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## **The effects of the country of brand and the country of manufacturing of automobiles: An experimental study of U.S. consumers' brand personality perceptions**

**Purpose:** This paper offers a new perspective of country of origin effects on consumers' brand personality perceptions of domestic and imported automobiles. It assesses the perceived similarities and differences between automobiles from two countries with respect to the country of origin of the brand (COB) and the country of manufacturing (COM) of that same brand.

**Design/methodology/approach:** An experimental design was used to investigate developed country consumers' brand personality perceptions of three cars; a domestic car, a car manufactured in a developing country by a developing country manufacturer, and a car from developing country manufacturer that is manufactured in the developed country. Data was collected in the United States and therefore a U.S. car was used as the developed country car. China was selected as the developing country of origin. A structured questionnaire was used to collect primary data.

**Findings:** Multivariate analysis of variance (MANOVA) indicates that consumers' brand personality perceptions varied according to the country of origin (COB) of the brand and the country of manufacture (COM) of the brand. We show that the COM of a car influenced the perceived brand personality of the car more than the COB. In some respects the Chinese car made in the U.S. was perceived to have a stronger brand personality than the U.S. car made in China. This suggests that for cars the COM exerts a greater influence on the perceived personality of a brand than the COB.

**Research limitations/implications:** While this paper offers an exploratory glimpse of potential challenges and opportunities facing domestic and developing country automotive manufacturers, future research should take a larger respondent pool, respondents from other countries, other automotive manufacturers as well as assess the impact of COM and COB on purchase intention and behavior.

**Practical implications:** Manufacturers of cars must understand the effect of country of origin and country of manufacturing of a brand on consumers' brand perceptions in order to build, position and protect their brands in various international markets.

**Originality/value:** This paper provides an important contribution to the existing literature and business practice by providing a new perspective on country of origin research by using the multi-dimensional construct of brand personality and analyzing the relationship between country of origin of a brand and country of manufacturing of that same brand. Moreover, it addressed a timely issue by investigating the challenges and opportunities Chinese and American car manufacturers are facing.

**Keywords:** International Marketing, Brand Personality, Country of Origin, Country of Manufacturing, China, Automobiles

**Paper type:** Research Paper

## **1. Introduction**

The world automobile market has historically been dominated by manufacturers based in developed countries. Developed country manufacturers first served their home markets, and then sought exports to, and foreign direct investment in, other developed country markets as well as developing country markets. Consequently, published research in the area of country of origin effects regarding automobiles has usually been conducted using automobiles from developed countries. However, in the last 20 years, automobiles from manufacturers in newly industrialized countries such as South Korea and more recently from developing countries such as Brazil, Russia, India and China have increasingly become important players in the world automobile market.

The United States automobile market has long been an attractive target for foreign automobile manufacturers. European, Japanese, and more recently South Korean manufacturers are now significant players in the U.S. market. Most recently, for example Indian and Chinese automotive manufacturers have begun to take aim at developed country automobile markets and they have made no secret of their intentions to compete in the global automobile market. In the case of China, according to the International Organization of Motor Vehicle Manufacturers (OICA), China produced over 8.8 million cars and commercial vehicles in 2007 (OICA, 2008), a 22% increase over 2006. China has already overtaken Germany to become the third largest automobile-manufacturing country in the world behind Japan and the United States. In 2007, there were over 310,000 Chinese cars exported worldwide (Kimes, 2008). Moreover, they have also undertaken foreign direct investments. For example, in 2005 Chinese Automotive company Nanjing Automobile Group acquired MG Rover. More recently, in 2009 Sichuan Tengzhong Heavy Industrial Machinery acquired the Hummer division of General Motors.

General Motors, Ford and Chrysler are currently producing cars in China in joint ventures with Chinese manufacturers. It is increasingly likely that developing country automotive manufacturers and most likely one or more Chinese manufacturers will soon enter the U.S. automobile market, especially in light of the recent problems that the U.S. automotive industry is facing. No matter what happens to the three U.S. automotive companies, it is very likely and most probably only a matter of time before Chinese automotive manufacturers follow in the steps of the European, Japanese and South Korean car manufacturers before them and aggressively enter the U.S. market by either exporting or by building or buying their own production sites in the U.S. In addition, as pressure on developed country manufacturers increases to reduce costs, they might look to China as sources of inexpensive manufacturing and might increasingly manufacture their cars in China and export them to developed countries.

In spite of all this, little is known about how developed country consumers will react to cars originating from or manufactured in developing countries. The purpose of this research is to explore this issue. A key question that arises is *how* consumers perceive the country of origin of a *brand* (COB) versus the country of *manufacturing* (COM) of that same brand, and specifically *where* the differences arise. Extensive research has been conducted addressing the country of origin effect (Dichter, 1962; Bilkey and Nes, 1982; Botschen and Hemettsberger, 1998; Verlegh and Steenkamp, 1999). Some studies have focused on cars (Akaah and Yaprak, 1993; Amal and Quester, 2007; Chinen *et al.*, 2000; Johansson *et al.*, 1985; Levin *et al.*, 1993; Roth and Romeo, 1992; Stoltman *et al.*, 1991;) and very few on the differentiation between country of origin and country of manufacturing of a car brands (Chinen *et al.*, 2000; Hamzaoui and Merunka, 2006; Srinivasan *et al.*, 2004). We know of no study that investigates developed country consumers' brand perceptions of developing and developed country cars and analyzes the relationship

between the country of origin of a brand and the country of manufacturing of that same brand. Moreover, little is also known about how consumers' brand perceptions vary. We investigate this issue by using the multi-dimensional construct of brand personality (Aaker, 1996) as the dependent variable to capture the differences and similarities in consumers' brand perceptions.

## **2. Conceptual Development and Research Hypotheses**

### **2.1. Country of Origin**

Beginning with Dichter (1962), research investigating country of origin effects on product evaluations has become a major research field in international marketing (Jaffe and Nebenzahl, 2001; Verlegh and Steenkamp, 1999). The country of origin (COO) of a product or service (d'Astous *et al.*, 2008) is one cue that has grown increasingly important as movement towards globalization of production has intensified, especially considering that an increasing number of products are manufactured in various countries. Often, country of origin acts as a cognitive cue from which consumers can infer beliefs about a product based upon their beliefs about the country from which the product originates (Verlegh and Steenkamp, 1999). Other research suggests that country of origin has symbolic and emotional meaning to consumers, and can relate to feelings of national identity (Botschen and Hemettsberger, 1998). Consumers' perceptions of a brand from a particular country create intangible assets, as well as liabilities in the minds of consumers (Kim and Chung, 1997). Brands from countries with a favorable country image typically are more readily accepted than brands from countries with less favorable images (Yasin *et al.*, 2007). It has been suggested that a favorable country image can lead to brand popularity and subsequently to brand loyalty (Kim and Chung, 1997). The implications of a favorable country image therefore become extremely important to brands that have yet to be established in

a given market. This leads to the idea of country equity, which is developed by the images and associations of brands with a certain country (Shimp *et al.*, 1993). Researchers have also found that when consumers are not familiar with a country's product they will use the country's image as a product evaluation cue (Maheswaran, 1994; Aaker, 1996; Klein *et al.*, 1998). This presumes that consumers' product perceptions infer from stereotypical beliefs about the country from which the product originates (Erickson *et al.*, 1984). Research has also shown that country of origin effects are product category-specific. Bilkey and Nes (1982), Roth and Romeo (1992), and Pappu *et al.* (2007) have demonstrated that consumers hold different sets of beliefs across product categories, and that their attitudes towards products from a given country vary by product category. These effects are generally less pronounced when the manufacturing process is simple (e.g. shoes) than when it is complex (e.g. cars) (Ahmed *et al.*, 2002). The implications of a favorable country image therefore become extremely important to brands that have yet to be established in a given market as is the case with developing country car brands. However, less is understood about how consumers from a developed country perceive branded products originating from developing countries. A hierarchy of biases has been observed within evaluations of developing countries based upon a positive relationship between product evaluations and the country's level of economic development (Bilkey and Nes, 1982; Han and Terpstra, 1988). Other factors that contribute to the hierarchy are country and product familiarity, culture, political climate and openness to foreign cultures (Balabanis *et al.*, 2002; Laroche *et al.*, 2005; d'Astous *et al.*, 2008). Research suggests that products originating from less developed countries are subject to a greater country of origin effect, and are evaluated less favorably than products originating from more developed countries (Bilkey and Nes, 1982; Verlegh and Steenkamp, 1999).

## **2.2. Country of origin of a Brand (COB) versus Country of Manufacture (COM)**

The increased occurrence of bi-national products may result in potential dissonance for consumers as they try to reconcile conflicting views about the country of origin of different parts of the product (Phau and Prendergast, 2000). In their most common form, bi-national products may carry a brand associated with one country but are increasingly manufactured and assembled in another country, potentially harming their chance to enter new markets. Chao (2001) also supports this notion. Many country of origin studies have been criticized for adopting a single-cue approach (Johansson *et al.*, 1985; Ozsomer and Cavusgil, 1991) without differentiating the country of origin of a brand (COB) from the country of manufacturing (COM) which indicates the clear need for a multi-cue approach. The emergence of international value chains and multinational production locations has also been highlighted by researchers (Chao, 1993; Ettenson, 1993) as a limitation of single-cue COO measurements, an observation that underscores the need to decompose the COO into a multifaceted construct (Ozsomer and Cavusgil, 1991), with at least two distinct parts: the country of origin of a brand (COB) and country of manufacturing (COM) of that same brand (Chao, 1993).

A change in the perceived country of manufacturing can have a deleterious effect on a brand name (Thakor and Katsanis, 1997). When a company chooses to change the country of manufacturing of a given product from a country that consumers have a favorable perception to a country with less favorable associations the brand name could be hurt as a result of lower consumer brand perceptions arising from the country of origin effect. Johansson and Nebenzahl (1986) as well as Han and Terpstra (1988) report that Japanese cars suffered erosion of brand attractiveness when production was shifted from Japan to less developed countries. Lee and



Schaninger (1996) argue that even in the case of prestigious global brands, consumers' perception of quality and their purchase decisions are likely to be influenced not only by the brand name but also by where the products are manufactured or assembled (Pappu *et al.*, 2006). Ulgado and Lee (1993) and Iyer and Kalita (1997) use country of manufacturing to show that the manufacturing location affects consumer perceptions of product quality.

It is important to understand the relationship between the country of origin of a brand (COB) and the country of manufacturing of a brand (COM) and brand perceptions for several reasons. First, companies, and specifically marketing managers need to effectively manage their brands especially if they have an international value chain and are operating in international markets (de Chernatony *et al.*, 1995). Second, when competing internationally, these managers must understand how to build, position and protect their brands across international markets. Understanding how the COB and COM impact brand perceptions will increase the effectiveness of marketing and brand managers by providing them with insights to manage their production and marketing and ultimately their brand management. Branding is an important marketing element that not only influences consumer perceptions of a product but ultimately their purchasing behavior. In this paper we define country of origin of a brand (COB) as the country that the brand is originally from and where the headquarters is located, and the country of manufacturing (COM) as where the product is primarily produced and assembled.

### **2.3. Brand Personality**

Building a global brand is the aspiration of all automotive companies. To help understand the many facets of a brand we turn to the concept of brand personality. Briefly, the theory is that brands are inanimate objects, yet consumers often view brands as having human characteristics,

in essence, creating a brand personality (Aaker, 1996, Aaker, 1997, Batra *et al.*, 1993, Biel, 1993). Much like human personality, brand personality can be thought of as a relatively enduring predisposition about a product's image or trait characteristics. Aaker's (1997) seminal work and extensive brand personality research led to the development of a valid and reliable construct of brand personality on a number of dimensions. The dimensions of brand personality are based on 42 items and consist of the five dimensions: sincerity, excitement, competence, sophistication and ruggedness. In this research we use the concept of brand personality, and its five related dimensions, to capture the effects of country of the brand (COB) and country of manufacturing (COM) on the perceived similarities and differences of developed country consumers' perceptions. We chose brand personality for three reasons: First, the multidimensional nature of brand personality allows us to capture different facets of a brand. Second, brand personality is a valid and reliable measurement construct across respondent samples and product categories and widely accepted as an important brand-related construct in consumer marketing research. Third, brand personality is an important component of a brand and essential for effective brand management (Aaker, 1996) and both practitioners (Biel, 1992) and researchers emphasize the importance of brand personality. Figure 1 outlines the five brand personality dimensions with the underlying 42 measurement items.

### **Take in Figure 1**

In light of the previous discussion, we are able to put forth several hypotheses. Based on previous research that suggests that products from developing countries are perceived less favorably than products originating from developed countries, we propose that the same logic will apply to automobiles. With regard to the COM, we propose that a positive relationship exists

between the level of economic development and perceived brand personality. Automobiles manufactured in a developed country will be perceived as having a stronger brand personality. We define a stronger brand personality as “more” of each of the five dimensions that comprise the brand personality construct.

***Hypothesis 1:** A developing country car brand manufactured in a developed country will be perceived to have stronger brand sincerity ( $H_{1a}$ ), brand excitement ( $H_{1b}$ ), brand sophistication ( $H_{1c}$ ), brand competence ( $H_{1d}$ ), and brand ruggedness ( $H_{1e}$ ) than the same car brand manufactured in the developing country.*

Turning to the effects of COB, again, prior research suggests country of origin effects act as both cognitive cues based on beliefs about the country, as well as symbolic and emotional feelings of national identity. We expect that for COB as well as COM, an association with the developed country will result in a stronger perceived brand personality. We expect to observe a positive COB effect when both cars are manufactured in the developing country. Therefore:

***Hypothesis 2:** A developed country car manufactured in a developing country will be perceived to have stronger brand sincerity ( $H_{2a}$ ), brand excitement ( $H_{2b}$ ), brand sophistication ( $H_{2c}$ ), brand competence ( $H_{2d}$ ), and brand ruggedness ( $H_{2e}$ ) than a developing country car brand manufactured in the developing country.*

Finally, to assess the relative influence of COB and COM, we expect that when a brand is manufactured in a country other than the country of origin, the brand’s personality will take on some of the perceived characteristics of the country of manufacture. If the country of manufacture is a developed (developing) country, this should result in a stronger (weaker) brand

personality. Therefore:

**Hypothesis 3:** *A developed country car manufactured in a developing country will be perceived to have weaker brand sincerity ( $H_{2a}$ ), brand excitement ( $H_{2b}$ ), brand sophistication ( $H_{2c}$ ), brand competence ( $H_{2d}$ ), and brand ruggedness ( $H_{2e}$ ) than a developing country car manufactured in a developed country.*

Hypothesis three is very important for the following reasons. First, developed country automotive manufacturers are already manufacturing cars in developing countries for the local market. It is a small step to export those cars back to the home country. Second, it is unclear how the combination of the country of origin of a brand (COB) and the country of manufacturing (COM) are affecting consumer brand personality perceptions. It should be mentioned that no hypotheses were developed regarding the impact of COB and COM on brand awareness, brand association or even brand loyalty as it would be difficult to experimentally manipulate consumers' perceptions with respect to automobiles that are not available in developed country markets. For example, asking consumers if they were aware of a certain automotive brand (without providing the country of origin) and to test their brand awareness would not provide any meaningful results (Pappu *et al.*, 2006).

### **3. Methodology**

An experimental design was used to test the hypotheses. The United States was selected as the developed country and China as the developing country in the experiment. The United States was chosen because it is the largest consumer automobile market in the world. China was chosen because it is the third largest automotive producing country in the world; it is the most important developing country in the world; and because Chinese automotive companies are on

the verge of entering developed country markets either by exporting or foreign direct investment.

A three part questionnaire was developed. The first included two photos and a description of the car. The second included the 42 questions related to the brand personality scale developed by Aaker (1997). The items are scored on a 5-point Likert-type scale anchored by the terms *not at all descriptive* and *extremely descriptive*. Responses are summed within each dimension and then divided by the number of items within a dimension to form average scores that can theoretically range from 1 to 5. The third part of the questionnaire included demographic information for classification purposes and questions regarding car ownership (the Appendix provides a sample page of the survey).

One hundred and nineteen U.S. undergraduate and graduate student subjects participated in the experiment and were randomly assigned to one of three treatment groups. All subjects were led to believe that a new car was going to be introduced into the U.S. market. The first group was told that the car was a Chinese car manufactured in China and imported to the U.S. The second group was told that the car was a Chinese car that would be manufactured in the United States. The third group was told that the car was an American car that would be manufactured in China and imported to the United States. All groups received identical information with the exception of the country of origin and the country of manufacturing of the car. Each group was then asked to complete the questionnaire related to this situation.

#### **4. Results**

Forty subjects completed the survey about the American car made in China, thirty-seven about the Chinese car manufactured in the U.S. and forty-two about the Chinese car manufactured in China, resulting in almost equal distribution across the three treatment groups.

The sample was nearly evenly split in terms of gender, with 47% men and 53% women. Eighty-three percent of the subjects reported that they owned a car. Prior to the data analysis, the reliability of the brand personality scale was assessed. The individual dimensions of the scale as well as the overall scale exhibited acceptable reliability, with an overall Cronbach Alpha of 0.79. The Cronbach Alpha of each of the brand personality dimensions were as follows; 0.79 for brand sincerity, 0.90 for brand excitement, 0.83 for brand competence, 0.80 for brand sophistication, and 0.83 for brand ruggedness.

Differences in consumer perceptions of brand personality were analyzed by the COB as well as the COM of the automobile using multivariate analysis of variance (MANOVA). The five brand personality dimensions were the dependent variables (Pappu *et al.*, 2006). The combination of the COB and COM was the independent variable. MANOVA assumes homogeneity of variances. Levene's Test for equality of variances is not significant at 0.01 level (brand sincerity  $F=0.153$ ,  $p=0.858$ ; brand excitement  $F=1.593$ ,  $p=0.208$ ; brand competence  $F=2.814$ ,  $p=0.064$ ; brand sophistication  $F=3.678$ ,  $p=0.028$ ; and brand ruggedness  $F=1.850$ ,  $p=0.162$ ). Therefore, the assumption of equal variance is met.

The results of all multivariate hypothesis tests associated with the experimental design are summarized in Table 1. Several statistically significant results were obtained. The two-way multivariate combination between COB and COM and the effect on brand perceptions were, in most cases significant. This indicates differences in the set of perceived brand personality dimensions among the three groups. Table 1 provides the mean value as well as the corresponding F-value and significance level for each brand personality dimension. The results show that the brand personality dimensions vary according to the combination of the COB and COM. The univariate F-tests show that each of the brand personality dimensions vary, and in

most cases significantly, with the different combination of COB and COM. These results provide partial support for our hypotheses and are discussed further in the following paragraphs.

### **Take in Table 1**

The multivariate tests section simultaneously tests each factor effect on the dependent groups. Each factor, in this case the combination of country of origin and country of manufacturing of the car, has a significant main effect, as does the intercept. As we have more than two groups of dependent variables, the Wilk's Lambda is the most appropriate test. We get a significant value of 0.63 [ $F = 5.813$ ,  $p=0.001$ ]. Post hoc multiple comparison tests were conducted to investigate univariate group differences among means between the American car made in China, Chinese car made in the U.S. and the Chinese car made in China. Table 2 outlines the results by using Tukey's (1953) honestly significant differences (HSD) method.

### **Take in Table 2**

Hypothesis 1 is partially supported ( $H_{1a}$ ,  $H_{1d}$ , and  $H_{1e}$ ). The location of the manufacturing site is an important influence on consumer brand personality perceptions. Specifically, consumer perceptions of brand sincerity, sophistication and ruggedness differ by country of manufacturing of the car. Generally, respondents perceived a Chinese car that was manufactured in the U.S. to have a stronger brand personality than the same Chinese car manufactured in China. These results are consistent with previous research (e.g., Johansson and Nebenzahl, 1986; Han and Terpstra, 1988; Pappu *et al.*, 2006) suggesting that developed country consumers prefer products that are manufactured in their own country.

(2) Hypothesis 2 is rejected. There is no evidence that a U.S. car manufactured in China

will be perceived to have a stronger brand personality than a Chinese car manufactured in China. In fact, our results offer some evidence, albeit weak, to the contrary with regards to the brand excitement dimension ( $H_{2b}$ ). Our results suggest that respondents perceive that a Chinese car made in China has a more exciting brand personality than a U.S. car made in China.

(3) Finally, with respect to hypothesis 3, we are able to offer only weak evidence about the relative strength of COB and COM effects on consumers' brand perceptions. With regard to brand sophistication ( $H_{3d}$ ), the Chinese car made in the U.S. is perceived to have a more sophisticated brand personality than the U.S. car made in China. A similar result was obtained by Levin *et al.* (1993) who investigated American consumers' attitudes towards American and Japanese cars. Subjects in their experiment were asked to rank-order their likelihood of purchasing an automobile from each of six companies that differed in terms of their country of origin (USA and Japan) and the percentage of American and Japanese workers in producing that car. There was a strong preference for cars made by American companies and an even stronger preference for companies that employ mostly American workers. This gives some indication that the manufacturing site for cars in the mind of U.S. consumers is as or even more important in terms of brand sophistication than the country of origin of that brand. This also suggests that to some extent the country of origin of the U.S. brand manufactured in China is somewhat offset by the favorable country of manufacturing effect of the Chinese car made in the U.S.

## **5. Discussion and Conclusion**

The purpose of this paper is to provide a new perspective on the country of origin construct. We offer an exploratory glimpse of the effects of COB and COM on developed country consumers' brand personality perceptions of developed country and developing country



automobiles and their perceived similarities and differences. The results shed some light on this issue and suggest interesting strategic marketing and brand management implications. The central findings of this paper are as follows:

(1) Brand personality is useful to assess the effect of the country of origin of a brand (COB) and country of manufacturing (COM) on the brand perceptions of consumers. The concept of brand personality not only appears to capture the differences in consumer perceptions, but gives important insights as to exactly where those differences and similarities reside.

(2) The combination of bi-national country of origin effect (COB and COM) is viewed differently by U.S. consumers. The three groups reported significantly different perceptions on four of the five brand personality dimensions. Interestingly, only the dimension of brand competence failed to yield any significant difference. We can only speculate why this is so. One explanation is offered by Aaker (1997) who suggested that some dimensions (and facets within dimensions) of brand personality are more relevant and descriptive of some brands than others. Future research might investigate this further and consider the influence of brand personality on quality perception, brand perception, purchase intention and consumer behavior, for example.

(3) The location of the manufacturing site is an important consideration for consumers as they develop their brand perceptions and appears to have an effect on the perceived personality of the car. Consistent with previous research, subjects in this study perceived a stronger brand personality for a developing country car manufactured in the developed country than the same car manufactured in the developing country. This suggests that developing country manufacturers entering the developed country markets might be well-advised to consider foreign direct investments to overcome the negative country of manufacturing effect on their own brands. This strategy has been followed in the U.S. by Toyota, Honda, and more recently Hyundai and KIA.

(4) The theoretical implication is that the country of origin of the brand influences the perceived brand personality of a product. Our results provide some novel insights, particularly in light of the fact that the Chinese car made in China was perceived to have a stronger brand excitement than the American car made in China. This may be due to the fact there are no Chinese cars currently available in the U.S. and the prospect is appealing and somewhat exciting. Another way to look at the results is that this might be in line with other studies (e.g., Johansson and Nebenzahl, 1986; Han and Terpstra, 1988) as we show that shifting the production of developed country car manufacturer to developing countries might be less appealing and hurt the brand perception and hence be less exciting. Future research should investigate this issue further to examine both the robustness of our result as well as possible explanations for it.

(5) Finally, we considered which of the two concepts (COB or COM) appear to exert the greater influence on the U.S. consumer brand personality perceptions. Our results indicate that the Chinese car made in the U.S. is perceived to be more sophisticated than the U.S. car made in China. This suggests interesting implications for automotive manufacturers from both developed and developing countries. For developed country automotive companies, shifting their production (COM) to developing countries and importing the cars back into their own country may have a negative effect on their brand. And while these cars are perceived to have a stronger brand personality than a developing country car made in the developing country, they are perceived as less sophisticated than a developing country car made in the developed country. Therefore, developed country automakers need to carefully assess the wisdom of outsourcing their production to developing countries if they intend to export them to developed countries. This might be especially important in the U.S. automotive market in light of the financial crisis American car manufacturers are currently facing which is already adversely affecting consumer

brand perceptions.

For developing country companies our results suggest that exporting their cars to the United States provides excitement for U.S. consumers, an observation that can be viewed as at least a positive start. However it will probably take a lot of time and resources to translate this excitement into brand awareness and effective purchasing intentions and actions. Furthermore, our results suggest that a Chinese car manufactured in the U.S. is perceived as being more sincere, competent, sophisticated and rugged than the same car made in China. Hence, Chinese and other developing country auto manufacturers might be well advised to undertake some FDI to enter developed markets such as the U.S. This strategy has already been followed by Toyota, Honda, and more recently Hyundai and KIA. KIA, for example, invested about USD 117 million in the US to establish a Tech Center in Michigan. One good example of a Chinese brand that has established itself in the United States is Haier. They produce products including refrigerators, air conditioners, washing machines, televisions, water heaters, personal computers, mobile phones and kitchen appliances. In 1994, Haier first entered the U.S. by exporting a niche product. In 1998 they formed a joint venture called Haier America and in 2001 Haier established a 40 million dollar industrial park and refrigerator factory in South Carolina. However, appliances and electronics are not cars. Still developing country auto manufacturers can learn from the internationalization and branding strategy of companies like Haier and can, over time, enter and establish themselves successfully in the very competitive U.S. market.

### **5.1. Limitations**

As with all research, there are some limitations that should be noted. First, the sample is small and homogenous, with 119 subjects. And while other studies of this nature have used

student samples (e.g. Pereira *et al.*, 2005), and smaller samples (e.g., Baker and Michie, 1995), the limitations of both must be noted. As such, the results are suggestive and not conclusive.

Second, this paper was based on an experimental stimulus and setting using only U.S. consumers and U.S. and Chinese cars. Some of our results might also be driven by US consumers' negative attitude towards foreign products which might be an alternate source for the results obtained.

Therefore, further research should not only take into account a broader base of respondents from other countries, but also the COB and COM effect from other developing countries like India, Brazil or Russia. Third, as our results show that there are similarities and differences between COB and COM, further research could decompose the COO construct into three or more components in order to further understand the similarities and differences. Fourth, it is important to carefully assess our use of the brand personality construct as our dependent measure. It is important to note that the items in the brand personality scale are not vector scale. That is to say, "more" of a characteristic does not mean "better" and "less" of a characteristic is not "worse."

Similarly, "more" of a characteristic does not suggest a higher purchase intention, only a stronger brand personality of that dimension. Fifth, we note that we did not collect measures of purchase intention, product attitude, ownership of a foreign car or consumer ethnocentrism. We recognize the potential that subjects' responses to the brand personality measure may have been influenced by their individual differences with regard to these variables. Finally, one could argue the lack of a fourth treatment group; a U.S. brand manufactured in the U.S., suggesting that it could be compared with the other three treatment groups. Also this might be rendered less relevant by the recent events in the U.S. automotive industry, it still would have provided an additional perspective that is lacking in our manuscript.

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Source measure	F-Value	Sig. Level	Mean Value		
			Chinese car <i>made in</i> China	U.S. car <i>made in</i> China	Chinese car <i>made in</i> U.S.
Brand sincerity	4.04	0.02*	2.84	3.10	3.21
Brand excitement	5.25	0.00*	2.85	2.26	2.67
Brand competence	1.61	0.20	2.63	2.75	2.93
Brand sophistication	5.48	0.00*	2.29	2.32	2.83
Brand ruggedness	4.35	0.01*	1.86	2.14	2.41

Note: \* deemed significant at the 0.05 level.

Table 1: MANOVA results: Univariate tests between subject effects

<i>Brand Dimension</i>	<i>COB/COM 1</i>	<i>COB/COM 2</i>	<b>Mean Difference</b>	<b>Standard Deviation</b>	<b>Sig.</b>
Brand sincerity	American car <i>made in China</i>	Chinese car <i>made in U.S.</i>	(0.11)	0.14	0.70
	American car <i>made in China</i>	Chinese car <i>made in China</i>	0.26	0.13	0.12
	Chinese car <i>made in U.S.</i>	Chinese car <i>made in China</i>	0.37	0.14	0.02*
Brand excitement	American car <i>made in China</i>	Chinese car <i>made in U.S.</i>	(0.41)	0.19	0.09
	American car <i>made in China</i>	Chinese car <i>made in China</i>	(0.59)	0.19	0.01*
	Chinese car <i>made in U.S.</i>	Chinese car <i>made in China</i>	(0.18)	0.19	0.62
Brand competence	American car <i>made in China</i>	Chinese car <i>made in U.S.</i>	(0.17)	0.17	0.56
	American car <i>made in China</i>	Chinese car <i>made in China</i>	0.12	0.16	0.73
	Chinese car <i>made in U.S.</i>	Chinese car <i>made in China</i>	0.30	0.16	0.18
Brand sophistication	American car <i>made in China</i>	Chinese car <i>made in U.S.</i>	(0.51)	0.18	0.02*
	American car <i>made in China</i>	Chinese car <i>made in China</i>	0.03	0.18	0.98
	Chinese car <i>made in U.S.</i>	Chinese car <i>made in China</i>	0.54	0.18	0.01*
Brand ruggedness	American car <i>made in China</i>	Chinese car <i>made in U.S.</i>	(0.27)	0.19	0.34
	American car <i>made in China</i>	Chinese car <i>made in China</i>	0.28	0.18	0.27
	Chinese car <i>made in U.S.</i>	Chinese car <i>made in China</i>	0.55	0.19	0.01*

Based on observed means.

**Note:** \* deemed significant at the 0.05 level.

Table 2: MANOVA results: Post hoc tests for country of origin

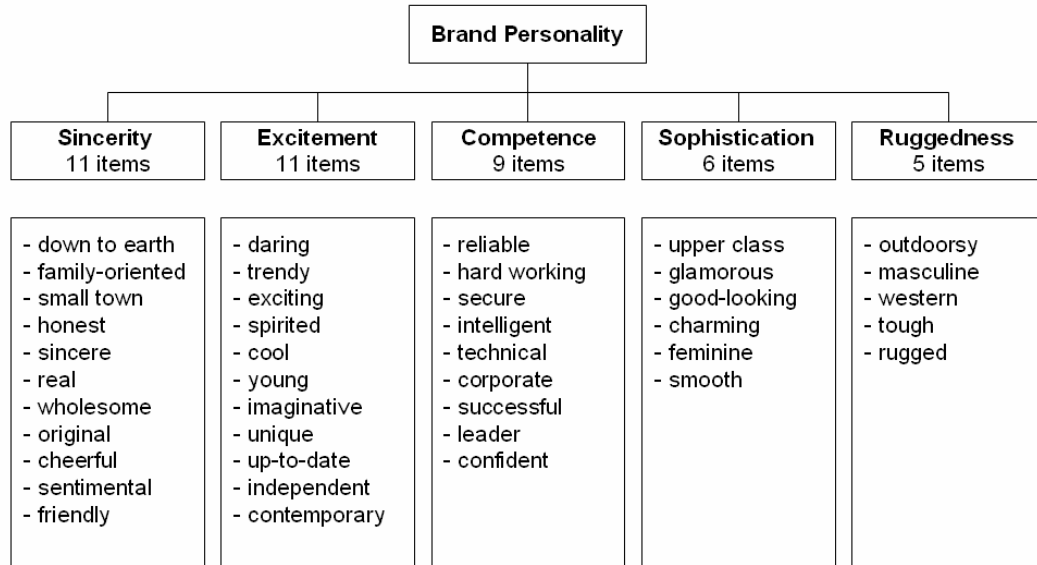


Figure 1: Brand Personality Dimensions and Facets

## CHINESE CAR



### FEATURED SPECIFICATIONS

- 2.4L 5-Speed Manual or 4-Speed Automatic Transmission
- Stainless Steel Single Exhaust
- Front and Rear Disc Brakes with ABS
- Front and Rear Seats with Anti-Submarining Cross Beam
- Energy Absorbing and Collapsible Steering Wheel
- Dual-drive Electric Power Steering
- Powered Windows, Locks, and Child Proof Anti-burst Locks
- Front Airbags with SMART/OCS System
- Side Airbags
- Remote Keyless Entry with Alarm System
- Air Conditioning
- AM/FM Single CD Audio System
- 16" Alloy Wheels