richardson, Dick, & Jain, 1994) posits that consumers utilise a limited number of cues to assess the quality of a specific product when faced with a lack of information or ambiguous information about product quality. That is, products can be viewed as an array of cues that serve as surrogate indicators of quality. Cues can be grouped into two categories: intrinsic cues and extrinsic cues (Lee & Lou, 1995). Intrinsic cues

are product-related attributes (e.g., ingredients, materials, etc.) that cannot be manipulated without altering the physical properties of the product. On the other hand, extrinsic cues are product-related attributes (e.g., brand, country-of-origin, price, etc.) that are not part of the physical product (Richardson et al., 1994, p. 29).

We use this concept of intrinsic and extrinsic cues to categorise product attributes into two groups: tangible and intangible. A tangible attribute is one that is concrete, physical, and objective while an intangible attribute is abstract, beneficial, and subjective. For example, the materials used in athletic shoes (e.g., leather) are tangible while the brand name of the shoe (e.g., Nike and Adidas) is intangible. Research has shown that intangible attributes become more important in product categories where there are fewer differences in tangible attributes between brands (e.g., Lefkoff-Hagius & Mason, 1990).

Our dominant concern is with the social attributes embedded within a product. We categorise these as intangible in that they represent characteristics of the product that are not immediately functional and represent aspects of the product that could be removed without changing the functionality of the product. They may, or may not, influence perceptions of the desirability of the product, its quality, the nature of its production. For example, the mercury- or cadmium-free characteristic of a battery can be desired because the purchaser believes they should help the environment and this is a way of doing so. However, the composition of the battery is not functionally changed by the addition of that attribute.

It is well recognised that many products are loaded with many different intangible components and it would be impossible to control for all of them. However, we include two other intangible attributes, brand and country-of-origin, so that we can investigate the importance of social attributes in a more realistic purchase setting and as a means of controlling for the overlap sometimes seen between brand, quality and location inferences, particularly in multi-country studies (Erdem & Swait, 1998; Peterson & Jolibert, 1995). We could have potentially included other intangible attributes into our study. For example, the quality of the product can be and often is viewed as an intangible attribute. However, we decided not to include quality as the choice of our tangible attributes underlies the quality of the products studied. For example, the durability of the sole for athletic shoes and the usage life of batteries are clear indicators of product quality. That is, consumers would consider shoes with soles that are more durable and batteries that last longer to be of higher quality to shoes with soles that are less durable and batteries that last for a shorter period of time. What is different about our approach is that we include all of these attributes in a single experiment where intrinsic and extrinsic cues are orthogonalised. Hence, we force consumers to not only make tradeoffs between tangible and social attributes, but also between social attributes and other intangible attributes. In addition, one of the major roles attributed to intangible variables is in

filling in the gaps in perceptions of quality (e.g., Nelson, 1982). By controlling for the underlying attributes that drive quality and functionality we can extract a purer estimate of the value of the social attributes. The next few sections will discuss the social attributes in more detail as well as brand and country-of-origin and develop our hypotheses.

2.2. Social product attributes

The literature on the importance of social product attributes is relatively new and much less developed than the literature on brand and country-of-origin. Most research, both commercial and academic, on the importance of social product attributes suggests that a growing number of consumers are increasingly taking ethical and social issues into account when purchasing products (Carrigan, Szmigin, & Wright, 2004; Mason, 2000; Rogers, 1998). Several factors including the emergence of pressure groups, increasing media interest in social and ethical issues, increasing focus on corporate social responsibility by major corporations, and the availability of better quality “ethical” products have been proposed as factors contributing to the growing popularity of these attributes (Harrison, 2003; Spar & La Mure, 2003; Strong, 1996).

An area where this is most dramatically seen is in the rise of a revitalised “green” movement. This phenomenon has no doubt given support by the awarding of the 2007 Nobel Peace Prize to Al Gore and the UN’s Intergovernmental Panel on Climate Change. The award not only generated immense press for environment issues, in general, but in combination with the dwindling sources of cheap energy that saw a dramatic spike in energy prices led to an increase in the demand for green product and service alternatives (as such products created long term cost savings) which itself created incentives for companies to invest in the development of green products and services to meet the consumer demand, lower their own costs and meet increasingly strict regulatory requirements.

Yet despite this increase in public perceptions of interest and importance, estimates of the importance of social issues in consumer purchasing decisions vary significantly depending on the survey methodology and/or source of the survey. For example, a heavily cited survey by MORI estimated that a third of consumers in the UK were seriously concerned with social issues, a finding one would suspect could potentially translate into a relatively large market for socially desirable products (Mason, 2000). However, no such market arose in the nearly 10 years since the initial survey. Even extensive professional studies by groups like Globescan lead to confusing results. Globescan’s well regarded Climate Change Monitor™ reveals that since 1992 only six countries viewed climate change as getting worse while nine viewed it as getting better; leading to considerable post hoc speculation of what accounts for these differences (see, www.globescan.com). These and hosts of

similar studies rely on traditional survey instruments with simple importance ratings scales that, as in the case of the MORI poll, may overstate the importance of these social issues as there is no incentive to answer the questions truthfully (Auger & Devinney, 2007) or lead to survey response biases when compared across counties (Harzing, 2006), as in the case of the Globescan. These concerns reveal the existence of an attitude-behaviour gap with respect to the impact of social issues on consumer purchases when attitudes are measured simply (Boulstridge & Carrigan, 2000; Carrigan & Attala, 2001; Simon, 1995; Ulrich & Sarasin, 1995). That is, consumers indicate in general opinion surveys that broadly defined social issues are important, but do not change their purchase behaviours accordingly when faced with the price of specific social options. This fact is revealed nicely by a Booz & Company survey that found that “about 80 percent of respondents said that they would pay a substantial premium for their own renewable solution, but they would not pay even a small percentage of that amount in higher [utility] rates. For example, most respondents indicated that they would rather install a solar panel on their home than pay even a small increase in their utility bill to reflect the cost of carbon reduction” (Gabaldon, 2009, p. 19).

A more rigorous stream of research has attempted to deal with these same issues and quantify the value of ethical product features for specific groups of consumers based on laboratory and field experimentation or bidding/bargaining games (e.g., Levitt & List, 2007; List, 2006). Although less “optimistic” than survey-based work, this research suggests that some consumers are willing to pay more for products that are socially acceptable or change their behaviour with respect to the producers/sellers of those products (e.g., Marymount-University, 1999). Elliott and Freeman (2001) produced some additional insights into the subtle behaviour of consumers. They uncovered relatively high elasticities of demand for products made under bad conditions but low elasticities for products made under good conditions implying that companies risk losses from having their products identified as being made under bad conditions but have little to gain from marketing their products as being made under good conditions.

Auger et al. (2003, 2008) used a choice modelling approach to provide more accurate willingness-to-pay estimates on a sample of consumers from Hong Kong and Australia. They found that some consumers were willing to pay more for products that possessed certain social attributes such as products that were not tested on animals or were manufactured by companies that did not use child labour. However, their results also clearly showed that consumers were not willing to sacrifice product quality or features for more socially acceptable products and that standard segmentation approaches work less well in distinguishing amongst consumers with different social preferences, a fact revalidated by Auger and Devinney (2007).

Belk, Devinney, and Eckhardt (2005) used video ethnography techniques with consumers from nine countries to get a deeper understanding of the underlying rationale for the purchase (or non-purchase) of socially desirable products. Though their sample was limited to 120 individuals due to the nature of their methodology, their results yielded several relevant contributions. First, they found that culture had a much smaller effect on perceptions of consumption ethics than expected. Ethical beliefs across the countries in their sample were fairly consistent in the sense that individuals understood the dilemmas present in their failure to act upon their beliefs. Second, ethical behaviour on the part of businesses can influence ethical behaviour on the part of consumers. That is, a large number of consumers in their sample cited the apparent lack of ethical conduct by business as a rationale for their own behaviour. Third, although the lack of ethical purchasing behaviour was similar across cultures, consumers rationalised that inaction in very different, culturally consistent, ways. Once again, these results were seen to persist across all the countries in their sample.

Although there is a considerable literature on business and individual values in different cultures very little research has been conducted that compares the importance consumers place on social attributes across different countries and cultures. Most of the research on cross-cultural consumer ethics has focused primarily on empirical tests of the Muncy and Vitell (1992) consumer ethics scale. The consumer ethics scale examines the extent to which consumers believe that certain questionable behaviours in a shopping or purchasing context are either ethical or unethical. Generally, most studies have found that consumers believe that actively benefiting from an illegal activity is universally illegal and unethical. This is not surprising given that the activity is labelled as illegal, but does point towards some universal beliefs about the ethical conduct of consumers. Most differences occur when there is greater doubt about the legality of the activity. For example, Rawwas, Strutton, and Johnson (1996) compared U.S. and Australian consumers and found that Australian consumers were significantly more tolerant of questionable actions than their U.S. counterparts. They found that Australian consumers were also more Machiavellian, which could explain some of the differences. A similar study by Al-Khatib, Vitell, and Rawwas (1997) found that U.S. consumers were significantly more ethical than Egyptian consumers, but less idealistic and relativistic, while within the microcosm of the Middle East, Al-Khatib, Vitell, Rexeisen, and Rawwas (2005) showed that simple characterisations between Egyptians, Saudis, Omanis and Kuwaitis was difficult.

Based on the research on general ethics and values across countries, there is strong reason to believe that consumers from developed and emerging economies will place different levels of importance on social attributes. This can be justified with recourse to the research on cross cultural values (e.g., Schwartz, 2006), differential attitudes toward corruption between countries (e.g., Tanzi, 2002), and international

variance in traditional individual ethical scales (e.g., Al-Khatib et al., 1997, 2005; Lin & Ho, 2008; Ng, Lee, & Soutar, 2007). In addition, following Harrison (2003) it could be credibly argued 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.) and a longer tradition of social activism (particularly around environmental issues) as well as a general willingness to pay for the “luxury” of social consciousness (e.g., Nadeau, 2007; Pelsmacker, Driesen, & Rayp, 2005).

We do not expect any differences in the importance of the social attributes across our two product categories (high and low involvement products). One of the primary differences between low and involvement is in the level of risk associated with the purchase of the product. High involvement products involve a greater amount of risk associated with the purchase since they are normally more expensive and more complex, thus requiring a greater level of involvement in the purchase. As such, we expect that the nature of the product with respect to involvement would be important when the attributes help consumers reduce the risk associated with the purchase. The nature of the social attributes does not help consumers reduce the risk associated with the purchase. For example, a consumer who prefers products that are not manufactured by children or do not damage the environment will do so irrespective of the relative price or complexity of the product. Hence, we hypothesise the following:

H1. The social attributes of the product have a larger impact on the purchase intentions of consumers from developed economies versus consumers from emerging economies for both higher and lower involvement products.

2.3. Brand

Brand has long been regarded as an important information cue or intangible attribute (Aaker, 1991; Wernerfelt, 1988). Richardson et al. (1994) described a brand as an information chunk that represents a composite of information. Brands can play a variety of roles within the consumer decision making process, but most of those roles revolve around a reduction in uncertainty. As Erdem and Swait (1998) proposed, brands can reduce confusion by becoming signals of quality. In effect, they proposed that brand can decrease consumer perceived risk and information costs leading to higher expected consumer utility. The overall importance of branding in marketing has led to the development of a rich literature including a number of studies that have examined the impact of brand across different countries (e.g., Dawar & Parker, 1994; Erdem et al., 2006; Robinson, 1996).

The results of these studies have demonstrated that the importance of brand varies

between different countries, especially between countries with different levels of economic development and different cultural orientations. For example, Zhou, Su, and Bao (2002) found that consumers from an emerging economy (China) did not use price-quality signals as much as consumers from a developed country (the USA). They explained their results by suggesting that consumers in emerging economies may believe in the price-quality relationship less because price information is less reliable. As a result, consumers in those countries may have to rely more extensively on other signals, such as brand, because the usual product information is less available or less reliable. Maxwell (2001) found similar results with a sample of Indian consumers. Her study focused more specifically on the importance of brand in two countries, the USA and India. Her results show that brand may be especially important in India because the quality of unbranded products varies widely.

Given that brand is often used by consumers to reduce uncertainty about quality (i.e., as an extrinsic information cue) we expect that brand should play a more important role for higher involvement products due to the greater risks (i.e., higher price, more features, more differentiated, etc.) of these products versus lower involvement products. Furthermore, we posit that using brand to reduce uncertainty for higher involvement product purchases would be especially prominent in emerging economies due to a lack of reliable information about product quality. Hence we propose the following two hypotheses:

H2a. The brand of the product has a larger impact on the purchase intentions of consumers from emerging economies versus consumers from developed economies for higher involvement products.

H2b. There are no differences in the impact of the brand of the product on the purchase intentions of consumers from emerging economies versus consumers from developed economies for lower involvement products.

2.4. Country-of-origin

Like the literature on branding, the literature on the country-of-origin effect is well-developed. Studies that have examined the country-of-origin effect fall into two broad categories: those that investigate consumer attitudes to different country brands and those that examine the domestic country bias.

For the former, the evidence strongly supports the existence of a country-of-origin (COO) effect but questions the magnitude and importance of the effect. For example, an early meta-analysis by Peterson and Jolibert (1995) showed that COO has a strong effect on product evaluation, but also concluded that COO effects are only somewhat generalisable and not well understood. A more recent meta-analysis

by Verlegh and Steenkamp (1999) found that COO affected consumer perceptions of product quality, but influenced their purchase intentions to a much lesser extent, a fact critical to us as our focus is on purchase intentions. However, the previous two authors along with many others (e.g., Pecotich & Rosenthal, 2001; Phau & Suntornnond, 2006; Ulgado & Lee, 1998) believe that the importance of COO might have been overstated since most of the studies were single cue studies (i.e., COO was the only intangible attribute). In fact, Verlegh and Steenkamp (1999) concluded that the COO effect is smaller in multi-cue studies; a fact further validated by Samiee, Shimp, and Sharma (2005) who find that consumers know very little about the country of origin of the products they purchase: “These studies ultimately lead us to conclude that past research has inflated the influence that country of origin information has on consumers’ product judgments and behaviour and its importance in managerial and public policy decisions” (p. 379).

The second area of research about COO has focused on the issue of the domestic country bias. A domestic country bias exists when consumers prefer domestically produced goods over foreign produced goods (Balabanis & Diamantopoulos, 2004; Balabanis, Diamantopoulos, Mueller, & Melawar, 2001; Klein, 2002). Most researchers explain the domestic country bias from an emotional perspective since it appears to relate to emotions such as pride, identity and so on (Verlegh & Steenkamp, 1999). In fact, most of the research on the domestic country bias has linked its existence with consumer ethnocentrism (Alden, Steenkamp, & Batra, 2006; Balabanis & Diamantopoulos, 2004).

Unfortunately, the number of studies that have examined cross-country differences with respect to the domestic country bias are limited. Alden et al. (2006) found South Korean respondents to be relatively ethnocentric and show greater preference for domestic products. Those results are consistent with Ulgado and Lee (1998) who found that South Korean consumers placed a greater level of importance on COO than American consumers. Nonetheless, the empirical evidence suggests that the domestic country bias is not consistent across countries and tend to vary from product category to product category. As Balabanis and Diamantopoulos (2004) stated, “domestic manufacturers cannot trust their local consumers to grant them favour over imported goods as a matter of course”.

Based on the available literature, there is little reason to believe that the importance of the COO will differ between different country markets. We do believe that COO will have an impact on purchase intentions as the cue will be more salient in an experimental setting, but that the impact will not vary dramatically between countries. Furthermore, the literature suggests that COO has a smaller impact on purchase intentions and in multi-cue studies. Our study includes both of those characteristics so that we expect the COO effect to be relatively small compared to the social attributes and brand. Similarly to the social attributes, COO does not help

consumers reduce the risk associated with the purchase of product. As such, we do not expect any differences in the importance of COO across our two product categories. Hence, we hypothesise the following:

H3. The country of origin of the product has an impact on the purchase intentions of consumers, but the impact is consistent across country markets.

2.5. Methods and sample

The results presented in this paper came from experiments conducted in six countries – Germany, Spain, Turkey, USA, India, and South Korea – with over 600 participants. The characteristics of the countries and the participant sample are given in Table 1 and are briefly described in the next few paragraphs. Being part of a much larger study, the results reported here focus on only two products, athletic shoes and batteries. 605 participants were involved in the athletic shoe experiment and 299 in the AA battery experiment. All individuals involved in the AA battery experiment were also involved in the athletic shoe experiment (the larger study included a third product that is not relevant to the issues discussed here).

Insert Table 1 about here

2.5.1. Countries

The countries chosen were meant to generate variance in terms of the level of economic development and income, variance in orientation on traditional cultural distance scales, variance in religious practices and historic traditions, variance in education/literacy, and variation in political development/freedom. However, in each case, the products under investigation needed to be widely available in the country and known to consumers who would be considered to be within the target market of such products.

2.5.2. Participant sample

The sample in each country was created in a way that allowed comparability between the individuals in the different countries. The aim was not to create a “representative” sample of consumers in each country but to create a sample of consumers who had purchasing experience with the product category being studied. Hence, our sample of consumers is best described as drawn from the “purchasing middle class” within their respective countries. Therefore, our term “middle class” is being used here not to represent “middle income” but a general term to represent what is euphemistically called a “rising middle class” in the popular literature; those with discretionary income and a willingness to spend it. The study was

executed by a professional market research firm located in each country. The selection of the participants was based on the following four criteria: (1) they should have purchased within the product categories in the last 6 months; (2) they should fit in an age distribution; (3) there should be a balance of gender; and (4) we aimed for a mix of incomes consistent with the middle range (\$15k–\$25k) with the exception of the USA and Germany (where that range was \$25k–\$40k). The process was overseen by one of the investigators in each country. We must emphasise that the sample is not a random sample of the entire country. Furthermore, the characteristics of consumers across our six countries are inherently different due to differences in the economic and social development that leads someone to be a class of consumer where purchasing the products in question is feasible.

Overall, the Turkish sample was the most accurately targeted as it was the only one in which we could preselect individuals. In the case of Germany, our participants are slightly “poorer” than targeted. In most countries, the sample is slightly skewed toward higher female participation, mainly because of the first targeting criterion. Only in South Korea this was a major issue. The research firm struggled to find male participants who purchased the two products being investigated. Ultimately we abandoned this criterion in the case of the South Korean sample. Focusing on “purchasing middle class” consumers who have the capability and desire to purchase products in the category we are investigating facilitates comparisons across countries by reducing the variations between participants from developed and emerging markets (i.e., we compared apples to apples). The use of these participants also ensured that they had the financial means to purchase the most expensive product in our experiments, athletic shoes (branded athletic shoes now frequently sell for over \$100 putting them out of reach for a large number of consumers in emerging market countries). Devinney, Auger, and Eckhardt (2010) give a more detailed description of the sampling.

2.5.3. Modelling and pretesting

We used discrete choice modelling (DCM) to test our hypotheses. DCM allows researchers to infer the value consumers place on various attributes, not by asking them, but by looking at what they choose (Louviere, Hensher, & Swait, 2000). In our DCM experiments, described in Table 2, we created products with different levels of tangible attributes (e.g., whether an athletic shoe had good or poor ankle support) and social/intangible attributes (e.g., whether or not the product was manufactured with the use of child labour, brand, and country-of-origin). The product attributes were based on prior research (Auger et al., 2003) and researched extensively with producers and focus groups of local consumers, ensuring that they were relevant to consumer purchase decisions, had maximum comparability to the extant research and were representative of the actual attributes used by the

producers. In each country, extensive fieldwork was conducted examining the range of prices available in the market (by visiting major stores in the test areas) to ensure they were consistent with prices in all six markets at the time of data collection.

Prices in the experiment were set so that the range included the range across all countries but did not exclude any country. In other words, participants from all countries should see the same range of prices but the range should not exclude possibilities that existed within that country. Also, with DCM it is important that the ranges between price points are equal hence we balanced the price range such that the extreme points were just outside the range seen in the countries in question. This led to four price points for each product: \$40, \$70, \$100 and \$130 for athletic shoes and \$1.30, \$3.30, \$5.30 and \$7.30 for a package of 4 AA Batteries. For athletic shoes this meant that the price range did not include high-end shoes sold in the USA, Germany, Spain or South Korea (where prices could go as high as \$200+). For batteries the price range fit into all the countries examined with \$1.30 being slightly below prices seen in the market and \$7.30 being slightly above those seen in the market. The median market prices for athletic shoes were in the \$70–\$100 range and for AA batteries it was in the \$3.30–\$5.30 range.

The experimental instruments were translated and back translated and pre-tested on a convenience sample of faculty and university students at local universities plus employees at the market research firms used to execute the study. All of the choices forced consumers to make tradeoffs—products never had the highest (or most attractive) level of both tangible and social attributes, so consumers implicitly had to make tradeoffs and we were able to measure the tradeoffs they made.

Insert Table 2 about here

2.5.4. Product categories

The two product categories – AA batteries and athletic shoes – used in this study were selected for three reasons. First, the products were familiar to, and were likely to have been purchased by, consumers in our sample frame, including consumers from emerging markets. A requirement for inclusion was that participants had to have purchased within the product category in the last 6 months. Knowledge of the product categories and prior purchase experience were important since we also asked participants to tell us about the attributes of their most recently purchased athletic shoes and batteries. Prior purchase experience also facilitated the experimental tasks since participants already understood the nature of the product attributes. Also, by asking participants to recall their last purchase by the specific

attributes increases the salience of all the attributes at one time, a common technique with DCM. Second, the products also differed in their level of consumer involvement in the purchase process, which is an important component of our research. Specifically, athletic shoes are considered higher involvement products compared to batteries since consumer search is more intensive and the price more noticeable to the consumer. In other words, the purchase of athletic shoes requires greater consumer involvement in the purchase process since athletic shoes are more expensive and more differentiated (e.g., more features and levels of quality) than batteries. Lastly, these two categories of products enabled us to investigate the importance of two different sets of social issues, namely environmental issues for batteries and labour issues for athletic shoes.

2.5.5. The experiment

The choice experiment survey required participants to: (1) evaluate their most recently purchased brand of athletic shoes and batteries, (2) decide whether to consider and purchase 8 hypothetical athletic shoe and battery products, and (3) answer a series of socio-demographic questions. For each hypothetical product the subject was asked two questions:

If the [shoes/batteries] described above were available in your local shops now, would you consider trying them (Tick ONE box only)? No Yes.

If the [shoes/batteries] described above were available in your local shops now, would you buy them instead of or in addition to your current [shoes/batteries] next time you shopped for [these products] (Tick ONE box only)? No Yes.

As noted, the materials were translated into the appropriate language as required (i.e., German, Spanish, Turkish, Korean, and Hindi). However, participants in India were presented with the choice of completing the survey in Hindi or English, and all participants opted for the English version. Data collection was conducted using either mall intercepts (USA, Germany, India, and Spain), or at the home/office of the respondent or the research company (South Korea and Turkey) depending on standard practice in each country. The experiment took between 30 and 45 min to complete.

3. Results

3.1. Hypothesis testing

Our first and second research questions sit behind the development of our hypotheses and dealt with whether or not consumers took social attributes into account when making decisions and whether those from different countries are

influenced differentially by these attributes. We tested these hypotheses using a series of binary logit models. Because many of the demographic covariates varied considerably between countries, and were effectively nested within country, we opted for separate analyses at the country level rather than conducting a pooled analysis that required potentially dubious comparisons between individuals based on covariates.

We did four regression analyses for each product and country. We first created a base model that only included the tangible attributes. We then created additional models by adding the social attributes followed by brand and country-of- origin, one at a time. Tables 3 and 4 present the results of the base and full models for athletic shoes while Tables 5 and 6 present the same information for batteries. We do not present the intermediate models due to space limitations, but those results are available from the authors upon request. The intent of this analysis is to address the marginal contribution of each block of new variables to explanatory power of the model (Auger et al., 2003).

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 shows that consumers from South 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 for hypothesis testing purposes requires a simplification of the presentation. We accomplished this by conducting a series of Likelihood Ratio tests that compared the social attributes, brand, and country-of-origin to the base model. The results of these analyses are presented in Table 7 for shoes and Table 8 for batteries.

Hypothesis 1 stated that consumers from developed economies would place greater importance on social product attributes than consumers from emerging economies for both product categories. Overall, the results show divided support for this hypothesis. In the case of shoes, the social attributes revolved around labour issues. The results show that consumers from developed market countries placed somewhat greater importance on the social issues and it is marginally more important as a predictor of choice. This can be seen more easily by simply looking at the sum of the coefficients for the social attributes (with the signs adjusted to mean a larger number is better) as well as the individual coefficients. For athletic shoes the sum of these coefficients is: Germany (1.206), Spain (0.873), Turkey (0.587), USA (0.570), South Korea (0.324) and India (0.162). (Note that the total effect is equal to the coefficient as each social attribute has only two levels, coded as {0, 1}.) The major anomaly to this effect is the USA where consumers are showing sensitivity in the middle range overall, effectively identical to Turkey.

However, Americans in the sample show significant concern about child labour (in line with the Spanish) and concern with dangerous working conditions (in line with Germans), something not seen by those in Turkey, South Korea or India (see Table 4).

Insert Table 3 about here

Insert Table 4 about here

Insert Table 5 about here

Almost identical results were obtained for batteries, but with more complex differences between the developed and emerging markets, due mainly to the variance in what is important. Again looking at the coefficients we see a pronounced difference: For batteries these are: Spain (1.953), Germany (1.570), Turkey (1.046), USA (0.863), India (0.263) and South Korea (-0.075). However, the real differences are in what matters. For Germans and Spanish it is the Mercury/Cadmium free character of the battery that is important. For Spanish, Americans and Turks it is the generation of hazardous waste in production. The Indians and South Koreans show little to no concern.

Overall, the results are in line with hypothesis 1: consumers from more developed economies have slightly stronger concerns about environmental and labour issues as revealed by purchase choice. What is also clear is that there is considerable heterogeneity in what is driving this.

Hypothesis 2a stated that brand would have a larger impact on the purchase intentions of consumers from the emerging markets for higher involvement products (athletic shoes). Our results (see Table 4) lend strong support for this hypothesis with brand being highly significant for Indian and Turkish consumers and not significant for consumers from the other countries. These results are consistent with previous research that has found brand to be more important in emerging markets since the usual product information is less available or less reliable (Erdem et al., 2006; Maxwell, 2001). Hence, our results support the notion that brand can be seen as a way to reduce uncertainty due to the relative paucity and/or poor quality of product information available in emerging economies. This is an even more powerful result given that our choice experiments presented all the 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.

Hypothesis 2b posited that there would be no differences in the importance of brand across countries for the lower involvement product (AA batteries). Our results generally support this hypothesis. The results in Table 8 show that brand significantly impacted the purchase intentions of consumers from most countries (i.e., Germany, Spain, USA, and India) while those from Turkey and South Korea were not significantly influenced by brand. These results put the results from the previous analysis (i.e., the higher involvement product) into better context and highlight the critical importance of brand for higher involvement products in emerging economy environments.

Finally, hypothesis 3 stated that the country-of-origin will influence consumer purchase intentions, but that the COO effect will not vary between country markets. Our results do not support the hypothesis. Overall, the rejection is due quite strongly to our South Korean participants who exhibited very strong domestic country biases. These results are consistent with previous work that has found South Korean consumers to place as much importance on country-of-origin as tangible attributes (Ulgado & Lee, 1998). However, the country-of-origin effect was not unique to these consumers and showed complex patterns across the products. For example, in the case of athletic shoes, German and Spanish consumers focused negatively on production in specific countries (Vietnam and Poland) while Americans and South Koreans showed a positive domestic bias. In the case of batteries, consumers from every country but Turkey and the USA showed a domestic bias, with the Indians and South Koreans also having a bias against Chinese and Polish production. Overall, however, the magnitude of the domestic bias effect seen by South Korean consumers was much, much larger than that seen for any other country's consumers. Additionally, the South Korean country-of-origin effect had a greater impact on their purchase intentions than any of the other categories of intangible attributes. Tables 3 and 5 also show that the effect of domestic production on South Korean consumers was the second largest after price. In effect, our South Korean consumers appear to have made purchase decisions primarily based on price and country-of-origin. One can speculate as to why we find this result, which may be partially explained by which countries fall into the specific "countries of origin".

Table 9 presents an analysis aimed at pulling together the information across all countries. The models here are slightly different from those used in Tables 3–8 in three ways. First, income, age and the number of children were mean centred for each country to make the estimation comparable. Second, in the case of AA batteries, 2 brands were identical across countries – Duracell and Energizer – while the other brands differed by country. Each of these latter country-brand effects was

estimated separately. Finally, dummy variables were added for each sample country to pick up residual effects for the countries. More complex models can be run but what is seen here is sufficient to glean the overall results. The results confirm those relating to tangible and intangible attributes found in Tables 3–8 (with slightly higher significance due to sample size). First, the social attributes once again clearly influence choice. There is a broader and more significant influence of environmental variables than is seen in the individual country estimates. Second, brand shows a significant effect with dominance of international brands with the exception of South Korea (positively) and Germany (negatively). Although the results are not shown, there are no brand-country effects for athletic shoes. Third, COO effects are seen but when compared to the prior results this can be attributed to the South Korea component of the sample. Hence, the aggregate model would erroneously hide the source of the COO effect. Finally, we see significant country level differences in terms of response. Americans and South Koreans are more likely to make purchase choices across all tasks and the patterns are nearly identical between the AA battery and athletic shoes experiments. Overall, Table 9 reveals a general picture consistent with our earlier findings but one that under plays the variation between the developed and emerging country samples.

Insert Table 6 about here

4. Knowledge of most recent purchases

Our third research question focused on the extent to which our sample of consumers knew about and could recall the different attributes of their most recent purchases of athletic shoes and batteries. Table 10 presents the percentage of consumers who remembered the level of attributes for their most recent purchases. We divided the attributes into four categories for ease of presentation and interpretation: (1) tangible attributes (excluding price), (2) social attributes, (3) brand, and (4) country-of-origin. For simplicity, the tangible attributes and social attributes percentages represent an aggregate of multiple attributes.

Five interesting results emerge from our analyses. First, consistent with extant theory and other findings, consumers were more knowledgeable about tangible attributes than intangible attributes. Second, similarly consistent with past work, consumers were more knowledgeable about the tangible attributes of the higher involvement product (athletic shoes) than the lower involvement product (batteries). Third, consumers professed more knowledge about the environmental attributes for batteries than for labour and workplace attributes of shoes. Fourth, brand had, by far, the highest level of recall among the intangible attributes. Fifth, there were few country differences with respect to knowledge of the attributes. The major exceptions were with respect to country-of-origin and the social attributes.

For the former, Indian and South Korean participants professed more knowledge about the country of origin of their most recently purchased products while South Korean consumers indicated they were more knowledgeable about the social attributes of products than consumers from the other country markets.

Insert Table 7 about here

Insert Table 8 about here

We also conducted a simple analysis to see whether or not recalling the intangible attributes mattered to choice. Our concern here is to examine the relationship between an individual recalling an intangible attribute and his/her intention to purchase a product when that intangible attribute is present. We did this by running generalised logit models that included all the model parameters and interacted the last purchase recall information with the experimentally manipulated intangible attributes (demographics are excluded). The dependent variable was once again the purchase intention (yes or no) and the independent variables coded such that we are comparing choice with an option either appearing (e.g., country of origin) or appearing in its “good” orientation (e.g., no child labour). What this allows us to do is determine whether an individual who indicates they can recall an intangible attribute (e.g., brand or child labour) is more likely to choose an option that contains the “good” (e.g., no child labour) or same level (e.g., Nike) of that attribute. Table 11 presents the results of this analysis.

For brevity we only include the statistics for the intangible attributes and exclude the full model estimates. First, there was a strong relationship between the recall of many of the social attributes and what a participant chose when faced with alternatives in the experiments. What these results reveal is that of the intangible attributes, the social attributes appear most salient, followed by brand in the case of the higher involvement product. There are also a few things that do not matter. Whether or not individuals indicated they knew the country of origin of the products in either category was unrelated to whether they reacted to the country of origin manipulations in the experiment. In the case of batteries (where we only reveal the results for the major brands and aggregated all others for simplicity) remembering your last brand of battery did not matter to whether you chose options with that brand in the experiment. A brand effect was, however, evident in the case of athletic shoes; the brand of your last purchase was related to a tendency to choose that brand in the experiment.

What this reveals is that a proclivity to remembering whether or not a product is

environmentally sound or labour friendly is a strong indicator of purchase intention. Note that is not an artefact as it would be very difficult for participants to link what they answered in the first part of the survey with what they were being asked to choose in the discrete choice experiment (where they had to make trade-offs). This potentially hints at the fact that those who are cognizant of environmental and labour factors in products are indeed likely to respond to further propositions with respect to these issues.

Insert Table 9 about here

Insert Table 10 about here

Insert Table 11 about here

5. Discussion and conclusions

It has been speculated based on limited research that some proportion of the value consumers receive from a product are from the social attributes embedded therein. Although considerable research has been devoted to various types of social attributes individually, relatively little research has examined the impact of those social attributes in a multi-cue context more representative of what consumers experience in reality. This study is unique in not just investigating social attributes but doing so across countries and in a manner that addresses the relative importance of social versus tangible attributes, but also social versus other intangible attributes. Our approach is an advancement on past research in that it forces much more realistic tradeoffs by consumers and broadens the cultural contexts in which those decisions are being made.

Overall, our results show that social attributes related to the environment and labour operate beyond the realm of a signal of the more tangible quality-based components of the product. In effect, our sample of consumers indicated that they are willing to place value on social attributes despite having a lot of information about the tangible attributes of the products and their implied quality. This is important from a policy and management perspective in that it may imply that opportunities for new market development and segmentation exist based upon these attributes separately from the more traditional approach based on functional attributes and

product quality. Additionally, we showed that consumers from developed countries do seem to place more importance on social product attributes than consumers from emerging markets.

In examining the other intangible attributes we see that brand played a similar and relatively minor role across countries for the lower involvement product (i.e., batteries) but that it showed significant importance for emerging market consumers in the case of athletic shoes. This behaviour would be consistent for a lower involvement purchase whereby consumers are much less cognitively involved in the purchase process and the cost of an error is relatively low. In the case of country-of-origin we saw a very complex pattern and one that is inconsistent with our hypothesis. South Korean consumers placed significant importance on the country-of-origin of the products displaying a large and significant domestic country bias (second only to price in magnitude), while those from other countries showed a complex mixture of indifference, domestic country bias and bias against specific manufacturing locations. The results for South Korean participants strongly suggest that those consumers have a high level of ethnocentrism (or economic nationalism). That is, buying locally made products may bring about a strong emotional reaction and a sense of national duty and pride; a finding consistent with other research on South Korean consumers (e.g., Lee and Lou, 1995; Ulgado and Lee, 1998).

Overall, there are important theoretical and practical implications that follow from our findings.

First, our results show that social issues resonate across similarly situated consumers in a wide variety of countries but do so in complex ways. Although our sample is not representative and not sufficiently large to make gross generalisations, the results show that when presented with product options that include social issues, this matters to some degree to consumers in all the countries. In the case of labour issues associated with the production of athletic shoes, child labour is a strongly negative factor (for all countries) as are dangerous working conditions (for all but India and South Korea). Germans are slightly more concerned about issues of living standards while South Koreans are concerned about the freedom of unions. In the case of environmental issues related to batteries, the production of hazardous waste matters considerably. Europeans are significantly more concerned generally, followed by Americans and Turks. Indians and South Koreans show little environmental concerns. Overall across all social issues there is a progression of concern that generally ranges from more concern in developed economies to less concern in emerging economies.

Second, consumers in emerging economies appear to operate with a more cue driven decision model than consumers in developed economies, who can be thought

of as getting some value from social attributes. Our results for brand showed that consumers from the emerging markets in our sample placed greater emphasis on brand than consumers from the developed markets for the higher involvement product (i.e., athletic shoes). This strongly supports hypothesis 2a. What is interesting about our results is that this is confirmed even when consumers had considerable information about the product. Hence, the result is not driven by a lack of information about the quality or composition of the product, negating the belief that brand consciousness in emerging economies is driven solely by a lack of information. When given information, these participants still put significant value on brand.

There are several possible explanations for these results. First, consumers from emerging markets may be conditioned to use brand as a surrogate for quality to such an extent that they still use it despite having more information. Second, brand may have more of an emotional connotation for those consumers. That is, the brand brings a positive emotional reaction that increases the overall utility of the product. This explanation is consistent with the emotional perspective discussed earlier in the paper. Finally, it is also plausible that those consumers did not trust the information about the tangible attributes and relied on brand instead. This is similar to the first explanation with the addition of consumer scepticism with respect to product information.

Third, the initial knowledge base of the consumers appears to have some importance but perhaps not in the way traditionally believed. For example, participants were more knowledgeable about tangible attributes than about the social attributes, brand, and country-of-origin, with the differences driven primarily by two groups of attributes—the social attributes and country-of-origin. This is consistent with Auger et al. (2003). However, as shown in our final analysis in Table 11, those individuals who reveal knowledge about the social attributes of the products they purchased most recently were also more likely to choose similarly constituted products when presented with them in the experiment. This advances Auger et al. (2003), as they were unable to find a link between information presentation, knowledge and product choice and questioned whether knowledge of social attributes had any real influence on choice.

This has subtle policy and management implications. It is typically believed that the way to make consumers more socially conscious is to provide them with information about the implications of their purchases on the environment or labour force and allow them to make a rational and informed decision. However, another explanation is that individuals gravitate towards products that are similar in critical ways to those that they have purchased; seeking a level of consistency in their behaviour and choices. An implication would be that providing information even when it may not be used to make a decision initially could influence future

decisions, particularly for those with a proclivity to be concerned about the issues being revealed.

We also found that consumers were more knowledgeable about the COO of athletic shoes than batteries, which is consistent both with its being a higher involvement product and the fact that COO is displayed more prominently on athletic shoes than on batteries (often only on the package) so that consumers have more opportunities to be exposed to the COO. The reverse is true for the social attributes where consumers are more likely to know and recognise the environmental attributes of batteries than the labour attributes of shoes. Here the differences may be explained by the nature of the social attributes. First, environmental issues tend to have a more direct impact on consumers than labour issues. This is most noticeable in the fact that many environmental problems have a local origin and/or connotation; e.g., recycling, air quality, manufacturing pollution, etc. The same cannot be said of the labour issues associated with the production of athletic shoes, where the concerns are about distant workers in different economic and social situations. Second, environmental attributes tend to be more “functional” than labour attributes. That is, environmental attributes can affect product performance and utilisation (e.g., disposal of the battery). On the other hand, labour issues have little or no functional impact. That is, it is impossible to tell the difference between two athletic shoes that were produced under different labour conditions. Hence, the additional functionality of environmental attributes could contribute to their higher relative valuations. This is consistent with Auger et al. (2008) who find that “social functionality” influences the salience of social attributes in products.

Like all research, our research suffers from a number of limitations that reduce the generalisability of our findings. First, we sampled a limited number of countries. Though we tried to select countries that were culturally different, the generalisability of our results is limited to the six countries in our sample. Second, we sampled only a limited number of individuals within a specific socio-economic class. The generation of generalisable results will no doubt require a more comprehensive sample and one matched closely to the socio-political characteristic of the countries examined. Third, our experiments are designed to increase incentive compatibility (i.e., socially desirable answers), but they do not eliminate it. Hence, there is a chance that consumers responded in a socially desirable way with respect to the social attributes, which would overstate their importance. Fourth, we did not have any measures of consumer ethnocentrism. This was primarily a trade-off to reduce the overall size and time required to complete our experiment. However, future research should probably include a measure of consumer ethnocentrism such as the CETSCALE (Shimp & Sharma, 1987).

In conclusion, our study adds to the growing evidence that social attributes are now playing an important role in determining consumer purchase intentions even in the

presence of other intangible attributes like brand and country- of-origin. Our results are consistent with existing research and theory and show that: (1) social attributes are generally more influential in developed countries than in emerging markets, (2) social attributes are influential for both low and high involvement products and for environmental and labour conditions, and (3) prior knowledge of the social attributes tend to be a stronger predictor of their influence on purchase intentions than the other intangible attributes. We believe that our results offer a more accurate picture of the role of social attributes since they are based on a multi- cue, multi-product design that forced consumers to make tradeoffs between tangible, the social attributes, brand, and country-of-origin.

Acknowledgements

This research was funded with financial support of the Australian Research Council Discovery Grant Program and administrative support from the Centre for Corporate Change at the Australian Graduate School of Management.

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Table 1
 Characteristics of the selected countries and demographics of sample^a.

| | Germany | Spain | Turkey | USA | India | South Korea | Total |
|--|---------------------------------------|-------------------|-----------------|---------------------|----------------|---|---------|
| Country characteristics | | | | | | | |
| Real per capita income (USD) ¹ | \$27,090 | \$22,513 | \$5,902 | \$37,313 | \$3213 | \$18,158 | |
| Literacy rate (of population >15 years) ² | 99.1% | 97.4% | 88.1% | 99.1% | 65.2% | 93.4% | |
| Religion (dominant and percent) | Protestant/ Catholic (34% each) | Catholic (94%) | Muslim (99%) | Protestant (52%) | Hindu (81%) | Unaffiliated (46%); Buddhist (26%) | |
| Hofstede measure: power distance ⁴ | 35 | 57 | 66 | 40 | 77 | 60 | |
| Hofstede measure: individualism ⁴ | 67 | 51 | 37 | 91 | 48 | 18 | |
| Hofstede measure: uncertainty avoidance ⁴ | 65 | 86 | 85 | 46 | 40 | 85 | |
| Hofstede measure: masculinity ⁴ | 66 | 42 | 45 | 62 | 56 | 39 | |
| Index of economic freedom ⁵ | 71.2 | 69.7 | 60.8 | 80.6 | 54.2 | 67.9 | |
| Demographics of the sample | | | | | | | |
| Number of participants (shoes/batteries) | 100/50 | 106/51 | 100/50 | 99/48 | 100/50 | 100/50 | 605/299 |
| Age (median grouping) | 30–39 | 30–39 | 30–39 | 30–39 | 30–39 | 30–39 | 30–39 |
| Age (Percent < 19) | 6.00 | 17.00 | 16.20 | 9.10 | 17.00 | 2.00 | 11.33 |
| Age (Percent > 50) | 17.00 | 32.10 | 14.10 | 29.33 | 11.00 | 22.00 | 21.00 |
| Gender (percent female) | 52.5 | 59.4 | 50.5 | 60.6 | 49.0 | 70.0 | 57.0 |
| Income (median grouping, \$000) | 15–25 | 15–25 | 15–25 | 25–40 | 15–25 | 15–25 | 15–25 |
| Income (percent < \$15,000) | 26.10 | 15.70 | 54.63 | 7.20 | 27.80 | 5.00 | 22.70 |
| Income (percent > \$40,000) | 28.40 | 19.10 | 11.30 | 51.47 | 3.10 | 7.00 | 19.90 |
| Education (percent univ educated) | 8.90 | 22.60 | 62.70 | 20.70 | 60.80 | 39.00 | 35.70 |
| Marital status (percent married) | 33.33 | 50.90 | 31.33 | 39.80 | 50.00 | 66.00 | 45.30 |
| Sample method | Mall Intercept | | Home | Mall Intercept | | Home/Office | |

^a Sample statistics based on 605 individuals.

¹Source: Penn World Tables, 2004 data based on PPP adjustment in year 2000 dollars. ²Source: UNESCO, 2006 data. ³Source: <http://www.infoplease.com/ipa/A0855613.html>. ⁴Source: <http://geert-hofstede.international-business-center.com/>. ⁵Source: Heritage Foundation. <http://www.heritage.org/Index/>.

Table 2

Product attributes for athletic shoes and batteries.

| | |
|---|--|
| <p>Athletic shoes</p> <p>Tangible attributes (levels of attribute) Shock absorption/cushioning (Low or High) Weight (Lighter or Heavier) Ankle support (Low Cut or High Cut)</p> <p>Sole durability (Short or Long) Breathability/ventilation (Low or High) Fabrication materials (Synthetic or Leather) Reflectivity at night (No or Yes) Comfort/fit (Low or High) Price (\$40, \$70, \$100, \$130)—US Prices</p> <p>Intangible attributes Social attributes (levels of attribute) Is child labour used in making the product? (No or Yes) Are workers paid above minimum wage? (No or Yes) Are workers' working conditions dangerous? (No or Yes) Are workers' living conditions at the factory acceptable? (No or Yes)</p> <p>Are workers allowed to unionise? (No or Yes) Country of origin (Poland, China, Vietnam, "local") Brand of shoe (Nike, Adidas, Reebok, Others)</p> | <p>AA batteries</p> <p>Useful life (15 hours or 30 hours) Storage life (3 years or 5 years) Is the expected spoilage date on the battery? (No or Yes) On-battery power indicator or on-package tester (No or Yes) Money-back guarantee (No or Yes) Rechargeable (No or Yes) Price (\$1.30, \$3.30, \$5.30, \$7.30)—US Prices</p> <p>Is the battery Mercury/Cadmium free? (No or Yes) Was hazardous waste created from the production process? (No or Yes) Is the battery made from recyclable materials? (No or Yes) Is the package made from recyclable materials? (No or Yes)</p> <p>Is safe battery disposal information contained on the package? (No or Yes) Country of origin (Poland, China, Japan, "local") Brand of battery (Energizer, Duracell, Eveready, Maxell)—USA Brand of battery (Energizer, Duracell, Sony, Varta)—Germany Brand of battery (Energizer, Duracell, Panasonic, Rocky)—South Korea Brand of battery (Energizer, Duracell, Varta, Cegesa)—Spain Brand of battery (Energizer, Duracell, Eveready, Excel)—India</p> |
|---|--|

Table 3

Logit estimates for athletic shoe choice by country—tangible attributes.

| | Germany | Spain | Turkey | USA | India | South Korea |
|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Intercept | 2.514 ^{***} | 1.638 | 0.752 | 1.235 ^{***} | 3.701 ^{***} | 8.500 ^{***} |
| Tangible attributes | | | | | | |
| Shock absorption | 0.291 ^{**} | 0.196 [*] | 0.050 | 0.004 | 0.072 | 0.025 |
| Weight | -0.149 [*] | -0.314 ^{***} | -0.134 | -0.119 | -0.175 [*] | -0.440 ^{***} |
| Suppleness (ankle support) | -0.053 | -0.083 | -0.118 | -0.119 | 0.011 | 0.188 [*] |
| Sole durability | 0.226 [*] | 0.126 | 0.327 ^{***} | 0.070 | 0.021 | 0.269 ^{**} |
| Breathability | 0.130 | 0.289 ^{**} | 0.310 ^{***} | 0.108 | 0.232 ^{**} | -0.047 |
| Fabric | 0.212 [*] | -0.130 | 0.198 ^{**} | 0.021 | 0.042 | -0.106 |
| Reflectivity | 0.139 | 0.063 | 0.050 | -0.057 | -0.190 ^{**} | 0.044 |
| Fit | 0.011 | 0.172 [*] | 0.232 ^{**} | 0.089 | -0.028 | 0.024 |
| Price (log) | -1.074 ^{***} | -0.906 ^{***} | -0.674 ^{***} | -1.134 ^{***} | -1.128 ^{***} | -1.842 ^{***} |
| Demographics | | | | | | |
| Age | 0.025 | -0.003 | 0.003 | 0.006 | 0.003 | 0.023 |
| Income | -0.006 | 0.004 | 0.010 | 0.004 | 0.005 | 0.020 |
| Gender | -0.089 | 0.038 | -0.080 | 0.240 | -0.092 | -0.442 |
| Education | -0.182 | 0.547 | -0.925 | 0.550 [*] | 0.291 | 0.842 |
| Marital status | 0.864 | 0.537 | 1.070 ^{**} | 0.220 | -0.456 | -0.854 |
| Children | 0.668 | 0.937 | 0.686 | -0.004 | -0.125 | -1.421 |
| R ² | 0.2693 | 0.2757 | 0.2541 | 0.3412 | 0.1918 | 0.3897 |
| Observations N | 800 | 832 | 800 | 776 | 800 | 800 |

Note: N = 8 choice tasks × number of participants.

^{*} p < 0.05.^{**} p < 0.01.^{***} p < 0.001.

Table 4
Logit estimates for athletic shoe choice by country—full model.

| | Germany | Spain | Turkey | USA | India | South Korea |
|------------------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Intercept | 2.994** | 2.141 [†] | 0.929 | 3.874*** | 3.851*** | 9.037*** |
| Tangible 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*** |
| Social attributes | | | | | | |
| Child labour | -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 [†] |
| 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*** |
| 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 |
| 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 |
| Observations N | 800 | 832 | 800 | 776 | 800 | 800 |

Note: N = 8 choice tasks x number of participants.

[†] p < 0.05.

** p < 0.01.

*** p < 0.001.

Table 5

Logit estimates for AA battery choice by country—tangible attributes.

| | Germany | Spain | Turkey | USA | India | South Korea |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-------------|
| Intercept | 0.744 | -1.230 | 0.534 | 0.965*** | 0.248 | 2.738 |
| Tangible attributes | | | | | | |
| Use life | 0.238* | 0.398** | 0.061 | 0.332** | -0.054 | 0.532*** |
| Storage life | 0.123 | -0.369** | -0.049 | -0.082 | 0.123 | 0.250* |
| Spoilage date revealed | 0.161 | 0.000 | 0.259* | 0.127 | 0.051 | 0.178 |
| Power indicator | -0.035 | 0.315** | 0.210* | 0.163 | 0.071 | -0.165 |
| Money back guarantee | 0.084 | 0.214* | 0.188 | 0.008 | 0.220* | -0.127 |
| Rechargeable | 0.450*** | 0.316** | 0.211* | 0.105 | 0.171 | -0.097 |
| Price (log) | -0.977*** | -0.954*** | -1.010*** | -1.185*** | -0.924*** | -4.411*** |
| Demographics | | | | | | |
| Age | 0.029 | -0.034 | 0.019 | 0.011 | 0.052** | 0.024 |
| Income | -0.005 | 0.002 | 0.011 | 0.006 | -0.036* | -0.011 |
| Gender | 0.693 | 0.745* | 0.111 | 0.389 | 0.862 | -0.592 |
| Education | -0.696 | 0.145 | -0.352 | -0.650* | 0.425 | -1.487 |
| Marital status | -0.116 | 0.986 | 0.099 | 0.100 | 0.555 | 2.990 |
| Children | 0.460 | 2.127** | -0.253 | 0.510 | 0.810 | 2.319 |
| R ² | 0.3202 | 0.2892 | 0.1801 | 0.3153 | 0.1833 | 0.5046 |
| Observations N | 400 | 408 | 400 | 384 | 400 | 400 |

Note: N = 8 choice tasks × number of participants.

* p < 0.05.

** p < 0.01.

*** p < 0.001.

Table 6
Logit estimates for AA battery choice by country—full model.

| | Germany | Spain | Turkey | USA | India | South Korea |
|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Intercept | 1.083 | -1.199 | 0.695 [*] | 1.114 ^{***} | 0.278 | 3.589 |
| Tangible attributes | | | | | | |
| Use life | 0.220 | 0.514 ^{**} | 0.060 | 0.380 ^{**} | -0.040 | 0.497 ^{**} |
| Storage life | 0.083 | -0.447 ^{**} | -0.054 | -0.111 | 0.096 | 0.192 |
| Spoilage date revealed | 0.107 | 0.032 | 0.271 [*] | 0.135 | 0.008 | 0.100 |
| Power indicator | -0.099 | 0.350 [*] | 0.279 [*] | 0.189 | 0.083 | -0.243 |
| Money back guarantee | 0.048 | 0.195 | 0.181 | -0.041 | 0.246 [*] | -0.086 |
| Rechargeable | 0.486 ^{***} | 0.289 [*] | 0.193 | 0.101 | 0.182 | -0.148 |
| Price (log) | -1.096 ^{***} | -1.137 ^{***} | -1.125 ^{***} | -1.310 ^{***} | -1.010 ^{***} | -4.790 ^{***} |
| Social attributes | | | | | | |
| Mercury/cadmium free | 0.634 ^{***} | 0.552 ^{***} | 0.168 | 0.039 | -0.132 | 0.169 |
| Hazardous production waste | -0.279 [*] | -0.762 ^{***} | -0.317 ^{**} | -0.479 ^{***} | -0.004 | 0.319 [*] |
| Made from recycled materials | 0.274 [*] | 0.067 | 0.151 | 0.198 | 0.052 | -0.024 |
| Uses recycled packaging | 0.217 | 0.094 | 0.269 [*] | 0.002 | 0.267 [*] | -0.002 |
| Disposal information given | 0.166 | 0.478 ^{**} | 0.141 | 0.145 | 0.072 | 0.101 |
| Country of origin | | | | | | |
| Poland | -0.302 | -0.235 | -0.134 | -0.344 | -0.148 | -0.741 ^{**} |
| China | -0.031 | -0.363 | -0.018 | 0.080 | -0.329 [*] | -0.327 |
| Japan | -0.106 | -0.049 | -0.082 | 0.068 | 0.131 | 0.027 |
| Domestic | 0.439 [*] | 0.647 ^{**} | 0.233 | 0.196 | 0.346 [*] | 1.041 ^{***} |
| Brand | | | | | | |
| Brand 1 | 0.513 [*] | 0.471 [*] | 0.130 | 0.262 | 0.400 [*] | -0.303 |
| Brand 2 | 0.177 | 0.490 [*] | 0.233 | 0.139 | 0.010 | 0.085 |
| Brand 3 | -0.498 [*] | -0.475 [*] | -0.121 | -0.429 [*] | -0.045 | -0.119 |
| Brand 4 | -0.192 | -0.486 [*] | -0.241 | 0.028 | -0.366 [*] | 0.337 |
| Demographics | | | | | | |
| Age | 0.046 [*] | -0.027 | 0.025 | 0.014 | 0.059 ^{**} | 0.029 |
| Income | -0.004 | -0.004 | 0.011 | 0.008 | -0.037 [*] | -0.009 |
| Gender | 0.626 | 0.984 [*] | 0.146 | 0.508 | 0.944 | -0.583 |
| Education | -0.675 | -0.080 | -0.469 | -0.787 [*] | 0.536 [*] | -1.483 [*] |
| Marital status | -0.314 | 0.928 | 0.004 | 0.059 | 0.578 | 2.759 |
| Children | 0.083 | 2.347 [*] | -0.255 | 0.427 | 0.870 | 1.775 |
| R ² | 0.4233 | 0.4441 | 0.2375 | 0.3659 | 0.2357 | 0.5685 |
| Observations N | 400 | 408 | 400 | 384 | 400 | 400 |
| Brand designations | | | | | | |
| | Germany | Spain | Turkey | USA | India | South Korea |
| Brand 1 | Energizer | Energizer | Energizer | Energizer | Energizer | Energizer |
| Brand 2 | Duracell | Duracell | Duracell | Duracell | Duracell | Duracell |
| Brand 3 | Sony | Varta | Varta | Eveready | Eveready | Panasonic |
| Brand 4 | Varta | Cegesa | Philips | Maxell | Excel | Rocky |

Note: N = 8 choice tasks x number of participants.

^{*} p < 0.05.

^{**} p < 0.01.

^{***} p < 0.001.

Table 7

Model comparisons for athletic shoes.

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

Note: ** p < 0.01. I² = 2 × (LL_n - LL_{n+1}).

* p < 0.05.

*** p < 0.001.

Table 8
Model comparisons for batteries.

| | Germany | Spain | Turkey | USA | India | South Korea |
|---|----------------------|-----------------------|----------------------|----------------------|---------------------|----------------------|
| Tangible attributes and demographics (base model) | | | | | | |
| Log-likelihood | 378.17 | 373.33 | 432.77 | 443.02 | 483.86 | 389.63 |
| R ² | 0.3202 | 0.2892 | 0.1801 | 0.3153 | 0.1833 | 0.5046 |
| Social attributes | | | | | | |
| Log-likelihood | 337.10 | 310.94 | 413.06 | 420.72 | 467.46 | 357.37 |
| R ² | 0.4233 | 0.4441 | 0.2375 | 0.3659 | 0.2357 | 0.5685 |
| I ² (Ddf = 6) | 58.24 ^{***} | 95.18 ^{***} | 33.26 ^{***} | 34.12 ^{***} | 13.82 [*] | 15.54 [*] |
| Country of origin | | | | | | |
| Log-likelihood | 366.22 | 358.53 | 429.69 | 437.78 | 474.37 | 365.14 |
| R ² | 0.3580 | 0.3374 | 0.1953 | 0.3290 | 0.2017 | 0.5704 |
| I ² (Ddf = 3) | 8.26 [*] | 13.36 ^{**} | 2.40 | 2.50 | 9.32 [*] | 41.72 ^{***} |
| Brand | | | | | | |
| Log-likelihood | 370.35 | 365.21 | 430.89 | 439.03 | 479.03 | 386.00 |
| R ² | 0.3430 | 0.3200 | 0.1923 | 0.3277 | 0.1919 | 0.5166 |
| I ² (Ddf = 3) | 15.64 ^{**} | 16.24 ^{**} | 3.76 | 7.98 [*] | 9.66 [*] | 7.26 |
| Full versus base model (effects all intangible attributes) | | | | | | |
| I ² (Ddf = 12) | 82.14 ^{***} | 124.78 ^{***} | 39.42 ^{***} | 44.60 ^{***} | 32.80 ^{**} | 64.52 ^{***} |

Note: I² = 2 × (LL_n - LL_{n+1}).

* p < 0.05.

** p < 0.01.

*** p < 0.001.

Table 9
Full models estimated pooling all data.

| AA batteries | | Athletic shoes | |
|------------------------------|---------------------|------------------------------|-----------|
| Intercept | 0.825 | Intercept | 2.937*** |
| Tangible attributes | | | |
| Use life | 0.171** | Shock absorption | 0.078* |
| Storage life | -0.042 | Weight | -0.197*** |
| Spoilage date revealed | 0.091 [†] | Suppleness (ankle support) | -0.024 |
| Power indicator | 0.094 [†] | Sole durability | 0.150*** |
| Money back guarantee | 0.100* | Breathability | 0.141*** |
| Rechargeable | 0.154** | Fabric | 0.041 |
| Price (log) | -1.017*** | Reflectivity | 0.026 |
| | | Fit | 0.092** |
| | | Price (log) | -1.050*** |
| Social attributes | | | |
| Mercury/cadmium free | 0.159** | Child labour | -0.287*** |
| Hazardous production waste | -0.198*** | Minimum wage | 0.082* |
| Made from recycled materials | 0.084 [†] | Dangerous working conditions | -0.158*** |
| Uses recycled packaging | 0.117 [†] | Living standards | 0.031 |
| Disposal information given | 0.125* | Unions allowed | 0.057 |
| Country of origin | | | |
| Poland | -0.299** | Poland | -0.075 |
| China | -0.137 | China | -0.065 |
| Japan | 0.032 | Japan | 0.051 |
| Domestic | 0.404** | Domestic | 0.191*** |
| Brand | | | |
| Energizer | 0.293** | Nike | 0.256*** |
| Duracell | 0.226 [†] | Adidas | 0.227** |
| Sony (Germany) | -0.476* | Reebok | -0.126 |
| Rocky (Korea) | 0.544 [†] | Other | -0.101 |
| Demographics | | | |
| Age | 0.008 | Age | 0.020 |
| Income | 0.001 | Income | 0.004 |
| Gender | 0.047 | Gender | -0.051 |
| Education | -0.169 | Education | 0.234** |
| Marital status | -0.061 | Marital status | 0.381*** |
| Children | -0.049 | Children | 0.062 |
| Sample | | | |
| Germany | -0.016 | Germany | -0.180* |
| Spain | -0.120 [†] | Spain | -0.261** |
| Turkey | -0.387** | Turkey | -0.215** |
| USA | 0.688** | USA | 0.347** |
| India | -0.193 | India | -0.111 |
| South Korea | 0.029 | South Korea | 0.419*** |
| R ² | 0.1593 | R ² | 0.100 |
| Observations N | 2792 | Observations N | 4808 |

Note: [†]Only significant brands shown. Energizer and Duracell appeared in all countries. Other brands effects were estimated only for the country in which they appeared.

* p < 0.05.

** p < 0.01.

*** p < 0.001.

Table 10

Knowledge of most recent purchase (percentage who remembered attributes).

| | Germany | Spain | Turkey | USA | India | South Korea | Total |
|--|---------|-------|--------|------|-------|-------------|-------|
| Tangible attributes (excluding price)^a | | | | | | | |
| Athletic shoes | 87.1 | 91.7 | 91.8 | 89.9 | 91.9 | 92.4 | 91.0 |
| AA batteries | 62.4 | 58.6 | 53.8 | 66.2 | 73.0 | 54.0 | 60.4 |
| Social attributes^a | | | | | | | |
| Athletic shoes | 21.6 | 25.8 | 10.6 | 30.7 | 23.0 | 51.2 | 27.3 |
| AA batteries | 43.8 | 40.5 | 33.5 | 41.2 | 32.8 | 58.4 | 38.0 |
| Country-of-origin | | | | | | | |
| Athletic shoes | 28.6 | 24.8 | 36.0 | 20.6 | 66.0 | 61.0 | 39.5 |
| AA batteries | 16.3 | 5.8 | 14.6 | 20.0 | 76.0 | 38.0 | 26.8 |
| Brand | | | | | | | |
| Athletic shoes | 81.0 | 96.2 | 90.0 | 83.8 | 97.0 | 71.0 | 86.6 |
| AA batteries | 64.6 | 84.6 | 77.6 | 76.0 | 94.0 | 74.0 | 78.7 |

^a Percentages are aggregated over all of the attributes in the category.

Table 11

Generalised logit models (interaction effects between intangible attributes and whether those attributes are recalled in last purchase). All countries pooled. Other estimates excluded.

| | Wald |
|------------------------------|-----------|
| Athletic shoes | |
| Social attributes | |
| Child labour | 68.883*** |
| Minimum wage | 5.731 |
| Dangerous working conditions | 21.632** |
| Living standards | 3.575 |
| Unions allowed | 6.685* |
| Country of origin | |
| Poland | 1.932 |
| China | 0.954 |
| Vietnam | 4.988 |
| Domestic | 3.948 |
| Brand | |
| Nike | 8.067** |
| Adidas | 9.364** |
| Reebok | 16.127*** |
| Other | 0.046 |
| Log likelihood | 3110.99 |
| AA batteries | |
| Social attributes | |
| Mercury/cadmium free | 12.518** |
| Hazardous production waste | 24.356*** |
| Made from recycled materials | 2.924 |
| Uses recycled packaging | 5.888 |
| Disposal information given | 12.310** |
| Country of origin | |
| Poland | 0.212 |
| China | 1.910 |
| Japan | 0.093 |
| Domestic | 0.631 |
| Brand | |
| Energizer | 2.273 |
| Duracell | 5.639 |
| Eveready | 2.116 |
| All others/domestics | 4.198 |
| Log likelihood | 1587.07 |

* p < 0.05.

** p < 0.01.

*** p < 0.001.

Appendix A. Correlations of the Covariates (country-mean centred where indicated)

| Covariates | Mean ^a | s.d. | Gender | Income ^b | Age ^b | Single | Married | HS Grad | Uni Grad | Post Grad |
|--------------------------------|-------------------|-------|--------|---------------------|------------------|--------|---------|---------|----------|-----------|
| Gender (Female) | 0.57 | 0.495 | 1.00 | | | | | | | |
| Income ^b | 23.06 | 21.44 | -0.052 | 1.00 | | | | | | |
| Age ^b | 36.58 | 12.62 | 0.087 | 0.040 | 1.00 | | | | | |
| Single | 0.46 | 0.498 | -0.168 | -0.089 | -0.670 | 1.00 | | | | |
| Married | 0.45 | 0.498 | 0.144 | 0.060 | 0.593 | -0.830 | 1.00 | | | |
| HS Graduate | 0.42 | 0.493 | 0.075 | -0.028 | -0.079 | 0.082 | -0.051 | 1.00 | | |
| Univ Graduate | 0.19 | 0.390 | -0.047 | 0.094 | 0.139 | -0.126 | 0.103 | -0.410 | 1.00 | |
| Post Graduate | 0.09 | 0.281 | -0.056 | -0.014 | 0.058 | -0.080 | 0.113 | -0.262 | -0.177 | 1.00 |
| Children (number) ^b | 0.96 | 1.145 | 0.137 | 0.025 | 0.578 | -0.647 | 0.639 | 0.019 | 0.012 | 0.044 |

^a Mean not adjusted for centring.

^b Mean centred for country.