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The impact of consumer ethnocentrism and country of origin sub-components for high involvement products on young Chinese consumers’ product assessments

Chui Yim Wong, School of Hospitality, Tourism and Marketing, Victoria University, Melbourne, Australia

Michael J. Polonsky, School of Management and Marketing, Deakin University, Burwood, Australia

Romana Garma, School of Hospitality, Tourism and Marketing, Victoria University, Melbourne, Australia

Abstract

Purpose – The purpose of this paper is to examine the effect of country of origin (COO) sub-components (i.e. design, assembly and parts), as well as the extent to which consumer ethnocentrism tendencies interact with these COO sub-components for young Chinese consumers with regards to product quality assessments and purchase intentions.

Design/methodology/approach – A 2 × 2 × 2 factorial experimental design was used to examine the effects of the three sub-components of COO with two levels of sourcing location – Home (China) and Foreign (Germany), for two high involvement products (an automobile and a digital camera). Chinese students in China represented the sample of 272 respondents. MANOVA was used to examine the direct effects and interactions of the three COO components, as well as ethnocentrism, measured using the CETSCALE.

Findings – It was found that the three COO sub-components did not influence young Chinese consumers’ evaluation of product quality or purchase intentions. In addition, consumers’ level of ethnocentrism also did not have a direct effect on perceived product quality or purchase intentions. There was only one statistically significant interaction effect between ethnocentrism and country of parts for one of the two products. As such, COO dimensions and young Chinese consumers’ ethnocentrism appears to have limited influence on their assessments of product quality or purchase intentions. This may occur because young Chinese consumers perceive that hybrid products are the norm for high involvement products in China as these products are all these consumers have experienced.

Originality/value – The findings of this research dispute the commonly held belief and evidence that sub-components of COO have an impact on the perceptions of product quality and purchase intentions. Young Chinese consumers may be different to consumers from western countries because they have been extensively exposed to hybrid products. Given the size and growth potential of China, young Chinese are an important, under-researched segment within the Chinese market.
Introduction

Global trade liberalization has increased the relative convergence of economic ideology throughout the world (Shankarmahesh, 2006). With globalization consumers are increasingly exposed to products from different countries and as such, the role of country of origin (COO) cues, that is, how consumers perceive products from a country (Elliott and Cameron, 1994; Tse and Gorn, 1993) are more salient. Undoubtedly, COO cues potentially have a more complex meaning under globalization compared to traditional “export” focused international trade, given that fewer products are designed, manufactured, assembled, branded and owned by one country (Baker and Ballington, 2002). This may mean that in some markets consumers only experience hybrid products, i.e. those that have multiple COO components (Chao, 2001; Ettenson and Gaeth, 1991; Li et al., 2000). The research on COO has recognized the complexity of origin by expanding the discussion from one overall COO concept, to consider aspects of country of origin separately. These aspects include country of design (COD) (Ahmed and d’Astous, 2007), country of assembly (COA) (Brodowsky, 1998), country of manufacture (COM) (Okechuku and Onyemah, 1999) and country of brand (Pecotich and Rosenthal, 2001).

Despite the extant research on COO, the literature identifies two major shortcomings. First, many past studies are wholly based on the “made-in” label, also referred to as COM to investigate consumer behavior toward products from different countries. Only a minority of studies take into account global sourcing which involves multiple sourcing locations/countries and therefore transforms COO into a multifaceted construct (Ahmed and d’Astous, 2007; Chao, 1993; Insch and McBride, 2004; Li et al., 2000; Pecotich and Ward, 2007; Samiee, 1994), although research into more complex constructions of COO are emerging. Second, the majority of COO studies have been conducted in developed countries although works in developing countries do exist (Ahmed and d’Astous, 2007; Kaynak and Hyder, 2000; Kaynak and Kara, 2002; Pecotich and Ward, 2007; Piron, 2000; Wang and Chen, 2004; Zhang, 1996). COO research in developing or non-western countries, especially Asian markets, remains less explored. Consequently, our knowledge of COO effects on consumer behavior in other parts of the world is less developed.

While there is a substantial body of research on COO it has traditionally emerged out of the USA, however, there has been a call to explore COO from other perspectives (Balabanis and Diamantopoulos, 2004). This might help to partially explain the growing research investigating COO outside the USA in recent times (Kaynak et al., 2000; Pereira et al., 2002). Research investigating COO in Asian countries is growing with studies exploring markets in Taiwan (Lin and Chen, 2006), Hong Kong (Yu and Albaum, 1999) and China (He, 2003; LaTour and Henthorne, 1990; Wang and Chen, 2004). Many of these studies that explored COO and Asian consumption have used young people as their sample (Chan, 2006, Gong et al., 2004; Wang et al., 2004; Parker et al., 2004). The increased general interest of young consumers in Asia is particularly important (Gong et al., 2004) especially as Asia is growing more rapidly then the rest of the world and according to the World Bank, GDP in the Asia Pacific region represents 6.8 per cent of world GDP (World Bank, 2007).

Without doubt, one of the critical Asian economies is China, which is presently one-sixth as large as the USA, and is projected to double by the year 2020 (World Bank, 2007). It is also
considered to be one of the most attractive consumer goods market in the world (He, 2003; Kaynak and Kara, 2000; People’s Daily, 2003) with young consumers in particular being a critical target market (Chan, 2006; Gong et al., 2004). Chinese economic reform has brought a flood of foreign goods and investment into the country along with increased exposure to western ideas (Li, 1997; People’s Review, 2003). This transformation has enabled Chinese people to interact with the international community. Therefore, international marketers seeking to tap into this market require an understanding of the relative effects of COO on product evaluation and purchase intentions, specifically when assessing product-sourcing issues.

Exploring how young Chinese consumers and others in emerging Asian markets, view products from their home and foreign countries is therefore important (Han, 1988; Wang and Chen, 2004), however, consumers’ attitudes are not simply based on the COO of goods. A number of studies have documented that consumers have a bias against foreign products, in favor of domestic products (Chung and Pysarchik, 2000; Peterson and Joilert, 1995; Verlegh and Steenkamp, 1999). Therefore, consumers’ level of ethnocentrism is an important consideration in COO studies (Shankarmahesh, 2006; Kaynak and Kara, 2002).

This study examines the extent to which varying the COD, COA and COM of home and foreign products affects young Chinese consumers’ product quality perceptions and purchase intentions for high involvement products. It also explores the extent to which consumers’ level of ethnocentrism affects their product quality perceptions or purchase intentions for home goods and how this interacts with the dimensions of COO.

The remainder of the article is organized in the following way. First, we review the COO literature specifically highlighting the transformation of the COO concept from a single construct to a construct with multiple sub-components, and its effect on consumer behavior, namely, its impact on product quality perceptions and purchase intentions. Second, we examine the role of consumer ethnocentrism on the perceptions of product quality and purchase intentions of young Chinese consumers. Third, we discuss the empirical study used to explore the relationship between the COO dimensions and consumers’ level of ethnocentrism on their assessments of product quality and purchase intention. In doing this we have drawn on available literature for support. Fourth, we discuss our findings and offer some future research directions.

Literature review

Transformation of the COO

Globalization has become an imperative in today’s competitive marketplace with firms often outsourcing various parts of their production and operations to different countries in search of the lowest possible cost and expertise (Chao, 2001). Consequently, researchers have found that defining COO has become more complex given the rise in the practice of global production. This phenomenon has led to products being designed in one country with component parts supplied by another country, and manufactured in yet another country (Ettenson and Gaeth, 1991; Jaffe and Nebenzahl, 2001; Tse and Lee, 1993). For example, General Motors (GM) cars could be designed in Italy, have the engine and transmission...
components produced in Japan and be assembled in Mexico (Jaffe and Nebenzahl, 2001).
Such multinational production has generated a vast number of hybrid goods not only in the
automobile sector but also many other product categories, especially electronic items such
as TVs or computers (Chao, 2001; Ettenson and Gaeth, 1991; Lee et al., 2001; Li et al., 2000;
Tse and Lee, 1993).

The practice of global sourcing has motivated several researchers to make distinctions
between the countries where products are manufactured, designed, or where
parts/components were made (Ahmed and d’Astous, 2001, 2007; Chao, 1993; Tse and Lee,
1993). While various studies have confirmed that each of these activities have different
levels of influence on consumer perceptions of product quality (Ahmed and d’Astous, 2001;
Brodowsky, 1998; Chao, 1998; Insch and McBride, 1998), it is becoming clear that a
decomposition of the COO construct into sub-components, namely COD, COA and country
of parts/components, is essential given the current global marketplace.

Chao (1993) was one of the first to divide the COO construct into multiple dimensions:
COA/COM and COD. He found that both criteria were important, although there was no
interaction effect between the two COO components. Tse and Lee (1993) decomposed the
COO construct into components origin and assembly origin, and found both were important
in terms of consumer behavior. Insch and McBride (1998) further extended the COO
construct to that of country of components/assembly (COA) in addition to COD and country
of production (COP). They found that all three COO dimensions varied based on the type of
product considered. This work was followed by others exploring the three dimensions of
COD, COA and COP, including Ahmed and d’Astous (2001), Chao (2001), Insch and McBride
(2004), Li. et al. (2000) and Ahmed and d’Astous (2007). The research generally supports the
view that consumers evaluate the COO sub-components differently depending on the
products and countries being examined (Insch and McBride, 1998).

The effect of COO

The impact of COO on consumer behavior has been examined in the business and marketing
literature for many years (Al-Sulaiti and Baker, 1998; Papadopoulos and Heslop, 2002;
Dinnie, 2004). These empirical studies have shown that COO can affect consumers in a range
of ways including perceived social status, store or product choice, and perceived risk (see Al-
Sulaiti and Baker, 1998; Dinnie, 2004; Peterson and Jolibert, 1995; Verlegh and Steenkamp,
1999, for comprehensive reviews of the literature). The majority of studies have explored
how COO effects consumers’ perception of a product’s quality, consumers’ attitudes toward
a product or their purchase intentions (Brodowsky, 1998; Chao, 1998; Chinen et al., 2000;
Huddleston et al., 2001; Kaynak et al., 2000; Liefeld, 1993; Li et al., 2000; Papadopoulos,
1993; Pecotich and Rosenthal, 2001). While there has been extensive research exploring
how COO effects consumer attitudes, the body of research has been criticized for
sometimes being contradictory, atheoretical and weakly supported by empirical evidence
(Baker and Ballington, 2002; Peterson and Jolibert, 1995).

Past studies have indicated that the influence of COO exists in both product assessment and
decision making processes (Balabanis and Diamantopoulos, 2004; Bilkey and Nes, 1982;
LaTour and Henthorne, 1990; Jaffe and Martinez, 1995; Reierson, 1966; Solomon, 2004;
Verlegh and Steenkamp, 1999; Zain and Yasin, 1997). Gurhan-Canli and Maheswaran (2000) have gone farther to suggest that COO can influence cognitive responses, product evaluations and broader beliefs about products. All these effects may exist because COO cues give information, which consumers then use to predict the likelihood that a product manufactured in a certain country, will have certain desirable features (Baker and Ballington, 2002, Roth and Romeo, 1992; Yu and Albaum, 1999). Moreover, a large number of studies have pointed to a systematic bias in favor of products from developed countries such as Germany, USA, Japan or Australia, while consumers are unfavorable of products from developing countries such as Indonesia, Vietnam or China (Ahmed and d’Astous, 2007; Wang and Chen, 2004). The positive stereotype held by consumers toward developed countries is possibly understandable since these countries are perceived as having high levels of economic and technological development (Ahmed and d’Astous, 2001, 2007; Chinen et al., 2000; Hsieh, 2004; Huddleston et al., 2001; Wang and Lamb, 1983). As such, consumers usually feel that products from highly industrialized countries offer better quality and performance. This also helps to explain why consumers respond differently toward identical products coming from various countries. A conceptual framework is presented in Figure 1, which highlights the link between the sub-components of COO and consumers’ assessment of product quality and purchase intentions and includes consumer ethnocentrism (discussed below), which has also been shown to effect how consumers assess products.

Some researchers also suggest that the level of importance consumers place on COO depends on the type of product being examined (Ahmed and d’Astous, 2001; Balabanis and Diamantopoulos, 2004; Lieflé, 1993; Zhang, 1996). The majority of studies have confirmed that products with high complexity or luxury items such as cars, personal computers, cameras, VCRs, TVs and home theatre systems may be more prone to be affected by where the product is made (Ahmed and d’Astous, 1993; 2001; Lieflé, 1993; Okechuku and Onyemah, 1999; Piron, 2000), as these products involve greater consumer expenditure or are seen as more risky.

Highly industrialized countries such as Japan, USA or Germany tend to be evaluated as more superior in the case of design capabilities compared with assembly/manufacture and components/parts aspects (Ahmed and d’Astous, 2001, 2007; Insch and McBride, 1998). While developing countries (e.g. Mexico, Indonesia and China) are generally viewed as inferior across design, assembly and parts ability but they are perceived somewhat less negatively in regard to the capability of assembly and parts (Ahmed and d’Astous, 2001; Insch and McBride, 1998).

Since past studies have revealed that the importance of the three COO dimensions are varied by product types (Tse and Lee, 1993; Insch and McBride, 1998), this suggests even if a product is not sourced from a country with a favorable image across all the COD, COA and COP sub-components, it is expected that the negative product rating due to one sourcing location (e.g. assembled in Malaysia) possibly can be overcome by another favorable sourcing location (e.g. designed in Japan). For instance, COD found in previous studies tended to be more important than COA for quality evaluations in TV sets (Li et al., 2000). In order words, if a TV is designed and assembled in Mexico, consumers may hold negative perceptions toward such a product. However, this negative rating probably can improve if it
is associated with Japanese design because consumers seem to place more concern on COD over COA in product assessment. The interaction of unfavorable assembly location by favorable design location may reduce negative evaluation due to negative assembly countries. Based on this, it further supports that consumers do make a cognitive distinction between the COO sub-components. However, in the literature there is no generalized hypothesized ordering of COO dimensions in terms of their importance on consumer views, nor are there hypothesized directions in regards to interaction effects.

As such we propose the following hypotheses:

\[ H1a \] Consumer perceptions of product quality will be influenced by home and foreign: (1) COD, (2) COA, and (3) COP. \[ H1b \] Consumer purchase intentions will be influenced by home and foreign: (1) COD), (2) COA, and (3) COP. \[ H2 \] There will be two way and three way interaction effects between: (1) COA, (2) COD and (3) COP in regards to consumers’ (a) perceptions of product quality and (b) purchase intentions.

For \[ H1a \] and \[ H1b \], based on the literature it would be assumed that young Chinese consumers will be more positive toward goods with foreign COO dimensions (i.e. Germany). We have not proposed a directional effect for the interaction between the COO dimensions (two or three way interactions). Overall, we would propose that in cases where the three COO dimensions were from the foreign country, young Chinese consumers’ assessments would be highest and assessments in situations where the three COO dimensions are from the home country would be lowest. This research does not explore the relative importance of the three COO dimensions. Thus, young Chinese consumers’ perceptions of hybrid products (i.e. where at least one COO dimension is from the home country and one from the foreign country) will fall in between.

**The role of consumer ethnocentrism**

Consumer ethnocentrism focuses on the appropriateness and morality perceived when purchasing foreign goods, as well as consumer loyalty to domestically produced goods (Shimp and Sharma, 1987). Lantz and Loeb (1996, p. 376) assert that, “ethnocentrism is the term which has often been applied to the home buying portion of the COO effect”. Consumers with high levels of ethnocentrism tend to emphasize the positive aspects of domestic products and discount the virtues of foreign made items (Rawwas et al., 1996), and are also more likely to purchase local products (Acharya and Elliott, 2003; Balabamis and Diamantopoulos, 2004; Shoham and Brenčič, 2003; Suh and Kwon, 2002; Watson and Wright, 2000). Shankarmahesh’s (2006) review of the literature on ethnocentrism supports these views as he identified that previous research has found that ethnocentrism affects consumers’ attitudes toward foreign product’s quality, as well as purchase intentions. Sharma et al. (1995) revealed that consumer ethnocentrism might, in fact, result in an overestimation of product attributes and overall quality of domestic products as well as an underestimation of the quality of foreign products. The theoretical underpinning of this behavior can be traced to Sumner’s (1906) general construct of ethnocentrism in which “the view of things in which one’s own group is the center of everything, and all others are scaled and rated with reference to it” (p. 13). On the basis of past studies, it is evident that
ethnocentrism does impact on consumer attitudes and behavior in regards to local versus foreign made products (Balabanis and Diamantopoulos, 2004; Pecotich and Rosenthal, 2001; Shankarmahesh, 2006; Wang and Chen, 2004; Yagci, 2001). However, most of these studies have generally not been examined in developing markets such as China.

Several studies have extended the research of ethnocentrism by exploring how this affects the constructs of COD, COA and COP (Acharya and Elliott, 2003; Brodowsky, 1998; Pecotich and Rosenthal, 2001; Wong et al., 2005). Brodowsky (1998) found that individuals with high levels of consumer ethnocentrism expressed positive beliefs and attitudes toward buying products that are locally designed and assembled. Pecotich and Rosenthal (2001) also found that ethnocentrism had a direct effect on consumers views in regards to price and purchase intentions, but not product quality, as well as a varying interaction effect with COO dimensions. This is somewhat consistent with Acharya and Elliott (2003) who found a weak relationship between consumer ethnocentrism and the quality perception of domestically designed products, but a strong relationship for products domestically assembled and manufactured.

The examination of ethnocentrism across the three COO sub-components has expanded our knowledge of how ethnocentrism might interact with the effect of various COO dimensions. However, the inconsistent results found in earlier studies highlight that further studies are needed to investigate the influence of consumers’ ethnocentrism tendencies associated with COD, COA, and COP. Based on the above discussion of ethnocentrism, the following hypotheses are proposed:

**H3.** There will be no difference in how consumers view products based on their level of ethnocentrism alone, in regards to (1) perceptions of product quality and (2) purchase intentions.

**H4.** Young Chinese consumers with high levels of ethnocentrism will have more positive assessment of product quality, where the (1) COD; (2) COA and (3) COP is local (Chinese), i.e. there is an interaction between ethnocentrism and each of the COO dimensions.

**H5.** Young Chinese consumers with high levels of ethnocentrism will have more positive purchase intentions, where the (1) COD; (2) COA and (3) COP is local (Chinese), i.e. there is an interaction between ethnocentrism and each of the COO dimensions.

**H6.** Young Chinese consumers with high levels of ethnocentrism will have more positive purchase intentions across three and four-way interactions among (1) COD; (2) COA and (3) COP, when there is local COO components for both (a) perceptions of product quality and (b) purchase intentions.

**Methodology**

This study used a full factorial (laboratory) experimental design to explore the issues discussed above. This approach is prevalent in many COO studies, especially research involving hybrid products (e.g. Acharya and Elliott, 2003; Brodowsky, 1998; Chao, 1998; Insch and McBride, 1998, 2001; Pecotich and Ward, 2007). This experimental design was deemed appropriate as it enables the measurement of the effects of two or more independent variables at various levels and allows for interactions between variables (Bordens and Abbott, 2002; Malhotra et al., 2002, Wason et al., 2002). Within this study, a 2 × 2 × 2 factorial design was used to test each of the three COO sub-components, with two
countries examined – China (the home country) and Germany (the foreign country). Hence, eight treatment scenarios are examined. As indicated earlier, the COO effect is more likely to occur with high involvement products (Ahmed and d’Astous, 1993, 2001; Insch and McBride, 2004; Okechuku and Onyemah, 1999; Piron, 2000). Thus, two high involvement products, namely automobiles and digital camera were each examined (i.e. total of 16 scenarios).

Each respondent was randomly assigned into two of the eight different treatments, with a scenario for an automobile and digital camera. The scenario presented a photo of the product and a price that was consistent with current Chinese prices for entry level products (see Appendix). This was done to ensure that price assessments were not undertaken by consumers. Brands of products were not included in the photographs or stimuli, to ensure that this factor was not considered by consumers. There was a brief description of the product in which the three COO dimensions were varied. The appendix provides the stimulus used for each of the products. In addition to the picture, price and description of COO characteristic, information on basic features was also provided, which has been done in other studies, such as Lee et al. (2005). The stimuli used in the experimental design allowed the researchers to focus on the three COO dimensions and control other product factors (brand, price, etc.) that might influence consumers’ assessments.

The products selected have relevance to Chinese consumers, which is the focus of this paper. The automobile market is growing rapidly and over 70 per cent of Chinese urban households were planning to buy cars (Xinhua, 2000). COO literature has also extensively used automobiles (e.g. Ahmed and d’Astous, 1993, 2001; Lawrence et al. 1992; Okechuku and Onyemah, 1999). German–Chinese automobiles are the largest sellers in China (ARA, 2003), with German firms being the early foreigner investors in the Chinese market (Liu and Deng, 2003; Wattanavitukul, 2002). Digital cameras are also highly demanded in China, with sales growing at 120 per cent in 2002 (TRI, 2002). While cameras have not been used in other studies, electronics goods have been explored (e.g. Ahmed and d’Astous, 2007; Insch and McBride, 2004). Thus, while purchase decisions for digital cameras are not as complex or expensive as automobiles, they generally require high involvement and have also been found to indicate a level of material success in China (Anderson and He, 1998).

In regards to the two countries selected, China was the home product market given the study was undertaken in China. Germany was selected as the foreign country as it has been an active trading partner with China, especially in the automobile market. In addition, German firms have invested in over 2,000 projects in China over the last two decades (People’s Daily, 2000).

**Ethnocentrism**

To explore ethnocentrism, we used Shimp and Sharma's (1987) original CETSCALE. Respondents are asked to respond to a set of 17 statements, which assessed consumers ethnocentric tendencies, using a 7-point scale (1 = strongly disagree to 7 = strongly agree). The 17 items were aggregated to form a total ethnocentrism score for each respondent. This scale has been used extensively in the COO literature (e.g. Balabanis and Diamantopoulos, 2004; Wang and Chen, 2004; Yagci, 2001). Pereira et al. (2002)
demonstrated that the CETSCALE is uni-dimensional and possesses internal consistency and reliability among Chinese respondents. The CETSCALE is deemed reliable in this study which produced an acceptable alpha value of 0.88.

A mean split of the data was used to classify respondents as either high or low ethnocentric consumers. This approach has been used elsewhere in the COO literature (Shimp and Sharma, 1987). Within this study the mean CETSCALE score was 56.25 and the SD is 14.6. This is similar to results in other countries in the Asia Pacific such as Australia, where the mean CETSCALE value has been reported to be 56.31 (Acharya and Elliott, 2003), and Taiwan, where the average level of consumer’s ethnocentrism is 56.1 (Pereira et al., 2002). Demographic information on respondents was also collected, including whether the respondent or a family member owned an automobile or digital camera.

**Dependent variables**

Two dependent variables were used in this study: product quality and purchase intentions. Respondents were required to make product quality judgments using four items drawn from Chao (1998) using a seven-point semantic differential scale. These included consumers’ perceptions of: workmanship (poor to excellent); durability (not durable to very durable); reliability (not reliable to very reliable) and overall quality (poor quality to excellent quality). Chao (1998) had explored these dependent variables in regards to perceptions of country of design, manufacture and components and thus the context was similar to this study. This study found that the product quality measure was reliable in both product contexts, with an alpha of 0.86 for the automobile survey and 0.88 for the camera survey.

A seven-point single item scale was used to measure future purchase behavior, where respondents were asked to indicate their purchase intention from very unlikely to purchase to very likely to purchase. This measure was used by Chao (1998) and other COO studies (Okechuku and Onyemah, 1999; Wang and Chen, 2004).

**Analytical tools used**

To test the seven hypotheses, we undertook MANOVA, which has been extensively used in past COO and/or ethnocentrism studies (Brodowsky, 1998; Insch and McBride, 2004; Jaffe and Martinez, 1995; Lee et al., 2005; Pecotich and Rosenthal, 2001; Pecotich and Ward, 2007; Rawwas et al., 1996). MANOVA was also selected as it allows for the detection of the main effect of individual independent variables and the interaction effect between different independent variables under a given experimental situation (Hair et al., 1995; Tabacknick and Fidell, 2001). In cases where statistical differences were identified, we undertook an examination of mean differences to determine the direction of these differences.

**Survey development and testing**

After the survey was developed in English it was translated into Chinese and then back translated into English to ensure the items explored covered the intended issues (Ahmed and d’Astous, 2007; Insch and McBride, 2004; Pereira et al., 2002). The survey was then
pretested with 50 Chinese students based in Australia taking an English course. These individuals had only recently arrived in Australia. Given that research suggests that acculturation takes several years (Chung and Pysarchik, 2000; Dion and Dion, 1996), these Chinese students in Australia were deemed to be representative of the students in China. The pretest students were asked not only to complete the survey but also to assess the instrument for clarity and phrasing. No substantial design issues were identified in this process. Reliability testing was undertaken on the product quality and ethnocentrism construct in the pretest, with both having acceptable alpha levels (0.89 and 0.88, respectively).

**Data collection**

Data for the main study was collected using a questionnaire that was administered to respondents using the “drop off” method, a technique commonly used in COO studies (Ahmed and d’Astous, 1993; Balabanis and Diamantopolous, 2004). A total of 320 questionnaires were distributed to Chinese students studying in an Australian business program taught in conjunction with a Chinese University in Northeast China. The usable response rate was 85 per cent (i.e. 272 completed surveys). Similar types of student samples have been used in previous COO studies (Bilkey and Ness, 1982; Crnjak-Karanovic et al., 2005; Peterson and Jolibert, 1995), hence the sample is deemed appropriate. Some researchers have been concerned that student-based samples may produce biased findings, which limits the level of applicability in actual consumers (Liefeld, 1993; Peterson, 2001; Samiee, 1994). However, in their meta-analysis of the COO literature, Verlegh and Steenkamp (1999) identified that in studies using student samples there were no statistically different effects as compared to those identified in studies using representative consumer samples. Thus, the problems associated with using student samples identified in more generalized research (i.e. Peterson, 2001) do not appear to be an issue in COO studies.

Additionally, this study focuses on young Chinese consumers rather than Chinese consumers generally and thus university students would be more representative of this specific group. As was identified earlier in China, 18-34 year olds are the most dynamic consumer segment (DSMR, 2001; Gong et al., 2004; Li, 1997). The one child policy has resulted in these “Little Emperors” (DSMR, 2001) having significant influence over their family's consumption behavior such as brand choice, shopping location, information access, entertainment programs and family fashion as well as creating a high demand for household goods (DSMR, 2001). Young Chinese consumers’ behavior has also been explored in other studies by sampling university students in China (Fan and Xiao, 1998). As such, a student sample is even potentially more applicable in China than other countries.

**Sample characteristics**

All respondents were Chinese university students, who were enrolled in an Australian University program based in China. Table I provides the demographic characteristics of the sample. As the sample was university students it was not expected that there would be a wide age variation. The average age of respondents was 21.3 years with a range between 19 and 24. Sixty-eight per cent of the respondents were female. The majority (74.3 per cent) of students came from relatively wealthy families, i.e. that had more than double the average
Chinese family income of 15,000 Yuan (World bank, 2007), which would be expected given they are undertaking a university program through a foreign private provider. In terms of family ownership of products being examined, 38 per cent owned cars, which again is high reflecting the economic status of the families. With respect to digital cameras, 34 per cent owned a digital camera, but this may not have included those whose phone incorporated a camera, which was not explored.

Ethnocentrism is technically not a demographic variable, although it does describe characteristics of the sample. As was mentioned earlier, the mean CETSCALE score was 56.25 with a SD of 14.6. Based on a mean split sample, there were 54 per cent of respondents classified as having low levels of ethnocentrism and 46 per cent having high levels of ethnocentrism.

Results

Tests were run to ensure all the assumption of MANOVA were satisfied. Each cell size was greater than 30, hence normality is assumed. Homogeneity of the variance-covariance is assumed as the Box's M test was non-significant for the automobile ($P = 0.404$) and camera ($P = 0.447$) experiments. The univariate test of homogeneity of variance for the dependent variables was not violated.

The results of the MANOVA are reported in Table II and are used to explore the hypothesis. We first explore the direct and interaction effects of the three COO dimensions on quality perceptions and purchase intentions (i.e. $H1$-$H2$). We then examine the results related to ethnocentrism ($H3$) and the interactions between ethnocentrism and the three COO dimensions ($H4$-$H6$). The results for both experiments were consistent across the three multivariate criteria, all main effects and interactions are insignificant, except for the interaction between ethnocentrism and COP in the camera experiment. The univariate $F$-test presented in Table III also confirms these findings.

The effect of COO sub-components

In both product cases, automobiles and digital cameras, there is no direct effect for any of the three COO dimensions (COD, COA or COP) on quality perceptions or purchase intentions. As such $H1a$-$iii$ and $H1b$-$iii$ are not supported. For both the products, there are no statistically significant two-way or three-way interactions between the COO dimensions for either purchase intentions or quality assessments, i.e. $H2$ is rejected.

The rejection of $H1$ and $H2$ suggests that for young Chinese consumers there is minimal, if any impact of the three COO dimensions on quality assessments or purchase intentions. These results are inconsistent with much of the past research, which has tended to find that COO dimensions have direct or interaction effects with regard to consumers’ product evaluation and purchase behavior (Ahmed and d’Astous, 2001; Chao, 2001; Insch and McBride, 1998). However, it does not seem to be the case in the context of young Chinese consumers. Thus, the present study fails to confirm that any COO cues are important to young Chinese consumers’ purchasing intentions or perception of quality. This implies that young Chinese consumers do not place the same value on these COO sub-components in
discriminating product quality or estimating purchase intentions as per those studies found in other countries.

A possible reason for the insignificant impact of COO sub-components on quality perception and purchase intentions might be that that global production sharing and alliances through inter-firm and inter-country collaboration have enabled products to be produced anywhere in the world. A single country need not produce products and various countries can contribute to a product simultaneously. This multinational manufacturing process means that numerous products and brands are manufactured outside the firm's home country (Yagci, 2001). This could also relate to the sample used (mean age 21.3 years), who may never have experienced the large volumes of imported foreign products. Given the high number of joint ventures in China, younger Chinese consumers might perceive hybrid products as the norm, thus possibly lessening the value of COO sub-components. Leonidou et al. (1999) have also found that younger and better educated consumers tend to accept foreign products more readily or have less prejudice toward products from developing countries.

**The effect of ethnocentrism**

As can be seen in Table III, the results suggest that there is no direct effect of ethnocentrism on consumers’ purchasing intentions or perception of quality for either product. Thus, H3 is supported, as ethnocentrism does not affect quality perceptions or purchase intentions.

In exploring the two-way interactions between ethnocentrism and each of the three COO sub-components there is only one statistically significant effect on perceptions of quality of cameras for ethnocentrism and COP. The results for H4i-iii are mixed, although in most cases these are not supported. Figure 2 provides a graphic representation of consumers’ quality evaluations. As can be seen, young Chinese consumers who have low levels of ethnocentrism prefer foreign goods (mean 5.21, SD 0.79) over domestic goods (mean 4.79, SD 0.96) and this difference is statistically significant ($t = -2.911, P = 0.004$), which is consistent with the literature exploring COO in developing countries (Kaynak et al., 2000; Okechuku and Onyemah, 1999). However, as would be anticipated, for consumers with high levels of ethnocentrism, they have a more positive assessment of local goods (mean 5.17, SD 0.95) as compared to foreign goods (mean 5.01, SD 0.96), although the difference is not statistically significant ($t = 0.904, P = 0.368$). Thus, while across interactions there is only one interaction effect, when there is a statistically significant difference it is in the hypothesized direction.

The results for H5i-iii are not supported as there is no statistically significant interaction of ethnocentrism and the three COO dimensions in regards to purchase intentions. As such, more ethnocentric young consumers do not view foreign goods differently to local goods. This would be consistent with the view that these young consumers have not experienced large volumes of exported goods, or the co-branding between local and foreign companies (e.g. Shanghai Volkswagen) has totally blurred the distinction between the brands.

In exploring higher order interactions of ethnocentrism, we also did not find any interactions for either quality assessments or purchase intentions. Therefore, H6 is not
supported. If ethnocentrism tendencies were to have a strong influence on the COO effects as some previous studies claimed, these two effects (H4-6) should all have been found to exist in regards to ethnocentrism and the COO sub-components, however, this is not observed based on our study and there is only a limited interaction between ethnocentrism and COO dimensions for young Chinese consumers. This is inconsistent with the work of other researchers (Brodowsky, 1998; Han, 1988) and this might suggest that consumer ethnocentrism has possibly a limited effect on product judgment and purchase likelihood between domestic foreign sourcing for young Chinese consumers. This would also lend support to Acharya and Elliott's (2003) suggestion that consumer ethnocentrism may not have a strong influence on purchase decisions especially for high-involvement products. In this case, the authors suggest that consumers tend to be more objective and less emotional in order to avoid making incorrect purchase choices.

It therefore appears that ethnocentrism tendencies do not play an important role in high-involvement purchases (Acharya and Elliott, 2003). The results may also relate back to these consumers’ expectations of hybrid products. As was mentioned earlier, there are extensive joint ventures in China and young consumers may only have experience with hybrid products. As such, they would not perceive these products as being foreign. For example, one of the largest car manufactures is China is Shanghai Volkswagen, which is branded as such. It might be the case that this branding blurs the line between foreign and local products even more than traditional COO sub-components allow.

**Conclusion and implications**

There is general consensus from the literature that country of origin affects consumers’ product evaluation. However, Papadopolous and Heslop (1993) indicated that the extent of these effects vary by product categories and different countries of origin. Indeed, authors have found that COO effects differ across countries (Brodowsky, 1998; Papadopolous and Heslop, 1993).

In decomposing the COO into COD, COA and COP, this study found no substitutive support for a direct effect or interaction effect of these three COO sub-components on consumer product assessment or purchase intentions for high-involvement products by young Chinese consumers. As such, the results of this study diverge from much of the past research. Thus, while the effects of various COO sub-components on consumer evaluation of products or purchase intention were identified as being significant in the past, this study casts possible doubt on its importance in China for young consumers, especially with the increased existence of hybrid products that appear to be the norm for consumers in this country who may in fact accept or even expect these multinational products.

In targeting young consumers it appears that globalization leads consumers to believe that the world is converging and becoming one “country” (Johansson, 1993). In this respect, consumers might perhaps gradually view globally made products as having the same attributes as a locally produced product for countries such as China. Chinese consumers might not be able to differentiate a product that is produced from a joint venture with multinational firms, if it is entirely imported, or if it is solely domestically made. However, there is some suggestion that they might feel that goods manufactured in China are as
“good” as products manufactured anywhere in the world (Li, 1997). Thus, Chinese consumers may find it unnecessary to make a fine distinction as to whether products are domestic or come from foreign sources.

With respect to ethnocentrism, we found there is limited impact on COO sub-components for the two product categories. This would seem to suggest there is little evidence to support the existence of a relationship between ethnocentrism and favourable evaluation of domestic sources among young Chinese consumers. This further supports the view that the acceleration of economic globalization requiring the joint input of various countries leads consumers to possibly adopt a more global perspective (Suh and Kwon, 2002). The fact that these foreign brands have become localized through joint ventures may in fact further dilute the importance of both ethnocentrism and COO sub-components. Further, Chinese consumers may be inclined to be more rational in judging products and purchases which may contribute to the weak impact of ethnocentrism across the three COO sub-components.

Based on the present investigation, it is suggested that for firms targeting Chinese consumers, COO information may not be relevant and will have limited influence on consumer evaluation of product quality and purchase intention. Thus, firms can feel relatively free to explore production sites of design and assembly in any country, which may provide competitive pricing opportunities. However this recommendation should be interpreted with care as only two countries were explored in this research and given the animosity Chinese consumer have to some countries such as Japan (Klein et al., 1998), this strategy may not be applicable for brands from all countries.

This research seems to support the view that the benefits of globalization eventuate over time, as consumers begin to evaluate product attributes, rather than the composition of COO dimensions. Firms targeting large markets can therefore benefit in the long-term from localizing some aspects of their activities, as this would seem to make hybrid products appear more global, thereby reducing the effect of COO and/or consumers’ ethnocentric views. For “home” country products competing in this market, they may need to focus on broader consumer appeals, such as patriotism, which focuses more on the need to support local products, rather than attributes of COO or a “fear” of foreign goods (Han, 1988).

While this study provides some insight into young Chinese consumers there are some limitations with this study. First, the data of the present study was collected from young consumers in Northeast China so that generalizing the results to the rest of the country should be undertaken with caution. It is also highly likely that there will be differences across age categories and thus products targeting older consumers may find COO dimensions valuable. Second, our study applied the CETSCALE to measure the level of consumer ethnocentrism tendencies and the CETSCALE is based on the “made-in” concept in explaining COO effect toward local goods foreign ones (Acharya and Elliott, 2003). Thus, while the CETSCALE has been used in this way in the past, it may not be as applicable to exploring the sub-components of COO (Acharya and Elliott, 2003; Brodowsky, 1998). The CETSCALE has generally also only been used to look at intentions not actual behavior (Shankarmahesh, 2006). Third, we only explored consumers’ views toward two countries in this study (China and Germany) and there may be differences depending upon which
developed countries are explored or whether developing countries are examined (Ahmed and d’Astous, 2007). In other small countries, where foreign companies do not have as extensive “local” activity, the role of COO may differ. Fourth, the research explored future behavioral intentions rather than actual purchase behavior. It has been suggested that consumers in fact do not use COO dimensions as much as theory proposes (Liefeld, 2004), thus examining actual purchase behavior using more qualitative research methods may allow for a better understanding of the COO issue (Gürhan-Canli and Maheswaran, 2000).

The findings also highlight a range of avenues for future research. The importance of joint ventures in reshaping the dimensions of COO needs to be further explored. There has been some limited work looking at the role of brand as a separate COO dimensions (Pecotich and Rosenthal, 2001) and joint ventures such as those in China that create local brands may be another strategy that needs to be explored. While such actions possibly would not be applicable to all firms expanding globally they might be effective in some markets. This could be explored by broadening the sub-components of COO considered.

The role of COO in developing countries which do not have extensive joint venture activities is another area to consider. Consumers in these markets may possibly be less global in their views, given the experience they have of imported goods, rather than localized hybrids. If this is the case, then there still may be a set of countries where COO dimensions are still important and will remain to be important, as these countries will potentially view global joint ventures as combining COO characteristics of two different countries. Thus, COO factors will indeed vary by country examined and thus COO effects are not a universal phenomenon.

The experience of consumers with different forms of international products may also be an important issue to include in future research. How does a consumer's experience with hybrid products as compared to their experience with traditional exported international products affect their attitudes toward COO dimensions? If consumers have only experienced hybrid products they might have difficulty making COO distinctions. Such research might possibly explore different age cohorts in China and other countries, who would possibly have different purchasing experiences. This research could also incorporate ethnocentrism in relation to experience with joint venture products. There may also be a range of other consumer factors that need to be considered in regards to COO. For example, rather than focusing on ethnocentrism, we might explore consumers’ global orientation.

In addition, our findings also offer some future research opportunities in understanding how different consumers regard the COO sub-components between various types of markets. Given that the majority of COO studies are largely conducted in regards to COO dimensions associated with the West or developed countries, this could offer a challenge for non-western and developing counties seeking to enter new markets. That is, it is unclear whether existing theories regarding COO are applicable to consumers from non-western countries and/or the level of development of the country. Exploring how consumers in one developing country view goods from other developing countries, especially when there is animosity between countries (see for example, Crnjak-Karanovic et al., 2005) is yet another issue to consider in future research? This will be extremely important as trading blocks emerge in developing regions, where trade between markets increases.
Lastly, more cross-cultural research in COO needs to be undertaken. While joint ventures may be the norm in China, these might be viewed differently elsewhere. While young Chinese consumers may see these actions as making products more local, other consumers may see joint ventures as making products as more foreign. For example, USA or Australian consumers might perceive Toyota to be somewhat local, as products are produced in their home country, whereas Japanese might view Toyota as becoming more foreign. Thus, focusing on consumers in targeted countries where such joint ventures take place might enable this type of issue to be explored.

In conclusion, this paper has identified that COO and ethnocentrism are indeed complex constructs. Relationships that might have been found in regards to these variables and consumers might be affected by the purchase experiences of consumers as well as the products being explored. While globalization suggests the world is becoming more similar, it is still the case that marketers need to understand this phenomenon within each market, as subtle differences may have substantial implications for practice. COO dimensions may be important in some contexts, but it appears that they may not have global relevance, or at least that relevance varies globally.

![Figure 1: Theoretical framework for assessing consumers’ product judgment](image-url)
Figure 2: Interaction effect for quality perceptions of camera
Automobile

Product features: 88KW Maximum power
1.6 SOHC VTEC II Engine
4-speed automatic or manual
Anti-lock braking system (ABS)
Dual airbags
Air-conditioning

Product design by: China / Germany
Product manufacture by: China / Germany
Product main components (i.e. engine) from: China / Germany
Represented retail price: RMB150,000

Figure A1 Automobile information
Digital Camera

Product features:
- 4 Megapixels
- 1.5 in LCD Screen Size
- 3 X Optical Zoom & 4 X Digital Zoom
- 16 MB Memory – Expandable Digital (SD) Card

Product design by: China / Germany
Product manufacture by: China / Germany
Product main components from: China / Germany
Represented retail price: RMB3,300

Figure A2 Camera information
<table>
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<tr>
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<th>Frequency ($n = 272$)</th>
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<td>RMB30,000-RMB50,000</td>
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<tr>
<td>Low (mean below 56.25)</td>
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*Table I: Demographic characteristics of the sample*
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<td>0.987</td>
<td>0.014</td>
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<td>0.994</td>
<td>0.006</td>
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<td>0.992</td>
<td>0.008</td>
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<td>COD × COA</td>
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<td>0.002</td>
<td>0.998</td>
<td>0.002</td>
</tr>
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<td>COD × COP</td>
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<td>0.011</td>
<td>0.989</td>
<td>0.011</td>
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<td>0.004</td>
<td>0.996</td>
<td>0.004</td>
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<td>0.999</td>
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<td>0.011</td>
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<td><strong>Experiment 2 - Camera</strong></td>
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<td>0.010</td>
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**Note:** *p < 0.05

Table II MANOVA results for automobile and camera experiments
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<td>1.056</td>
<td>0.0000</td>
<td>1.712</td>
</tr>
</tbody>
</table>

**Notes:** COD, country of design; COA, country of assembly; COP, country of parts/components

*p < 0.05

**Table III** MANOVA results

**References**


Xinhua (2000), "Chinese to buy more cars in five years", World Bank Magazine, 1 November.


**Appendix**

Figure A1

Figure A2

**Corresponding author**

Chui Yim Wong can be contacted at: pinkbox_02@yahoo.com