Consumers' Brand Origin Recognition Accuracy (BORA) Scores: an Empirical Study

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Abstract: This research reviews, measures, and tests a new concept introduced in marketing literature referred to as brand origin recognition accuracy (BORA). The purpose of this research is to measure how well consumers can recall the actual origin of 45 different brands and aims at measuring the country of association or country of brand. We assumed that consumers are knowledgeable of brand origins, and that this knowledge is a significant influence that drives judgments of product quality, brand attitudes, and choice behavior in the marketplace. BORA is measured by asking consumers to complete a questionnaire stating what they think the origin is of 45 different brands. The 45 brands consist of 15 from the United States and 15 from six European countries: England, France, Germany, Italy, Netherlands, Switzerland and also 15 brands from Japan and South Korea. The results of this research revealed that respondents were more successful at recognizing the origins of Asian brands and their scores for BORA As were more than BORA US and BORA Eu. Our research reveals that consumers actually have only modest knowledge of the origins of brands, and variables such as socioeconomic status, past international travel, foreign language skills, gender, age and use of the internet influence consumers' proficiency at recognizing foreign brand origins.

Key words: country of origin, brand origin, International marketing, Hybrid products, consumer behavior

INTRODUCTION

Globalization has resulted in increased competition as businesses extend their coverage to include a range of domestic and international markets. As a consequence, customers have an ever-expanding choice of purchase options, including an increasing proportion of foreign products and brands (Klein et al., 2006). They are constantly confronted with a wide variety of product information, supplied through packaging, branding, advertising and other channels. This information is used by consumers to form preferences and purchase decisions, but it also elicits emotions, feelings, imagery, and fantasies (Verlegh and Steenkamp, 1999). From a marketing point of view, global companies that are operating in highly competitive domestic and foreign markets need to understand consumers' perceptions and evaluations of foreign-made products. Understanding global consumer behavior is the first step of corporate learning about how to compete in the world market (Ahmed and d’Aousts, 2008). Since the 1990s, consumers and marketers have been using COO and brand names as a means of evaluating products. There are some reasons for this. First, due to the rapid process of globalization, many consumers turn to product origin and brand name as a means of simplifying information processing, by treating them as indicators of quality and acceptability. Second, the growing complexity of products and the difficulties business people face in establishing unique selling propositions as a result of product standardization lead to the greater use of COO and brand names by marketers.

Third, COO and brand name offer significant opportunities for the formulation of a multinational marketing strategy. Fourth, consumers readily become familiar with foreign products and the differences among them due to exposure to global media (Ozretic-Dosen et al, 2007). In the country-of-origin literature, brand origin is widely assumed to be a relatively transparent information cue that is potentially important in determining a brand’s country association. Especially in the age of global production and outsourcing, brand origin has been put forward as the only stable information about a product’s country association since products/brands have been increasingly produced by or sourced from multiple country locations. These products are known as “hybrids” (Al-Sulaiti and Baker, 1998; Heydarzadeh and Saeedi, 2007; Zhou et al, 2010). Our argument, in contradiction to the tacit assumption in the country of origin (CO) literature, is that consumers have limited knowledge of the origins of brands, and that a brand's origin probably is not as important to consumers as the literature insinuates (Samiee et al., 2005). In reality, the origin information for most brands may not be readily
A brand's origin is just one piece of information among an array of data available for consumers to possibly acquire from point of purchase or retrieve from memories. Hence, the importance of brand origin information compared with actual consumer behavior situations has likely been inflated in experimental research (Lee and Ganesh, 1999). If brand origin plays a salient role in consumers' everyday judgments and decision-making processes, it would be expected that consumers would possess reasonably accurate abilities to recognize brands' COs. If ability to recognize brand origins truly were important, it would be expected that consumers would know the COs of a sampling of brands from the universe of available domestic and foreign brands.

Given that many consumers are unable to identify brand origins correctly, researchers have pointed out that the true importance of brand origin information could be unreasonably overestimated in the vast majority of prior country-of-origin studies (Samiee et al., 2005). In China, for example, consumers are often confused about the origins of brands in terms of local versus foreign brands. So far, little research has explored consumers' proficiency at recognizing foreign brand origins. Therefore, the authors of this paper decided to measure how well consumers can recall the actual origin of different brands. Hence in this research we used BORA concept to examine consumers' brand origin recognition accuracy.

Samiee et al. (2005) defined BORA as the consumer's ability to correctly identify where a representative group of widely distributed and generally well-known brands have originated, their countries of origin. They empirically tested whether consumers are able to recognize the origin of a number of branded products. For this purpose the brand origin recognition accuracy (BORA) concept was developed and employed in the study. Their results showed that consumers only have modest knowledge of the objective national origin of brands. In other words, “the evidence provided, based on a broad spectrum of product categories and brands, suggests that consumers either have limited recognition of brand origins, or find such information relatively unimportant and thus unworthy of retention in memory” (Samiee et al., 2005). Brand origin is one such cue that plays a potentially important role in determining a brand's image (Thakor and Lavack, 2003). Brand origin is defined as “the country in which the headquarters of the brand's parent firm are located, regardless of where the brand is manufactured (e.g., Nike is a U.S. brand, though none of its products are actually produced in the United States)” (Johansson et al., 1985; Ahmed and d'Astous, 1995; Thakor and Kohli, 1996; Heydarzadeh and Saeedi, 2007; Balabanis and Diamantopoulos 2008).

Several authors (Harris et al., 1994; Leclerc et al., 1994; Thakor and Kohli, 1996) have noted that one important source of origin information is the brand itself. For example, brands like Sony, GE and Samsung may automatically activate origin cues among segments of consumers, even though the name of the country is not appearing explicitly in the brand name. Richardson et al. (1994) described a brand as an information chunk that represents a composite of information (Auger et al., 2010). A brand consists of a name, term, and/or symbol that attempts to represent the unique benefits the company can provide to consumers in terms of attributes, value, and culture through the particular product or service (Zhuang et al., 2008). Brand knowledge is composed of stored information about a brand in memory, to which various links and associations are related. It represents the personal meaning about a brand that consumers have stored in memory, and includes all descriptive and evaluative brand-related information (Keller, 1993, 2003). In addition to basic brand awareness, this information includes brand attributes (e.g., this watch brand is of Swiss origin). Such knowledge can be conveyed by marketers in their efforts to link brands with positive country images, or can be acquired by the consumer independently of marketers' conveyances as a matter of marketplace experiences and word-of-mouth flows or first-hand brand information acquisition. Regardless of the source, for any given brand, the consumer may or may not know its CO, or may even confuse the brand as being from a country other than its actual origin (Samiee et al., 2005).

Measuring brand origin recognition accuracy required that we select a range of brands from among the thousands available to Iranian consumers, who were the respondents in our study. We selected an initial group of brands and then reduced through a process that number to a smaller set of 45. The 45 brands consist of 15 from the United States and 15 brands from six European countries: England, France, Germany, Italy, Netherlands, Switzerland and also 15 Asian brands from Japan and South Korea. These brands represent a range of consumer package goods, semi-durables, and durable products and constitute a representative selection.

Accessibly and in many cases consumers confuse brand origin to various degrees (Zhou et al., 2010). Four categories of factors may cause such confusion (Zhuang et al., 2008). First, consumers' cognition processes, such as their cognitive ability, attention paid to the brand and its origin, and memory, may influence the amount of confusion they experience. Second, a company may intentionally attempt to mislead consumers about the company’s brand origins (Netemeyer et al., 1991). Third reason why consumers may not possess accurate information about brand origins is that such information often is not diagnostic for making decisions, and thus is not accessible in memory (Feldman and Lynch, 1988). Finally, in addition to product categories varying in the degree to which CO information is diagnostic, consumers are themselves variable in terms of how much importance they place on CO information.

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of foreign brands that are available to most Iranian consumers in department stores, mass merchandise outlets, supermarkets, and other common retail venues. BORA scores range between 0-100 and represent, in the aggregate, the proportion of brand origins that respondents correctly identify. We distinguish between knowledge of US brands (BORA US), Asian brands (BORA As) and of European brands (BORA Eu). Lower levels of correct brand origin recognition suggest that either (1) a brand is perceived to be manufactured and available in many countries or (2) brand origin is inconsequential in the choice process. Under these conditions, a brand must compete along the dimensions for which the firm has better control (e.g., quality). On the other hand, higher levels of correct brand origin recognition demonstrate the saliency of brand origin to consumers, which in turn reinforces the need to develop international marketing and global strategies that are sensitive to and incorporate this information. If this information carries a negative or positive bias, the CO literature stresses the need to adjust international marketing plans (Samiee et al., 2005). In this article we measure brand origin recognition accuracy of consumers by proposing and testing a model that accounts for the variability in BORA, and discusses its importance and implications.

**Literature review**

Consumers use the country in which a product is manufactured as an extrinsic cue when making a purchasing decision. This is referred to as the country-of-origin (COO) effect (Bilkey and Nes, 1982; Al-Sulaiti and Baker, 1998; Papadopoulos, 1993). Baker and Currie (1993) suggested that the country of origin concept should be considered a fifth element of the marketing mix along with the product itself, its price, promotion and distribution. Since the mid-1960s, the countries of origin effects have been the impetus for a number of studies (Al-Sulaiti and Baker, 1998). Previous studies have found that the country-of-origin affects consumers in many ways, including product evaluation (Nagashima, 1970, 1977; Gaedeke, 1973; Schaefer, 1997; Johansson, 1989; Thakor and Katsanis, 1997; Al-Sulaiti and Baker, 1998; Pasawan and Sharma, 2004; Yasin et al., 2007; Ahmed and d’Astous, 2008), quality perception (Han and Terpstra, 1988; Hong and Wyer, 1989; Papadopoulos, 1993; Agrawal and Kamakura, 1999; Leonidou et al, 1999; Kaynak et al., 2000; Ahmed et al., 2002; Insh and McBride, 2004; Pharr, 2005; Tam, 2008), attitudes towards a product (Darling and Arnold, 1988; Lee and Ganesh, 1999), perception of risk (Cordell, 1992; Johansson, 1989), perceived value of that product (Ahmed and d’Astous, 1996; Teas and Agarwal, 2000), preferences (Kaynak et al., 1994; Knight and Calantone, 2000) and purchase intention (Schooler, 1965; Han and Terpstra, 1988; Han,1990; Ha’ubl, 1996; Kim and Pysarchik, 2000; Ahmed et al, 2004; Lin and Chen, 2006). Samiee (1994) points out that country-of-origin means the country that a manufacturer’s product or brand is associated with; traditionally this country is called the home country. For some brands, country-of-origin belongs to a given and definite country, such as IBM belongs to the USA and SONY is a Japanese brand. Country-of-origin is a critical information cue, which plays a major role in having the product accepted in a different world market (Phau and Suntornnond, 2006).

However, the continuing globalization of markets has led many companies to produce product components from multiple countries, so it is more and more difficult to identify the COO of a product by manufacturing location (Clarke et al., 2000). Increasingly, brand origin has a greater impact on consumer purchase intention than has manufacturing origin (Papadopoulos, 1993). The focus of research has also shifted, from the place of manufacture to the origin of a brand (Samiee i., 2005). One significant characteristic associated with many brands are the origin cues. Brand origin can be thought of as the country a brand is associated with by its target consumers regardless of where it is manufactured (Kim & Chung, 1997; Thakor & Kohli, 1996; Thakor & Lavack, 2003; Koubaa; 2008). Lee and Ganesh (1999) and Samiee et al. (2005) suggest that brand origin offers an opportunity to explore country influences upon choice behavior more accurately and realistically, and develop an appropriate international marketing strategy. Brand origin research investigates the effect that the COO of brands has on consumers. Previous studies have found that brand origin, similar to COO in the past, affects consumers’ quality perceptions, brand-related attitudes, and purchase intentions, and results in brand origin stereotypes. Brand origin can be classified into two categories: local and foreign.

Some local companies take advantage by using foreign-sounding brand names and/or the advertising elements of foreign brands to confuse consumers about the brand origin. Only a few studies have been conducted in this area. In their study of brand origin recognition accuracy, for example, Samiee et al. (2005) found that brand origin recognition depends largely on associations of brand names with languages indicating country origins (Zhuang et al., 2008) and a fact further validated by Samiee et al. (2005) 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 behavior and its importance in managerial and public policy decisions” (Auger et al., 2010). Thakor and Lavack (2003) found that the brand origin association may be more influential than the COO itself in terms of consumer evaluations of a product, and concluded that the brand origin association

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*Note: The text above is a natural representation of the document as if you were reading it naturally.*
appears to have a greater influence on consumers, while information about the place of manufacture or assembly of the product and/or product components is less important (Zhou and Hui, 2003; Ozretic-Dosen et al., 2007). However, there are few empirical studies evaluating the importance of brand origin (Jin et al., 2006). In this research we try to extend the previous research by measuring BORA of Iranian consumers to see how well they can recognize the actual origin of 45 brands accurately.

**Brand Origin Recognition Accuracy (BORA)**

According to Samiee et al (2005) BORA involves a form of knowledge that consumers potentially have stored in memory and can retrieve as input when forming brand-related judgments and making choices. Overall, four scenarios pertaining to BORA are possible. First, it is likely that accurate brand origin information is held in memory, and consumers associate brands with their respective countries. If brand origin plays a salient role in purchase decisions, as argued in the CO literature, the rational consumer would be expected to seek or possess accurate brand origin information. A second prospect is that consumers might be entirely oblivious to origins of brands, in which case brand-origin-related information plays no role in their choice behavior. Although plausible, the overwhelming evidence offered by the CO literature appears to suggest otherwise. On the other hand, if consumers’ BORA is shown to be generally low, then the arguments reported in the CO literature are considerably weakened. A third possibility is that brand origin may be merely perceived (but inaccurate), and that this information is used in consumers’ evaluative processes. If the conveyance of inaccurate brand origin information is intentional, and this information is uniformly held by consumers - for example, a US firm selecting a French name as its brand - it is presumably attributable to the marketer's proactive and successful branding and positioning strategies that include association with a desirable source country. A less ideal situation is where the targeted segment associates the brand with an incorrect but desirable origin, by chance or because of various unplanned activities or cues. This branding strategy is deployed by some firms, but there is little empirical evidence suggesting that it leads consumers to actually believe that such brands as LeSueur or DiGiorno food products are indeed from France and Italy, respectively.

In the absence of empirical evidence, such associations represent surface-level artificial connections for most consumers that may have no influence in choice behavior. Finally, the most difficult and chaotic brand (mis)management situation is where consumers associate the brand with a variety of origins, and this information is used in their purchase decisions. Diffused source-country designations represent images that vary across consumer groups and are potentially undesirable and inconsistent with the firm's marketing strategy, particularly if leading brands in the category are linked to a specific country image.

These scenarios point collectively to the academic and managerial importance of developing a better understanding of BORA.

**Conceptual Model and Research Hypotheses:**

The conceptual model depicted in Figure 1 was formulated to test the hypothesized relations. Socioeconomic Status and age are modeled as having both direct and mediated (via international experience) effects on BORA, whereas all other factors are modeled as having only direct effects.

Socioeconomic status has been identified in the cross-culture literature as a key determinant to how comfortable people feel about things foreign (Inglehart and Baker, 2000; Levitt, 1983). It has often been associated with ability to buy, income, world awareness, affluence, social status and power. People from upper social class, in most societies, have more access to information, travel more often, and are exposed to other cultures. In this research we used education and income as indicators of socioeconomic status, and it was expected that more educated and higher-income consumers would demonstrate higher BORA scores. Research has shown that higher-income consumers hold relatively more favorable attitudes toward foreign products (Schooler, 1971; Dornoff et al., 1974; Wall and Heslop, 1986; Good and Huddleston, 1995; Sharma et al., 1995; Bailey and Pineres 1997). Most studies revealed that people with a high level of education are more in favor of foreign products than those with limited education (Anderson and Cunningham, 1972; Dornoff et al., 1974; Festervand et al., 1985; Greer 1971; Schooler, 1971; Wall and Heslop, 1986; Good and Huddleston, 1995; Sharma et al., 1995; Bailey and Pineres 1997; Samiee et al., 2005; Heydarzadeh and Saeedi, 2007). Consequently, they are likely to be more aware of multinational brands and their COO. Based on the literature, we propose that:

**H1: Consumers higher in socioeconomic status should reflect higher levels of BORAus, BORAEU and BORA As.**

**International experience:**

Cross-cultural research has identified travel as one of the best means of gaining cross-cultural exposure (Levitt, 1983; Inglehart and Baker, 2000). In general, travelers tend to be more aware of cross-cultural
practices, products, and ideas. International travel and foreign language expertise are relevant indicators of international experience. We anticipate that socioeconomic status will have both direct and mediated (via international experience) effects on brand origin knowledge. Several studies have revealed a relation between international travel experience and income level (Butterfield et al., 1998; Samiee et al., 2005). Additionally, Rounds (1988) reported that 86% of college graduates have traveled abroad as compared with 62% of those with a high school diploma. Moreover, 84% of those with household incomes exceeding $50,000 have international travel experience as compared with 59% of those with annual incomes under $10,000. Finally, knowledge of foreign languages, even if passively acquired (e.g., non-US natives or their more immediate descendants), heightens individual interest and knowledge in international/foreign matters (Samiee et al., 2005; Heydarzadeh and Saeedi, 2007). Thus we expect that there is a relationship between socioeconomic measures and international experience within the context of BORA.

**Fig. 1: Conceptual model**

**H2a: Consumers' Higher Socioeconomic Status Is Positively Related to Higher Levels of International Experience:**

In addition, it is expected that consumers who are able to read or speak other languages would exhibit higher BORA scores. Consumers' international experiences are potential indicators of their tendency to belong to market segments to which global brands are marketed. In the global marketplace, there are opportunities for consumers to develop greater familiarity with products and brands through both voluntary and involuntary exposure to information. International travel, for example, has been shown to enhance perceptions toward foreign products and, hence, origins of brand (Samiee et al., 2005; Heydarzadeh and Saeedi, 2007). A reasonable expectation, therefore, is that consumers who have engaged in international travel for work or pleasure should possess higher levels of BORA.

**H2b: Consumers Who Have Amassed Greater International Experiences Should Manifest Higher Levels of BORAUS and BORAEU:**

Although international experience is expected to correlate positively with BORAUS and BORAEU we expect consumers to be fairly familiar with Asian brands regardless of their levels of international experience, and thus the influence of international experience on BORAAs should be negligible. Additionally, brands of Asian origin are more dominant in the market, and for many consumers the expectation of an Asian origin may be the norm rather than the exception (Heydarzadeh and Saeedi, 2007). Therefore,

**H2c: International Experience Is Not Related to Consumers' Level of BORAAs:**

**Demographic variables:**

The importance of consumers' demographic characteristics in this line of inquiry is bolstered by research findings that have demonstrated age and gender to be important indicators of marketplace preferences (Schooler, 1971; Smith, 1993; Holbrook and Schindler, 1994; Bailey and Pineres, 1997; Samiee et al., 2005). More specifically, CO research also provides important evidence regarding the relevance of age and gender
to product knowledge and assessment. Research has shown that the use of CO information is inversely related to age (Heydarzadeh and Saeedi, 2007). These findings offer a direction for consumers' BORA levels with the expectation that younger individuals will be more likely to demonstrate higher levels of BORA. Although our expectation is somewhat equivocal, H3a posits that

**H3a: Age is inversely related to consumers' levels of BORAus, BORAEU and BORA As.:**

Demographic variables play a great role in differences in “made in” image between male and female respondents (Wall and Heslop, 1989; Wall et al., 1989). Male and female attitudes towards foreign products differ; previous research suggests that relative to their male counterparts, female consumers tend to rate foreign products more favorably (Wall and Heslop 1986), and they have more positive views about foreign brand names (Thakor and Pacheco 1997). Also research from the CO domain demonstrates that men are more prone to be biased against foreign products (Schooler, 1971). Therefore we propose that

**H3b: Women will demonstrate higher levels of BORAus, BORAEU and BORA As.:**

**Use of the Internet:**

Attention to the role of the Internet in business activities has intensified, as evidenced by the growing volume of information on the subject in various business and trade publications. Academic inquiry on the subject has also accelerated with many contributions attempting to define the Internet’s role in marketing and seeking new paradigms that appropriately incorporate this new medium in marketing theory (Samiee, 1998). The Internet's global nature has created a medium for consumers who have never met a product or brand to gather information about them. The Internet also allows an individual to have access to the sources of information created by marketers on the Internet. Today marketers are beginning to realize the importance of the Internet. With increasing numbers of consumers using the Internet as a source of information and as a guide to product choice, understanding cross-cultural differences in information seeking, information giving, and CoO effects online will become increasingly important for marketers selling products in a global marketplace (Fong and Burton, 2008). Since many consumers are likely to do research on the Internet before making purchase extrinsic product information such as brand and origin information may be achieved by consumers. Therefore we propose that

**H4: Consumers Who Use the Internet More Should Possess Higher Levels of BORAus, BORAEU and BORA As.:**

**Measuring BORA:**

We selected an initial group of 60 brands and then reduced that number to a smaller set through a process. In the initial phase, five faculty members who were familiar with CO research were advised to review the original list and identify any unusual or outlier brands. Then, a final set of 45 brands was selected (see Appendix A1). The set consists of 15 brands from the United States and 15 brands from six European countries (i.e., England, France, Germany, Italy, Netherlands, and Switzerland) and also 15 brands from Asian countries (i.e., Japan and South Korea). These brands represent a range of consumer package goods, semi-durables, and durable products. The 45 brands are available to most Iranian consumers in department stores, mass merchandise outlets, supermarkets, and other common retail venues. We expect the knowledgeable respondent recognize the actual origin of a brand. Adidas, for example, by its German origin. Likewise, Bic should be recognized for its French origin, and so forth. A perfectly knowledgeable respondent would make correct registrations for all 45 brands and thus receive a perfect score of 100%, which would contrast with the entirely clueless respondent whose score would approach zero. Measured scores across respondents thus range between 0 and 100%, and are based both on actual knowledge about the sampled brands' COs and on incidental guessing.

**Methodology:**

**Sample and data:**

An empirical study was designed to understand Iranian consumers’ Brand Origin Recognition Accuracy (BORA). The data for analysis for this article came from a convenience sample of current university students at the Islamic Azad University, located in Rasht in north of Iran. The members of the student sample were familiar with the type of product that the study used. The respondents provided the data by means of a self-completed questionnaire. From a total of 400 questionnaires that were distributed in the university, 53(13 per cent) were incomplete, 44 (11 per cent) were badly completed and therefore 303 (75 per cent) usable answers could be collected.
Questionnaire and measure:
A questionnaire formatted as a matrix was developed to collect the data for this study, with the 45 brands listed down the rows and columns headed with country names. Respondents were instructed to circle for each brand its country origin. Specific countries listed in an alphabetical order were England, France, Germany, Italy, Japan, Netherlands, South Korea, Switzerland, and the United States. 'Not listed' and 'Don't know' were two additional response options. Two measures, education and income, served as indicators of socioeconomic status. Education was measured by having respondents select one of six categories that reflected the highest level of education they had attained: under 12 years, high school degree, 1-2 years of college or technical school, 3-4 years of college, college graduate, and graduate or professional degree. Income was measured by having respondents indicate their approximate total family income from all sources. Two items were used as indicators of international experience: the number of countries that a respondent has visited, and the number of foreign languages that s/he self-reported as being reasonably proficient in speaking, reading, or writing. Age was measured by having respondents assign themselves to the appropriate group using these categories: under 18, 18-24, 25-34, 35-44, 45-54, and 55 or over. Use of the Internet was measured by having respondents indicate approximate time that they surf the internet everyday by selecting one of these categories: less than 1 hour, 1-2, 2-3, 3-4, 4-5, 5 or over.

Validity and reliability
To assess the reliability of the BORA measure, a group of 30 university students was asked to identify the brand origins of the 45 brands on two occasions separated by a full month. The test-retest correlation coefficient (r=0.76, P<0.05) reflects a high level of concurrence. To assess validity typically Coefficient alpha is used but coefficient alpha for scales with two items typically is not assessed, and normally the correlation between the two items is examined (Samiee et al., 2005). Therefore the Pearson correlation coefficients between the two items measuring socioeconomic status (SES) and the two items indicating international experience (IE) assessed that they were 0.59 and 0.53, respectively.

Analysis and results:
Country-by-country average BORA scores, shown in Table 1, are insightful. Considering, for example, the 4 brands from Switzerland, it is evident from the main diagonal that only 45.1 % of respondents' assignments correctly associated these brands with Switzerland. The off-diagonal entries reveal that 10.1% of the Swiss-brand assignments were associated with England, 12.9% with France, 3.7 % with Germany, 2.7% with Italy, and so on. The data in the 'Don't know' and 'Not listed' columns indicate that respondents in nearly 7.8% of the cases were unable to assign the brands from Switzerland to any country. These data reveal, in fact, that a substantial proportion of all brands could not be assigned to any specific country, ranging from 2.2% (Japan) to 20.1% (Netherlands). Indeed, 73.2 of the 11 Japanese brands were correctly categorized as being of Japanese origin, and only 2.2% of Japanese brands could not be identified with any country. South Korean brands are second only to the Japanese, with a BORA score of 69.4%. The scores fall precipitously for other origins, ranging from only 31.4 and 36.9% for Netherlands and England, respectively, to 51.6% for Germany. From these results, it is apparent that consumers, by and large, maintain a modest level of BORA. The results revealed that respondents were more successful at recognizing the origins of Asian brands and their scores for BORA As were more than BORA US and BORA Eu. Also we used a structural equation model approach to assess all our hypotheses simultaneously. That is to say, the links in Fig. 1 served as the proposed model, and we assessed it by using LISREL 8. The results are shown in table 2 and also fit indices of structural model are given in table 3.

Table 1: brand origin recognition accuracy matrix

<table>
<thead>
<tr>
<th>Brands from</th>
<th>ENG</th>
<th>FRA</th>
<th>GER</th>
<th>ITA</th>
<th>AP</th>
<th>NE</th>
<th>S.K</th>
<th>SWI</th>
<th>USA</th>
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<tr>
<td>England</td>
<td>36.9</td>
<td>3.1</td>
<td>6.8</td>
<td>0.5</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>1.7</td>
<td>41.9</td>
<td>0.4</td>
<td>10.2</td>
</tr>
<tr>
<td>France</td>
<td>13.7</td>
<td>49.4</td>
<td>11.9</td>
<td>0.1</td>
<td>0.0</td>
<td>0.3</td>
<td>0.1</td>
<td>0.6</td>
<td>17.9</td>
<td>4.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Germany</td>
<td>12.6</td>
<td>8.3</td>
<td>51.6</td>
<td>2.2</td>
<td>0.1</td>
<td>1.3</td>
<td>0.5</td>
<td>0.3</td>
<td>12.6</td>
<td>4.6</td>
<td>5.9</td>
</tr>
<tr>
<td>Italy</td>
<td>13.1</td>
<td>4.6</td>
<td>3.7</td>
<td>44.8</td>
<td>0.0</td>
<td>2.4</td>
<td>0.1</td>
<td>3.2</td>
<td>18.9</td>
<td>3.2</td>
<td>6.0</td>
</tr>
<tr>
<td>Japan</td>
<td>0.4</td>
<td>0.1</td>
<td>1.1</td>
<td>0.4</td>
<td>73.2</td>
<td>0.2</td>
<td>14</td>
<td>0.1</td>
<td>8.3</td>
<td>1.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Netherlands</td>
<td>9.1</td>
<td>4.7</td>
<td>8.9</td>
<td>3.3</td>
<td>1.1</td>
<td>31.4</td>
<td>0.7</td>
<td>7.4</td>
<td>13.3</td>
<td>4.4</td>
<td>15.7</td>
</tr>
<tr>
<td>South Korea</td>
<td>2.6</td>
<td>0.3</td>
<td>1.1</td>
<td>0.1</td>
<td>18.9</td>
<td>0.0</td>
<td>69.4</td>
<td>0.0</td>
<td>2.3</td>
<td>2.7</td>
<td>2.6</td>
</tr>
<tr>
<td>Switzerland</td>
<td>10.1</td>
<td>12.9</td>
<td>3.7</td>
<td>2.7</td>
<td>1.7</td>
<td>0.1</td>
<td>0.0</td>
<td>45.1</td>
<td>15.9</td>
<td>2.8</td>
<td>5.0</td>
</tr>
<tr>
<td>USA</td>
<td>27.3</td>
<td>3.7</td>
<td>5.3</td>
<td>2.2</td>
<td>1.7</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
<td>50.9</td>
<td>1.5</td>
<td>7.0</td>
</tr>
</tbody>
</table>

*NL = not listed; DK = don’t know
" indicates that 16.9 % of the respondents correctly associated English brands with England.
" indicates that 3.7 % of the respondents incorrectly associated French brands with England.
Table 2: BORAUS, BORAEU and BORA As path coefficients

<table>
<thead>
<tr>
<th>Path</th>
<th>BORAUS (γ)</th>
<th>BORAEU (β)</th>
<th>BORA As (γ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES → IE</td>
<td>γ11=0.26 (3.949)</td>
<td>γ21=0.19 (1.211)</td>
<td>γ31=0.18 (2.17)</td>
</tr>
<tr>
<td>SES → BORA</td>
<td>γ12=0.06 (0.35)</td>
<td>γ22=0.03 (0.16)</td>
<td>γ32=0.04 (0.22)</td>
</tr>
<tr>
<td>Gender → BORA</td>
<td>γ13=0.24 (2.61)</td>
<td>γ23=0.25 (3.164)</td>
<td>γ33=0.19 (4.121)</td>
</tr>
<tr>
<td>UI → BORA</td>
<td>γ14=0.13 (2.421)</td>
<td>γ24=0.14 (2.111)</td>
<td>γ34=0.18 (2.17)</td>
</tr>
<tr>
<td>IE → BORA</td>
<td>β41=0.46 (5.52)</td>
<td>β42=0.41 (6.513)</td>
<td>β43=0.59 (8.198)</td>
</tr>
<tr>
<td>Age → IE</td>
<td>γ42=0.31 (6.13)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*values in parentheses are t-values.

Table 3: Fit Indices

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>0.044</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.044</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.95</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.94</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.91</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.90</td>
</tr>
</tbody>
</table>

P<0.05

BORAus findings:

As mentioned before the standardized coefficients (with t-values in parentheses) are given in Table 2. In support of H1, socioeconomic status was positively related to ability to recognize US brand origins (γ11=0.26, t=3.949, P<0.05). The relationship between socio-economic status and international experience was also significant (γ12=0.06, t=0.4017, P=0.05), supporting H2a, which posits that higher socio-economic status is positively related to higher levels of international experience. Also H2b which posits that greater international experiences cause individuals to recognize the origins of US brands was supported (β41=0.46, t=5.52, P<0.05). Age did not significantly predict BORAus (γ12=0.06, t=0.35, P<0.05), and thus this relationship does not support H3a. However, as expected, older individuals have more time to travel and to learn foreign languages, and hence the path between age and IE is significant (γ22=0.19, t=4.121, P<0.05). Further, in support of H3b, gender (coded as male=1 and female=2) was positively and significantly related to BORAus (γ23=0.25, t=3.164, P<0.05). The relationship between UI and BORAus was, as hypothesized in H4, significant (γ24=0.14, t=2.111, P<0.05). It shows that people spending more time on surfing the internet will have more knowledge about US brands and they can recognize the origins of US brands correctly.

BORAEu finding:

As shown in Table 2, the direct effect of SES on BORAEu was significant (γ11=0.26, t=3.949, P<0.05) in support of H1. As noted in the BORAus section, the paths between age and IE and SES and IE are significant (see Table 2). The effect of IE on BORAEu was significant (β42=0.41, t=6.513, P<0.05), indicating that respondents with greater international experience possessed greater recognition accuracy of the origins of European brands. Thus, H2b also is supported. The negative sign between age and BORAEu reveals an inverse relation that, although directionally consistent with H3a, does not achieve statistical significance (γ22=0.16, t=0.16, P<0.05). The path between gender and BORAEu is significant (γ23=0.25, t=3.164, P<0.05), it means that females (coded 2) had more ability to recognize European brand origins than did males (coded 1). Thus, H3b was supported. Finally, the relationship between UI and BORAEu is significant (γ24=0.14, t=2.111, P<0.05). Supporting H4 shows that people spending more time on surfing the internet will have more knowledge about European brands and they can recognize the origins of European brands correctly.

BORAAs findings:

As shown in Table 2, the direct effect of SES on BORAAs was significant (γ31=0.18, t=2.17, P<0.05) in support of H1. Moreover, H2c, which posits a null relationship between IE and BORAAs, was also confirmed (β43=0.59, t=8.198, P<0.05). The negative sign between age and BORAAs reveals an inverse relation butt in support of H3a, it does not achieve statistical significance (γ32=0.04, t=0.22, P=0.05). The path between gender and BORAAs is significant (γ23=0.25, t=3.164, P<0.05), it means that females (coded 2) had more ability to recognize Asian brand origins than did males (coded 1). Thus, H3b was supported. Finally, the relationship between UI and BORAAs is significant (γ34=0.18, t=2.17, P<0.05). Supporting H4 shows that people spending more time on surfing the internet will have more knowledge about Asian brands and they can recognize the origins of Asian brands correctly.
Discussion:

Our study revealed that respondents were more successful at recognizing the origins of Asian brands and their scores for BORAAs were more than BORAUS and BORAEu. It showed that consumers actually have only modest knowledge of the origins of brands, and variables such as socioeconomic status, past international travel, foreign language skills, gender, age and use of the internet influence consumers' proficiency at recognizing foreign brand origins. Moreover as we expected, this sample of respondents possessed greater knowledge of the origins of Asian brands (M=71.3%) than of American brands (M=50.9%) and European brands (M=43.2%). Thus, these findings suggest that the role of CO in brand choice under natural, ecologically valid conditions, where brand origin information has either to be acquired at the point of purchase through active search or accessed from memory via intentional, goal-driven efforts, is nominal for the most part. Additionally, given that firms source their products for global markets from multiple and varying locations, brand origin, as defined in this study, is potentially the only stable information about a product (Samiee et al., 2005; Thakor and Lavack, 2003). Thus BORA offers an opportunity to explore country influences upon choice behavior more accurately and realistically, and develop an appropriate international marketing strategy.

Therefore, based on the results obtained in this study, international marketing strategies should place much greater reliance on non-geographic attributes of brands than those related to their origins. This conclusion is consistent with results obtained by Lee and Ganesh (1999), indicating that brand image is more important than CO. The present research questions this assumption. The evidence provided, based on a broad spectrum of product categories and brands, suggests that consumers either have limited recognition of brand origins, or find such information relatively unimportant and thus unworthy of retention in memory. The fact remains that consumers might react based on their incorrect perception of where a brand originates rather than on the basis of correct origin information. Although plausible, this certainly is not a desirable situation for all brands that are misidentified with countries possessing lower equities than the country from which the brands actually originate. Sophisticated brand managers surely would not tether their brands' successes to the stochastic prospect that their brands may be misperceived as being from countries with higher equities than their actual source countries. On the other hand, it is easy to understand why a brand marketer from a country that has relatively low country equity - that is, with respect to product-quality perceptions - may indeed choose to use a brand name that dissociates it from its source country and suggests it has originated in a country known for high quality (Samiee et al., 2005).

Our research thus leads to the conclusion that managers of new brands should periodically monitor the origins associated with their brands in order to avoid the obvious pitfalls of their brands being associated with undesirable origins, particularly those that interfere with the international positioning goals stated in their respective marketing strategies. As mentioned before socioeconomic status, past international travel, foreign language skills, gender, age and use of the internet contribute to higher BORA scores. A greater focus on these attributes is likely to establish more firmly the origins of the brands being marketed. The variables identified in this research can assist in better targeting the firm's communications. Brand origin considerations also entail a broader public policy consideration. Governments have an inherent interest in firmly establishing and maintaining a positive country equity for all brands associated with them through communications and promotion programs, education, and regulation. The issues discussed in this research are of particular importance to emerging and developing economies that are rapidly industrializing and vying for a larger portion of global trade. Historically, firms in these countries have been sensitive to country equity and brand origin considerations.

Future research:

Brand-related issues are among the leading areas designated as research priorities by the Marketing Science Institute, and the findings of this study highlight the importance of this line of inquiry in an international context. As such, several areas for future research are evident. First, inasmuch as a great deal of interest in CO research is evident from the literature, BORA offers a more realistic and ecologically more appropriate alternative research stream. A focus on brand origin offers a meaningful alternative for bypassing the many conceptual and research design difficulties and shortcomings associated with CO studies. Second, standardized branding strategies are inherently related to the firm's global orientation and strategy. Firms cannot create new brands for every new market they enter just by virtue of the presence of negative brand origin or CO bias. Future studies that link the implications of brand origin recall to the firm's global orientation and global marketing program are desirable. Little is known about brand-related consumer knowledge and its influence on consumers' decision processes. Brand origin should realistically be viewed as a component of brand equity, because the origins of many products are very much a part of their characters. Thus, field studies that involve large numbers of actual brands and attempt to unfold brand-related cognitive structures of consumers are in order. To do this we suggest researches to study BORA concept in different areas of world and with different
groups of samples. They can try to find other factors influencing consumers' BORA scores. Some factors such as product categories, people's job, perceived quality, price, consumer involvement and so on.

**Limitations:**

We assessed a new construct introduced in the marketing literature by Samiee et al. (2005) called BORA. Several aspects of this study have influenced our findings. First, we used a specific definition for BORA that is advocated in the small but growing literature dealing with product and brand origin. Furthermore, knowledge regarding globalization of firms and cross-national acquisition of popular brands may complicate the nature of brand origin for some respondents. Second, the set of brands used were derived from a wide range of consumer products. We intentionally excluded brands with well-known origins such as BMW and Nike from Germany and USA, respectively, so that BORA scores are not artificially inflated. Third, our research instrument was demanding in that it required respondents to recall 45 brands, their experiences with them, and their origins, and to respond to demographic and other questions. Given the length of our research instrument, respondent fatigue might have influenced the accuracy of some responses. Forth, the sample that we used in this study were university students, therefore they are more knowledgeable than common people and because they spend more time surfing the internet their BORA scores may be higher than ordinary consumers. We recommend other researchers to use different samples to compare their results with our findings. Fifth, we used just a set of brands available for most consumers in Iran, but the students in sample may be consumers of that set of brands or they may not be. It is suggested to use in future researches the set of brands that the sample group is the actual consumer of it.

**REFERENCES**


Holbrook, M.B. and R.M. Schindler, 1994 'Age, sex, and attitude toward the past as predictors of consumers' aesthetic tastes for cultural products', Journal of Marketing Research, 313: 412-422.


