Chinese Consumers’ Perceptions Of Country Design, Assembly And Parts Capabilities: Does Country Considered Or Consumer Acculturation Matter?

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Abstract

Chinese consumers are facing a diverse range of choices in regards to products produced wholly or in part overseas or by overseas corporations based in China. This study examines how consumers from China, both residing at home and abroad, perceived capability of Germany, Japan, US and China in regard to three dimensions of country capabilities - design, assembly and parts/components. The findings show that consumers have different perceptions concerning country capabilities and that Chinese consumers residing overseas appear to have more positive perceptions of foreign countries’ capabilities.

Background

Numerous studies have demonstrated that the country-of-origin (COO) tends to generate bias in consumer product evaluations and purchase intentions (e.g., Kaynak et al. 2000; Au and Sha 2003). The concept of COO is concerned with how consumers perceive products sourced from a particular country (Chinen et al. 2000). This suggests that COO can play an important role in the formulation of manufacturing, marketing and investment strategies for multinational firms (Chinen et al. 2000), because the country-of-origin image can serve as a controllable extrinsic cue in the sense that sourcing and location decisions are made by the firm (Zhang 1996; Li et al. 2000).

Although studies of COO have been carried out for decades (Verlegh and Steenkamp 1999), a review of existing literature reveals several limitations from past research. Firstly, the majority of COO research have been conducted in developed countries mainly US, Canada and Europe (e.g., Zhang 1996; Wang and Chen 2004). Studies relating to developing or non-western countries, especially in Asian markets, remain relatively scarce although growing in number. Further, Ahmed and d’Astous (1999) have indicated the findings relating to western developed countries may not necessarily apply to developing countries due to the difference in market structures and consumer behaviour; this would be particularly true for a transitional economy such as China. Secondly, recent research has indicated that defining COO is becoming more complicated due to the widespread practice of global sourcing resulting in hybrid products (e.g., Tse and Gorn 1993; Samiee 1994 and Yagic 2001). Several countries are frequently associated with a single product, especially for products such as automobiles, computers and white goods (Tse and Lee 1993; Jaffe and Nebenzahl 2001).

Much of the research has generally found that COO information has some influence on consumer purchase processes. There are of course other factors that have been found to moderate the importance of country of origin. This includes ethnocentrism - consumers’ preference for home country products (Lantz and Loeb 1996; Watson and Wright 2000) - and consumers experience with international products and cultures (Rawwas et al. 1996; Suri and Kwon 2002), as well as acculturation to other cultures (Parameswaran and Pisharodi 2002).

China’s “open door” policy of the 1970’s has resulted in unprecedented economic reform (LaTour and Henthorne 1990). This includes a flood of foreign goods and investments (Li 1997; Peoples Review 2003) as well as increased exposure to western ideas (Li 1997).
Chinese consumers are also increasingly travelling and studying overseas. These factors have resulted in a broader awareness of foreign good.

This study aims to examine if differences exist in Chinese consumer perception of country capability across three components of country capabilities, that have been examined in the country of origin literature: country-of-design (COD), country-of-assembly (COA) and country-of-parts/components (COP), as well as whether Chinese consumers who are based outside China have different views to those in China. The latter variable is used as a proxy for acculturation. We recognise that this measure of acculturation is a limitation of this work, as there are many more sophisticated measures of acculturation, including; language spoken, media attitudes, social participation, cultural identity, etc.

**Country Capability**

According to Roth and Romeo (1992), “the concept of country quality is really what makes the COO effect take place”; while consumer perception of different capabilities drives different countries to produce high quality products (Roth and Romeo 1992; Johansson 1993). For example, most consumers are aware of Japan’s ability to produce sophisticated electronic equipment and therefore consumers are likely to have a higher evaluation of Japanese electronic products than products made in other countries (Tse and Gorn 1993). The image of country-of-origin enables consumers to predict the likelihood that a product manufactured in a certain country will have certain features or performance (Yu and Albaum 1999). The increased production of hybrid products in the marketplace means that products are often promoted as being designed in one country with components supplied by another country and manufactured in yet other country (e.g., Chao 1993; Jaffe and Nebenzahl 2001). Therefore, the investigation of how consumers’ perceive the capabilities of various countries needs to be expanded to include multiple country capabilities and how they inter-relate.

Indeed, researchers have investigated the effects of various COO sub-components (e.g., Tse and Lee 1993; Ahmed et al. 1997; Chao 1998) and found that consumers perceive industrialized countries, i.e. Japan, US and Germany, as being superior in terms of design, assembly and parts manufacturing capabilities and compared to newly industrialized countries, e.g. Mexico, Indonesia and China (Insch and McBride 1998; Ahmed and d’Astous 2001). Past research has suggested that consumers hold different perceptions of capabilities across countries. Hypotheses 1 is:

H1: Chinese consumers’ perception of a) design; b) assembly and c) parts/components capabilities will vary across countries being examined.

**Acculturation**

Acculturation can be defined as one’s culture is expected to become more and more like the dominant majority ethnic identity from the original ethnic identity (Quester and Chung 2001). There have been extensive studies that examine the impact of acculturation on marketing (Burton 2000), although few focus on country of origin related issues such as country capabilities. In many cases, acculturation looks at how consumers from one country adapt their attitudes and behaviours of a host culture (Dion and Dion 1996, Jamal and Chapman 2000, Suri and Manchanda 2001). Several works have examined aspects of how acculturation impacts on marketing (Burton 200, Seitz 1998, Steenkamp 2001), including issues such as information search (Quester et al 2001), price sensitivity (Suri and Manchanda 2001),
shopping behaviour (Gentry et al. 1995, Jamal and Chapman 2000, Ownbey and Horridge 1997, Xu et al. 2004) and personal influences (Kim and Kang 2001). It could be anticipated that adaptation of “foreign” views would also impact on consumers’ perceptions of countries’ design, production and assembly capabilities, and thus modify purchases (Ownbey and Horridge 1997, Xu et al. 2004). Such affects would of course possible be moderated by attitudes towards home and host countries in general, similar to ethnocentrism (Yagci 2001), although this is not included within this study. Hypothesis 2 states:

H2: Consumers, who have been acculturated (i.e. living overseas), will have different perceptions of a) design; b) assembly and c) parts/components capabilities to consumers who have not been acculturated,

We recognise that categorising consumers as acculturated or not, based on their residing in a foreign country or not is an over simplification and thus a potential limitation of the research. However, we suggest that those studying overseas would be “receptive” to trying new products and new ideas, which is one core component of acculturation (Schiffman et al. 1981).

Methodology

To measure country capability in regard to the three COO dimensions, Insch and McBride (1998) 14 items have been used that evaluate design, assembly and components/parts capabilities. The items used to evaluate China, Germany, Japan and US capabilities to produce durable goods (e.g. car or television) with respect to design, manufacture/assembly and parts/components quality were measured on 7-point interval scales ranging from 1 to 7.

Past research indicates that the COO affects tend to be product specific, while durable goods are likely to be affected by the source of origin (e.g. Liefflde 1993; Okechuku and Onyemah 1999). The rational for selecting these foreign countries is because car sales in China predominantly come from brands linked to these countries (Mu 2001, TRI 2003), with China being included as consumers “home” market products. As was discussed earlier, acculturation was defined based on where the sample was located, with those outside China being categorised as acculturated, which has been identified as a potential limitation of the research.

Data collection

A self-completion questionnaire was used to collect data. Chinese students studying a range of English and university programs in Australia were selected for the acculturated group of consumers. Approximately 150 surveys were distributed to these students and 133 usable completed surveys were collected. The non-acculturated sample comprised university students studying in China, through a program operated by an Australian university. This resulted in 283 returned surveys, with 272 being useable. Studies have reported there is no difference in responses between students and actual consumers (Liefeld 1993; Samiee 1994) and thus this is not a limitation of this work.

Analysis

MANOVA was used to determine if there are any variations in perceived capabilities based on the country being evaluated (China, Germany, Japan and the US), whether the respondent is acculturated (in Aus.) or not (in China) and the interaction between these two variables. We then examined where specific differences occur using an evaluation of paired comparisons of
perceived capability for each component between countries with a Bonferroni adjustment to compensate for multiple comparisons. In addition, we also examined whether differences in perceptions of capabilities exist for each component within each country based on whether the respondent is acculturated or not.

Table 1. Summary of MANOVA Results: The impact of country, acculturation and the interaction **Statistically Significant (p < .05)

<table>
<thead>
<tr>
<th>Source</th>
<th>Factor (Capability)</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Design</td>
<td>21490.683</td>
<td>3</td>
<td>7163.561</td>
<td>150.690</td>
<td>.000**</td>
</tr>
<tr>
<td></td>
<td>Assembly</td>
<td>4661.858</td>
<td>3</td>
<td>1553.953</td>
<td>80.264</td>
<td>.000**</td>
</tr>
<tr>
<td></td>
<td>Parts</td>
<td>4657.662</td>
<td>3</td>
<td>1552.554</td>
<td>139.890</td>
<td>.000**</td>
</tr>
<tr>
<td>Acculturation</td>
<td>Design</td>
<td>747.186</td>
<td>1</td>
<td>747.186</td>
<td>15.717</td>
<td>.000**</td>
</tr>
<tr>
<td></td>
<td>Assembly</td>
<td>480.885</td>
<td>1</td>
<td>480.885</td>
<td>24.838</td>
<td>.000**</td>
</tr>
<tr>
<td></td>
<td>Parts</td>
<td>203.784</td>
<td>1</td>
<td>203.784</td>
<td>18.362</td>
<td>.000**</td>
</tr>
<tr>
<td>Country * Acculturation</td>
<td>Design</td>
<td>690.510</td>
<td>3</td>
<td>230.170</td>
<td>4.842</td>
<td>.002**</td>
</tr>
<tr>
<td>Assembly</td>
<td>314.875</td>
<td>3</td>
<td>104.411</td>
<td>5.421</td>
<td>.001**</td>
<td></td>
</tr>
<tr>
<td>Parts</td>
<td>121.232</td>
<td>3</td>
<td>40.411</td>
<td>3.641</td>
<td>.012**</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Summary of mean values for each dimension in both groups of Chinese respondents (Sig. at p<.05 with appropriate Bonferroni adjustment, N.S. = Not Significant)

<table>
<thead>
<tr>
<th>Dimensions (Acculturation paired t-tests)</th>
<th>Sample</th>
<th>Mean China (a)</th>
<th>Mean Germany (b)</th>
<th>Mean Japan (c)</th>
<th>Mean US (d)</th>
<th>Significant Country Comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Capability</td>
<td>No (China)</td>
<td>29.3272</td>
<td>36.8088</td>
<td>36.9706</td>
<td>38.0037</td>
<td>ab, ac, ad, bc</td>
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<tr>
<td></td>
<td>Yes (Australia)</td>
<td>29.4060</td>
<td>37.6692</td>
<td>40.7368</td>
<td>39.0827</td>
<td>ab, ac, ad</td>
</tr>
<tr>
<td>T-test</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assembly Capability</td>
<td>No (China)</td>
<td>17.6507</td>
<td>21.5735</td>
<td>19.6176</td>
<td>20.5551</td>
<td>ab, ac, ad</td>
</tr>
<tr>
<td></td>
<td>Yes (Australia)</td>
<td>17.2632</td>
<td>22.9624</td>
<td>21.7594</td>
<td>22.0526</td>
<td>ab, ac, ad, bc, bd</td>
</tr>
<tr>
<td>T-test</td>
<td>N.S.</td>
<td>Sig.</td>
<td>Sig.</td>
<td>Sig.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parts/Components Capability</td>
<td>No (China)</td>
<td>12.4779</td>
<td>16.7436</td>
<td>15.1176</td>
<td>15.7500</td>
<td>ab, ac, ad, bc, bd</td>
</tr>
<tr>
<td></td>
<td>Yes (Australia)</td>
<td>12.3158</td>
<td>17.6541</td>
<td>16.5714</td>
<td>16.5714</td>
<td>ab, ac, ad, bc, bd</td>
</tr>
<tr>
<td>T-test</td>
<td>N.S.</td>
<td>Sig.</td>
<td>Sig.</td>
<td>Sig.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results

Table 1 reports the MANOVA results, which identify that Chinese consumers’ perception of each of the components of country capability- design, assembly, and parts components – statistically differ based on the country being examined, whether respondents are acculturated, as well as the interaction between country being examined and acculturation. The results suggest that the country under consideration and acculturation appear to impact on views in regards to the three components. In addition, there is a statistically significant interaction between country examined and acculturation.
In Table 2 paired comparisons between the each capability across countries are reported as well as whether there are statistical differences between the acculturated and non-acculturated respondents. The Bonferroni adjustment was used to compensate for multiple comparisons and the required significance level reduced from \( p<.05 \) to \( p<.0125 \) for the comparisons between the Chinese and Australian respondents (i.e. \( .05/12 \)) and from \( p<.05 \) to \( p<.003 \) for the comparisons between the four “supply” countries within a respondent group (i.e. \( .05/18 \)).

There are differences in how acculturated respondents view capabilities in regard to design (1 out of 4 countries), assembly (3 out of 4 countries) and parts (3 out of 4 countries). In all those cases Chinese respondents in Australia have more positive views than those in China. An examination of comparisons of how respondents perceive countries indicates that both acculturated and non-acculturated respondents view China least positively. This supports the view that Chinese consumers display unfavourable rating for their home country in terms of product quality and country image but favourable stereotyping of products from developed countries (LaTour and Henthorne 1990; Zhang 1996; Li et al. 2000).

**Discussions and Conclusions**

Our findings suggest that there are differences in views of country capabilities. This seems to be influenced by whether a consumer is acculturated to foreign environments. Thus, we cannot reject H1 and H2. It may be that exposing consumers from China to westernised customs or political ideologies influences how they view products produced in China and foreign countries. This is consistent with Johansson’s view (1989) that more information and experience with a country will impact on how individual view its products. This might explain why acculturated Chinese respondents were more positive about foreign countries’ capabilities, although they were not always less positive about China’s capabilities. This later finding might suggest that some of those overseas seek to hold on to their Chinese identity, which has also been found in past research (Schiffman et al. 1981).

Based on our research findings, it is suggested that a closer contact or direct interaction with other countries might change the perception of country image of some Chinese consumers. Although other research suggests that this “shift” in thinking takes time (Dion and Dion 1996; Chung and Pysarchik 2000), it may have a more significant impact on consumers acculturating to cultures significantly different to their own. Such changes in views may then translate into shifts in consumer behaviour as well, i.e. a greater preference for specific types of ‘foreign’ goods. As Chinese consumers are exposed to more western ideas, it would seem that there would be increased potential to leverage “foreign” involvement. Hence, there will possibly be an ongoing preference for non-Chinese products. The specific countries to be leveraged will likely depend on the perceived capabilities and there may be a greater preference for western developed countries.

There are several limitations with this work. Respondents were university students enrolled in Australian educational programs and thus the non-acculturated sample might be positively disposed to foreign products (at least education). Acculturation was based on location of the respondent rather than more complex measures related to cultural assimilation as has been suggested in the literature. Other variables could have been included such as ethnocentrism, which would also theoretically impact on how consumers view their own and other countries. Lastly, we did not explore generalised purchase intentions, which one might anticipate would be affected by perceptions of country capabilities.
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