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The Impact of Foreign versus Local aspects of Country-of-Origin on Chinese Consumers' Evaluation of Home and Foreign Products

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Abstract

As globalisation of the world's economies proceeds at a rapid pace, an area of continuous interest in international marketing is the influence of the country of origin (COO) effect on prospective purchasers of products. Although the effects of COO has been an active research area for many years, increased globalisation has resulted in a shifting of focus from a single country "made-in" concept to other aspects such as a product's design or parts locations. The components of Country-of-design (COD), Country-of-manufacture/assembly (COA) and Country-of-parts/components (COP) are meaningful because many firms increasingly outsource the product's design, assembly, and parts to different countries. However, the extent of influence of these factors is not fully understood, and it is not known whether they are applicable across all markets. The present study provides a deeper understanding of the influence of COO by examining the effects of COD, COA, and COP together with their interaction on perceptions of product quality and consumer purchase intentions in the context of home country versus foreign ones.

Our study measures the effects of these components, namely, COD, COA, and COP, on consumer product evaluation and purchase intentions based on two high involvement products of automobile and digital camera using MANOVA techniques. We observe that there is no support for a direct effect of the three COO sub-components on consumer product assessment and purchase intention in the context of the China market for either product.

These findings suggest that, although the effect of the various sub-components of COO on consumer evaluation of product or purchase intent may well have been significant in the past, their continuing significance is questionable in the current global market place in which hybrid products have gradually become the norm.

In addition, we also examine the factors which may have a moderating effect on the three COO sub-components in the context of local and foreign sources. The results suggest that ethnocentrism and country capability plays a limited role in mediating the effects of COD, COA, and COP on product evaluation and purchase intentions.

The results of this study will be of interest to COO researchers and to corporations involved in global marketing and production. In particular, our findings imply that firms may not benefit from providing consumers with detailed global sourcing information such as COD, COA and COP on the product label, nor do they need to be overly concerned with the choice of production locations by limiting them to countries with a favourable image.

Declaration

I, Wong Chui Yim, declare that the Master by Research thesis entitled "The Impact of Foreign versus Local aspects of Country-of-Origin on Chinese Consumers' Evaluation of Home and Foreign Product" is no more than 60,000 words in length, exclusive of tables, figures, appendices, references and footnotes. This thesis constrains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signature

Date

18 Nov 2005

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Chapter 1
Introduction

1.0 Background

As globalisation of the world's economies proceeds at a rapid pace, an area of continuous interest in international marketing is the influence of the country of origin (COO) on prospective product purchasers. The motive driving various marketing scholars to study the field of country image is due to the important role played by country of origin in the formulation of manufacturing, marketing and investments strategies for global and multinational firms (Chinen *et al.* 2000). Firms are also concerned with country of origin because it enables consumers to make inferences in relation to product quality and it impacts consumers' beliefs about product attributes (Han 1989). The country of origin construct can be defined as the country where a given product is made (Tse and Gorn 1993; Elliott and Cameron 1994).

The United States is one of the world's largest markets, and there are numerous foreign firms around the world competing for a piece this market (Terpstra and Sarathy 1997). Thus, studies of COO have often been conducted in the context of the US. Other countries such as China are also growing quickly and are becoming attractive markets as well (Malhotra *et al.* 2002). The transformation and development of China in the last two decades have been impressive (People Review 2003; Peoples Daily 2003). A recent study of 150 senior executives from the world's largest companies revealed that one-third of the executives indicated China as a favourite place to invest worldwide (Skorburg 2002). The following section will provide a brief history of the economic revaluation of China over the past 20 years and highlight how country of origin might affect this attractive market for consumer goods and services.

Prior to 1978, people in China were facing poverty and fighting for food, but the "open door" policy adopted by the People's Republic of China in 1978 (Peoples Review 2003) has created the most unprecedented economic reforms in Chinese history. Such policy has brought about remarkable economic growth to China due to the government's significant redirection and realignment of its political, social and economic strategies. Each of these factors has contributed to China's GDP increase by an average of 9.3 percent annually between 1989 and 2002 (People's Daily 2003). The opening up of China's economy has also led to increased foreign goods and investment entering China (Li 1997; People's Daily 2003). The sale of consumer goods in China has increased by an average of 10.8 percent annually between 1997 and 2001, and the Chinese consumption pattern has shifted to be more hedonic with consumers enjoying a range of luxury products such as cars, computers and hi-tech household electronic items (MingPao 2004; Zhu 2003).

As a result, a greater number of foreign companies are entering the China market. Chinese consumers have greater opportunities of accessing foreign products and have become more familiar with foreign sourced goods. The increasing number of foreign products in the marketplace has intensified pressure on domestic firms and forced them to improve their competitive standards. Moreover, liberal exit visa approvals from the Chinese government and the increase in disposable family income have resulted in many Chinese students being educated overseas and thus is also increasing Chinese outbound tourists. Each of these factors enhances international interaction of people in China with other communities and possibly changes Chinese preferences and tastes, as well as how they view their own culture and products. Consequently, it is important to understand Chinese consumers' perceptions concerning products' country of origin (COO) because COO has an impact on consumer attitude towards product, product quality perception and purchase intention (for example see Liefeld 1993; Elliott and Cameron 1994; Peterson and Jolibert 1995; Zhang 1996; Chao 1998). The effect of country of origin will be elaborated in chapter two.

The high-performing Chinese economy and increasing individual's buying power has made China the world's most attractive commodity market for foreign companies looking to expand abroad, and more than 80% of the world's 500 top companies have invested in China by 2001 (People's Daily 2003). As such, the question of how to effectively and efficiently market in China is of interest to the majority of marketers seeking to enter the Chinese market. However, studies on Chinese consumer behaviour presents challenges to existing consumer theories that are largely derived from research in Western cultures (Sin and Ho 2001). Since there are significant cultural and marketing differences between China and Western countries, thus existing theories may not be applicable to Asian markets (Sin and Ho 2002; Ahmed and d'Astous 1999). This issue will be further discussed in section 2.6 of the next chapter.

Some researchers have indicated that the impact of country of origin is becoming more complicated in today's complex marketplace (Samiee 1994; Al-Sulaiti and Baker 1998). Since the 1990's, various studies began to focus on multiple factors associated with COO by making distinctions between issues such as countries where products were manufactured, designed, or where parts/components were made, as well as where companies' headquarters were located (Chao 1993; Tse and Lee 1993; Samiee 1994; Li *et al.* 2000). Such distinctions have become necessary due to the increase in the number of companies engaging in multinational sourcing, multinational production of sub-assemblies and the location of assembly plants outside their home countries (Samiee 1994; Yagci 2001). The widespread practice of global sourcing has generated substantial hybrid products in the global marketplace. An example of a hybrid product is an automobile like Pontiac Le Mans which is assembled in South Korea, but designed in Germany and containing components and parts made elsewhere (Jaffe and Nebenzahl 2001). Collaboration involving multiple countries complicates the assessment of COO effect in product evaluation. Further discussion related to the transformation of the COO construct will be provided in section 2.4 of chapter two.

With the increasing volume of trade between China and foreign countries and the prevalence of global production (Li 1997; Li *et al.* 2000; Cheung 2004), it is essential

for firms, both local and foreign, to understand how a product's country association may affect consumer assessment when design, assembly/manufacturer and components/parts location are specified. This is because some studies suggest that the country of origin is an important information cue which plays a major role in product acceptance in different markets (Samli 1995; Piron 2001). Various studies also indicate that consumers view products sourced from developing countries, such as China as having a negative image (Zhang 1996; Li *et al.* 1997). With widespread global production sharing, products are often associated with several countries of origin, and corporations frequently allocate manufacturing to less developed countries but have products designed in developed countries (Chao 1998; Ahmed and d'Astous 2001). As such, firms need to understand how consumers might view such a product. Are Chinese consumers concerned with design location, assembly/manufacturer location and components/parts location as part of product quality judgement? This question may facilitate local firms to develop strategic collaboration toward foreign partners. In the next chapter, the issue of the effect of country of design, assembly/manufacture and parts/components will be further elaborated in section 2.4.1.

Previous research suggests that consumers in developed countries tend to perceive domestic products as being of higher quality than imported ones (Damanpour 1993; Eliott and Cameron 1994; Ahmed *et al.* 1997), whereas the reverse is true for consumers in developing countries (Jaffe and Martinez 1995; Okechuku and Onyemah 1999; Wang and Chen 2004). Such bias may be due to some consumers perceiving that workers in less developed countries are unsophisticated, so that these countries are unlikely to have the capability to produce goods of high quality (Li and Monroe 1992; Ahmed and d'Astous 1996). This implies that consumers' perceptions of country capability in producing quality goods impacts views of country of origin. In fact, the perception consumers hold toward a given country is not the only factor in determining product quality. The effect of COO can be also explained by other factors such as ethnocentrism tendencies or demographic characteristics (for example see Lantz and Loeb 1996; Klein *et al.* 1998). Ethnocentrism is related to consumers' nationalistic or patriotic sentiments toward the obligation in purchasing domestic products (Shimp and

Sharma 1987). Such sentiments tend to cause consumers to have a negative bias toward products from foreign countries. As such, marketers or government may be inclined to undertake a "buy national" campaign to reinforce positive perceptions of home country's products. Factors of country capability and ethnocentrism, which may mediate COO effect will be discussed in greater depth in sections 2.5 to 2.5.2 of chapter two.

1.1 Aims of the study

This study aims to contribute knowledge for both local and foreign firms in their ability to successfully gain a competitive advantage in marketing to the Chinese market. More specifically, the aims of this research are:

- To investigate the effects of Country-of-Origin (COO) by breaking it down into the Country-of-Design (COD), Country-of-Assembly/Manufacture (COA) and Country-of-Parts/Components (COP) together with their interaction on perceptions of product quality and purchase intentions;

- To identify the factors which may influence the resulting consumer perception of product quality and purchase intentions toward the effect of Country- of-Origin sub-components with respect to local and foreign sources

1.2 Contributions of the Research

Although research on the effects of Country-of-Origin (COO) on consumers has been undertaken since 1965, increased globalisation has resulted in the focus of this research gradually shifting to an investigation of hybrid products (Insch and McBride 1998; Chao 1998; Acharya and Elliott 2003), extending to other aspects such as design or components/parts location. The sub-components of Country-of-Design (COD), Country-of-Assembly (COA) and Country-of-Parts (COP) are important because many firms increasingly outsource a product's design, assembly, and parts to different

countries, rendering the single COO concept rather meaningless. From the academic perspective, the present study will provide a deeper understanding of the influence of COO by examining the three sub-components of this construct: COD, COA and COP, and the impact these have on consumers. The examination of the sub-components of COO will enable a thorough assessment of the composite impact of all aspects of COO effect on consumer product perception and purchase intentions.

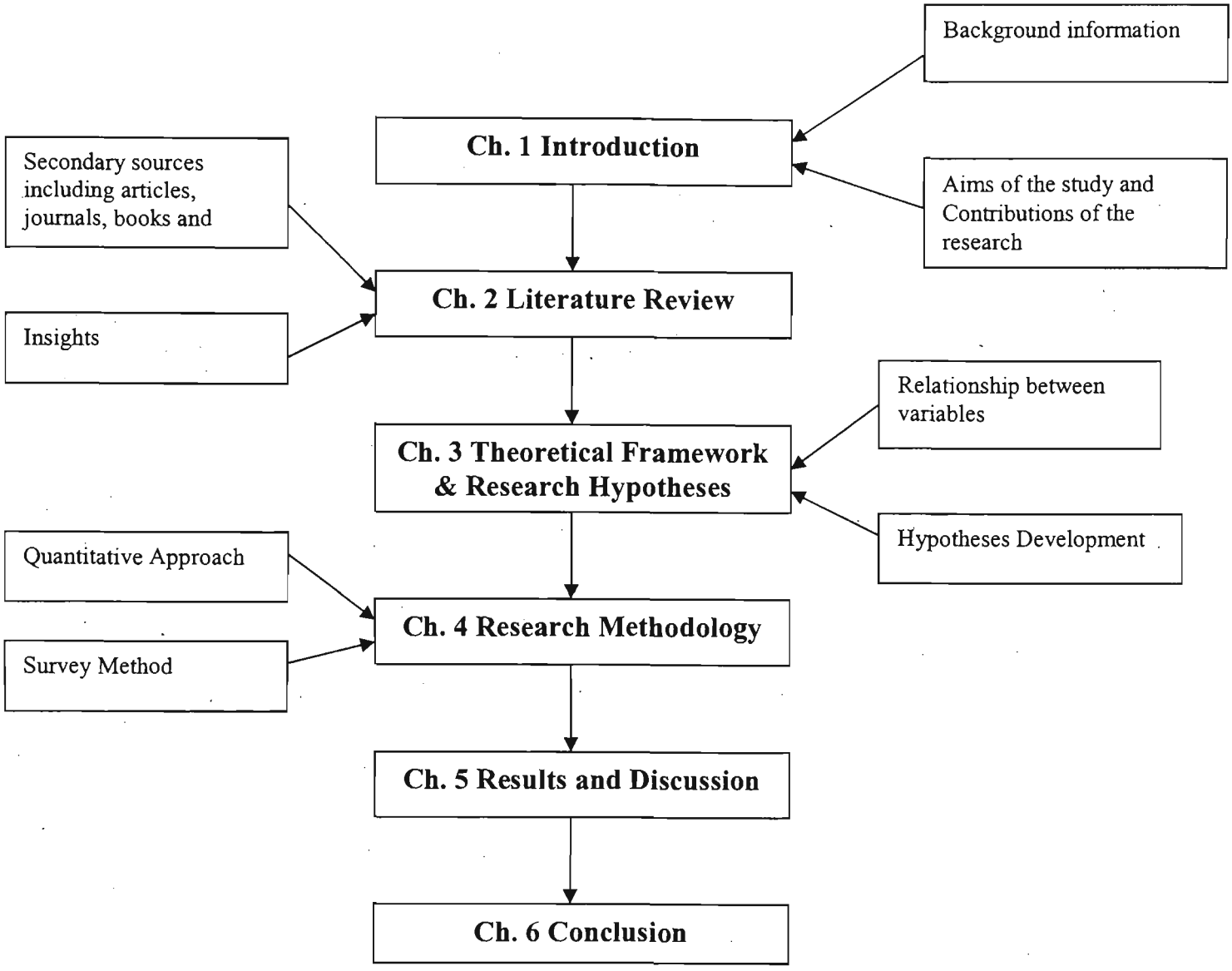
In addition, COO studies have been largely conducted in America, although there have been some extrapolation to a more universal marketing contexts by examining other national settings (e.g. Canada, Australia, Germany and Mexico). It is necessary to undertake more focused COO issues in non-American situations, especially in rapidly growing non-western countries. Hence, the present study will complement such knowledge through focusing on the China market as China's economy has grown rapidly in recent years and has attracted many foreign investments (Li 1997; Brandsma 2002).

From the practical perspective, this research will provide information that will assist in the formulation of global strategies such as how products from foreign sources can effectively and efficiently be marketed in China. It will also assist multinational companies in deciding how to better allocate or outsource various aspects of their production process (i.e. COD, COA and COP) across different countries. This information can be integrated into all marketing activities, including promotion and advertising strategies.

1.3 Summary of the Study

The Introduction given in this chapter provides an overview of the proposed study. It outlines the background and aims of the study. The contributions of this research are also provided. Figure 1.3 exhibits the structure of the thesis, indicating how this thesis is organised.

Figure 1.3 Structure of the Study



Chapter 2 provides the literature review which examines the relevant COO research work done in this area. It also contextualises the problem with respect to the current literature, highlighting those aspects for which previous studies have not examined in depth. In chapter 3, the important variables are defined, and the relationships among them are identified. It also establishes a theoretical framework and describes the hypotheses.

The research methodology chosen for the study is explained in Chapter 4 and provides a rationale for the specific research design selected, including country and product

choices. Sampling design and questionnaire development are also described. In chapter 5, the research findings from the data collected are analysed and interpreted with respect to the specific objectives of this study. The hypotheses stated in chapter 3 are examined in the light of the data, and possible explanations of the results are also given. In chapter 6, the major findings are summarised. The limitations, implications, areas for further research, and the conclusions of the study are also provided.

Chapter 2

Literature Review

2.0 Introduction

The impact of Country-of-Origin (COO) on consumer behaviour has been demonstrated in the business and marketing literature for many years (for example see Al-Sulaiti and Baker 1998; Papadopoulos and Heslop 2002; Dinnie 2004). According to Neal, Quester and Hawkins (2000), the overall model of consumer behaviour includes external influences, internal influences, situational influences and decision-process influences. Empirical studies indicate that COO cues can contribute to consumer internal influences such as quality perception or product attitudes (for example see Kaynak *et al.* 2000; Li *et al.* 2000; Chao 1998; 2001), consumer external influences such as social status or patriotism (for example see Papadopoulos 1993; Brodowsky 1998) and consumer decision-process influences such as store choice and purchase (for example see Liefeld 1993; Huddleston *et al.* 2001). These findings reflect that the influence of COO is not just confined to a particular aspect of consumer behaviour, but has a flow on effect on almost the entire model of consumer behaviour (i.e. COO effects → internal influence → external influence → decision-process influence). Hence, the effect of COO in consumer behaviour should not be underestimated.

The focus of the study presented in this thesis is '*the impact of foreign versus local aspects of Country-of-Origin on Chinese consumers' evaluation of product*'. The main investigation will only involve aspects related to consumer internal influences associated with COO issues. More specifically, the aim of this research is to understand the effect of COO in consumer perceptions of product quality and purchase intentions. In particular, this study will examine whether consumers in China have a preference for products made locally or from other countries.

In this chapter, previous studies on COO will be examined and their significance evaluated. This literature review is not intended to be an exhaustive coverage of past studies but rather it attempts to focus on issues relevant to the present research topic (i.e. the nature and strength of COO effects on consumer purchase behaviour) and defines the scope of the study. Section 2.1 of this thesis begins with a brief overview of COO research. The next section 2.2 provides specific discussions concerning the effect of COO in product evaluations and purchase intentions. Some of the significant issues are highlighted in section 2.2.1, such as claims that brand association has supplanted the COO as a consumer driver, while the contention of whether the COO effect is dependant on product type is discussed in 2.2.2; section 2.2.3 is related to the function of COO cue in strategy formulation. Section 2.3 will focus on country stereotyping and to what extent it affects the consumer preference toward home and foreign products. Section 2.4 will discuss the transformation of the single COO construct into various COO sub-components, and the reason behind such transformation. The effect of the three COO sub-components will be specified in section 2.4.1. Section 2.5 concentrates on the factors which have influences on consumers in relation to the COO effect, with section 2.5.1 focused on country capability and section 2.5.2 on consumer ethnocentrism. Section 2.6 will highlight the issue of research bias in the COO field with respect to insufficient studies carried out in Asian countries, while the final section 2.7 will give a conclusion for this chapter.

2.1 An Overview of Country-of-Origin Research

Country-of-Origin (COO) has been studied for almost forty years with well over 700 published studies (Papadopoulos and Heslop 2002). The construct is sometimes referred to as product country image or PCI (Al-Sulaiti and Baker 1998; Laroche *et al.* 2003) and these terms are often used inter-changeably. Papadopoulos (1993) and Becker (1999) indicated that a product's COO represents one of the product cues that may become part of a product's total image.

There are a number of different ways COO has been defined in the literature. Wang and Lamb (1983) believed country of origin effects formed a barrier for entering new markets due to negative consumer bias toward imported products. Bilkey and Nes (1982), Han and Terpstra (1988) and Papadopoulos (1993) define the product's country of origin as "the country of manufacture or assembly" and it is this definition that has been adopted by the majority of COO studies. The subject of "country-of-origin" or "made-in" phenomenon has received excessive attention in academic marketing and economic research (Papadopoulos 1993; Caswell 1998; Dinnie 2004) because COO can be used as unique selling propositions for brands and products, as well as assisting governments in their policy making (Papadopoulos 1993; Becker 1999; Roosen *et al.* 2003).

Information process theory posits that consumers evaluate products not only on the intrinsic attributes, but also on the extrinsic attributes. Intrinsic cues refer to attributes inherent within a product such as style, colour or performance while extrinsic cues are those that can be changed without altering the product physically such as changing the brand, price or warranty, and COO label is also classified as an extrinsic attribute (for example see Samiee 1994; Sikand 1999; Schiffman *et al.* 2001). In many cases, intrinsic attributes provide consumers with the most reliable cue to judge product quality, but they may not easy to evaluate prior consumption and also not always as easily available or obtained as are extrinsic cues (Insch and McBride 1998; Li *et al.* 2000). Thus, consumers may place more attention on COO in forming product impressions (Li *et al.*2000). However, some researchers suggest COO plays a minor role on quality assessment and purchase intentions (for example see Elliott and Cameron 1994; Choe and Cho 2000; Nooh and Powers 1999) because the COO effect appears to be product specific (Liefled 1993; Lampert and Jaffe 1998). Product issues will be further elaborated in section 2.2.2.

Dinnie (2004) provides a thorough review and summary of COO studies from 1965 to 2004. His work classified the past research on COO into the three main periods. The first period of 1965-1982 is viewed as adopting a simplistic approach to COO. These

early COO studies were largely demonstrational in nature and were concerned with documenting the existence of COO effects (Nagashima 1970; Reierson 1966). In this early period, the majority of subjects were provided one information cue – product made in country – in an hypothetical experiment. Some scholars had argued that these early studies might have produced bias results and overestimated the effect of COO since product origin was the only information used in product evaluation (Bilkey and Nes 1982; Papadopoulos 1993).

The second period of COO research relates to the period between 1983-1992. In this period of research, improvement to experimental designs had been made from single cue studies to multi-attribute approaches in the assessment of COO effect. Thus product origins together with other attributes such as price or brand were also supplied in the experiment. Some studies found that COO had less effect in consumer product evaluations when other product information was available (for example see Ettenson *et al.* 1988; Johansson *et al.* 1985; Wall *et al.* 1991). Some researchers also focused their attention on the determinants of COO biases, and suggested that the degree of economic or political climate, as well as nationalism appeared to have an influence toward the COO effect (for example see Wang and Lamb 1983; Shimp and Sharma 1987).

The third period 1993-2004 can be characterised by a proliferation of different streams of research, which seek to reconceptualise COO. A considerable amount of studies are found in this period, and this has significantly advanced theoretical developments in the COO field. Based on the studies in this third period, it is revealed that researchers are not only interested to understand what the consumer image held for products from different countries, but also the strength and direction of such COO effect and the process by which consumers integrate COO into their purchase decision and intention. Many researchers have even taken a step to further examine if possible relations existed between COO and other cues such as price, brand, patriotic or product experience (for example see Chao 1993; Tse and Gorn 1993; Jaffe and Martinez 1995; Brodowsky 1998; Acharya and Elliott 2003), while some scholars began to explore the issue of the single COO effect with regard to products associated with multiple countries production (for

example see Samiee 1994; Chao 1998; Li *et al.* 2000). Furthermore, a number of studies had also expanded to examine other developing or non-Western countries in regards to the COO issues, such as China, Bangladesh, Turkish or Singapore (for examples see Zhang 1996; Kaynak *et al.* 2000; Kaynak and Kara 2002; Piron 2000).

Table 2.1 summarises a sample of those recent COO research studies which are relevant to the current study. Since the focus of this study is to investigate the perception of products with various COO sub-components in the context of domestic versus foreign aspects, studies dealing with issues similar to this are included in the summary table. Hence, this summary does not attempt to cover all past studies in detail but rather those studies that facilitate the investigation in extracting important variables. As discussed above, the early COO studies, especially those in the first period, may have lower validity due to the limitation of using single cue studies, while studies after the first period tend to provide more fundamental and comprehensive knowledge of COO. Hence, the studies referred to in the table are selected from those published since 1990.

As shown in Table 2.1, various types of products have been examined. The nature of COO investigation includes both cognitive and affective domains, such as quality perception or product belief (cognitive response) and product attitude or value of product (affective response). However, one major limitation is that the majority of studies are largely based on the "made in" concept to examine the COO effect on product evaluation or purchasing intention (for example Chao 1993; Li *et al* 2000; Acharya and Elliott 2003). There are insufficient studies that take into account the fact that global sourcing involving multiple sourcing issues and has transformed COO into a multifaceted construct (Samiee 1994; Nebenzahl *et al.* 1997).

Table 2.1 Summary of empirical studies of COO research relevant to this thesis

Author(s)/Year	Attribute Measure	Cues examined	Products examined
Wall *et al.* 1991	Perception of product Risk of purchase Perceived value Likelihood to purchase	COO, Brand, Price	Shirt, Phone, Wallet
Tse & Gorn 1993	Product attributes perception	COO, Brand	Stereo system
Ahmed & d'Astous 1993	Perception of quality Purchase value	COO, Brand, Service	Price, Automobile
Elliott & Cameron 1994	Perceived product quality	Quality of manufacture Price, COO, Brand	PC, Car, Dishwasher. Shoes, Jam, Tires
Jaffe & Martinez 1995	Product perception	COO, Demography, Product involvement, Product ownership	General electronic household product
Zhang 1996	Product attitudes	COO	TV, shirt
Ahmed & d'Astous 1996 1996	Perception of quality Purchase value	COA, COD, Price, Brand, Warranty	Automobile, VCR, Shoes
Lantz & Loeb 1996	Consumer preference	COO, Price, Colour, Style, Ethnocentrism	Mouse Pad
Brodowsky 1998	Product beliefs Attitudes toward buying	COD, COA, Ethnocentrism	Automobile
Okechuku & Onyemah 1999	Consumer preference Likelihood of purchase	Brand, COM, Price, Reliability, Safety, Picture quality	Car, TV
Pecotich and Rosenthal 2001	Quality evaluation Purchase intention	COO, Brand, Quality, Ethnocentrism	Printer
Watson & Wright 2000	Product attributes Willingness to buy	COO, Ethnocentrism	Refrigerator, TV, Camera
Li *et al.* 2000	Functional quality Symbolic quality	COC, COD, COA, Warranty	TV
Chao 2001	Product attitudes Purchase intention	COD, COA, COP	TV, Stereo component system
Yagei 2001	Product attitudes Perception of quality Purchase intention	COO, Brand, Ethnocentrism	Automobile
Ouyang *et al.* 2003	Consumer preference	Brand knowledge, Price, Patriotic feeling	Beverage
Acharya & Elliott 2003	Perceived quality Purchase preference	COD, COA, Ethnocentrism	Automobile, Jean, Tinned pineapple

Notes: 1) COO and COM means where the product is made or produced
2) COA means where the product is assembled
3) COD means where the product is designed
4) COP means where the product's components/parts are supplied
5) COC means origin of corporation

Chinen, Jun and Hampton (2000) reported the important issues in COO studies involve an aggregate image of products from a particular country, but the multiple countries phenomenon has created a situation in which it is becoming more difficult for consumers to pinpoint a particular country with which products may be associated (for example see Samiee 1994; Insch and McBride 1998; Chao 1998; 2001). A single product may involve several countries of origin in relation to design, manufacture/assemble and parts/materials aspects. For example, a Sony television may be designed in Japan, have parts and components supplied from China, and be assembled in Malaysia (Li *et al.* 2000). A single COO therefore is no longer relevant to such a hybrid product, and COO investigations should not be limited by where a product is made. Further details related to the issue of products involving several countries of origin will be provided in section 2.4. The following section provides an illustration of the COO effect on consumer behaviour.

2.2 The Effect of Country-of-Origin

This section provides a review and discussion related to the influence of the COO cue in regards to consumers' product evaluation process and purchase intentions. The claims about strong brand association overshadowing the COO effect, and the product specific nature of COO will be discussed on section 2.2.1 and section 2.2.2 respectively. In sections 2.2.3, the focus will be on the role of COO in marketing activities.

The concept of the COO effect is concerned with how consumers perceive products sourced from a particular country (Chinen *et al.* 2000). A large body of empirical studies have indicated that the influence of COO exists in both product assessment and decision making processes (for example see Reierson 1966; Bilkey and Nes 1982; LaTour and Henthorne 1990; Jaffe and Martinez 1995; Zain and Yasin 1997; Verlegh and Steenkamp 1999; Solomon 2004). The nature of the COO effect on consumers has been pointed out in Table 2.1, which covers various aspects such as quality perception, product attitude, consumer preference and willingness to buy.

Since Schooler's (1965) seminal study of consumer product attitudes from different countries of origin, numerous studies have reported that consumer perceptions of product quality vary across countries (for example see Roth and Romeo 1992; Elliott and Cameron 1994; Badri *et al.* 1995; Rawwas *et al.* 1996; Darling and Puetz 2002). These past works suggest that COO can act as a quality indicator or influence quality perceptions in product evaluation or choice decision (Elliott and Cameron 1994; Huddleston *et al.* 2001). Countries with a positive image generate positive beliefs about their products and vice versa (Orbaiz and Papadopoulos 2003). Solomon (2004) asserts that certain products are strongly associated with specific countries such as France with cologne and fashion, Italy with sports cars and designer accessories, while Germany is more likely to be associated with automobiles (Schiffman *et al.*2001).

Some studies suggested that when consumers were unfamiliar with a given country, COO serves as a halo construct - that is consumers infer product attributes through country image (Bilkey and Nes 1982; Han 1989; Yagei 2001). It can directly affect consumers' beliefs about the true level of product attributes they attach to the products (Erickson *et al.*1984; Johannsson *et al.* 1985). For example, German cars are perceived as durable; hence Opel is seen as a durable car. These perceptions also relate to country stereotyping and details related to this issue are discussed in section 2.3. As consumers become familiar with a country's products, COO may present a summary construct where country image summarises product attributes from consumers' belief (Han 1989).

As mentioned earlier in section 2.0, COO affects both the product evaluation and the decision making processes. Lawrence, Marr and Prendergast (1992) have reported that COO is often a determining factor in the buying process in the new car market. The impact of COO not only occurs within consumer products but also in industrial products (for example see Liefeld 1993; Al-Sulaiti and Baker 1998; Dzever and Quester 1999; Dinnie 2004). It is believed that consumers have pre-existing images of different countries in their minds based on a country's social environment and consumption acculturation (Brigham 1971; O'Shaughnessy and O'Shaughnessy 2000). Consumers form opinions about countries and such overall country perceptions then affect their

product evaluation of a specific country (Kaynak *et al.* 2000). As is demonstrated in past studies there is sufficient evidence to assume that COO contributes to consumer internal influences and alters their product choice decision.

Studies in the COO area have been performed in various experimental settings such as: single-cue (i.e. COO was the only information in the studies supplied to respondents on product evaluation) versus multi-cue (i.e. several attributes such as price or durability were included in the studies) (for example see Peterson and Jolibert 1995; Zhang 1996; Verlegh and Steenkamp 1999; Dinnie 2004); established brand versus fictitious brand (Tse and Gorn 1993; Li *et al.* 2000); single national versus cross national (for example see Roth and Romeo 1992; Jaffe and Martinez 1995; Ahmed and d'Astous 1999); and prior product experience versus after product experience (Tse and Gorn 1993).

The previous section 2.1 had reported that single-cue studies had a greater effect on consumer product evaluation when COO was the only cue to assess the product quality and so this approach is not employed in current research. Tse and Gorn (1993) demonstrated that direct product experiences could lead to improvements in product ratings. Their studies involved fictitious brands and suggested consumers might have a positive impression of a new brand coming from a country with a favourable image. In addition, well-known brand names are evaluated more favourably than those with less well-known brand names (Tse and Gorn 1993). An interesting study by Hui and Zhou (2003) indicated that the COO information was not a significant influence on product evaluation when the brand product was produced in the same country (e.g. Sony made in Japan) but was not the case when products were manufactured outside the brand's origin country (e.g. Sony made in Malaysia). However, Li, Murray and Scott (2000) found that the country where the corporation was located did not affect product evaluation.

Some evidence appears in the literature that COO studies involving cross-national issues are likely to receive inconsistent results. For example, Gürhan-Canli and Maheswaran (2000) reported that consumers from collectivists culture such as Japan

evaluate local products more favourably regardless of the product superiority whereas consumers in individualists culture such as US evaluate local products more favourably only when the product is superior to foreign alternatives. These authors argued that COO effects might depend on culture-specific factors. Another study indicated that the made-in label was less important to Belgian consumers while it appeared to be more important to Canadians, so that the latter were likely to seek out COO information (Ahmed and d'Astous 1993). These past results seem to be suggesting that the value consumers placed on COO is not the same for every country while general cultural tendencies such as individualism/collectivism may influence the product evaluation of different countries. Further studies across different nations are needed in order to have a better understanding in the uses of COO information in consumer behaviour from various culture backgrounds.

In relation to the socio-economic characteristics' interaction with COO, Jaffe and Martinez (1995) suggest that consumers with a higher level of education and professional occupations tend to evaluate foreign products more favourably while others report that education level has little or no effect (Ahmed and d'Astous 2001). A number of studies found that younger consumers seem to have a more positive attitude toward foreign products (Han 1988; Ahmed and d'Astous 2001). Persons with a relatively low-income level in Canada were more favourable toward products made in newly industrializing countries such as South Korea or Taiwan (Ahmed and d'Astous 2001) while consumers with a higher income in Israel show preference toward domestic products (Shoham and Brenčič 2003). Yet Ahmed and d'Astous (2001) found that income does not affect COO perceptions. These inconsistent results seem to suggest that demographic variables do not play a very definitive role in explaining the COO effect.

Hence, it is widely acknowledged in the marketing literature that the COO cue has an effect toward product evaluation and influences purchase decision over a range of consumer and industrial products (for example see Liefeld 1993; Peterson and Jolibert 1995; Zain and Yasin 1997; Dezever and Quester 1999; Hsieh 2004; Dinnie 2004). Each country evokes a certain image in the mind of consumers (Hooley *et al.* 1988) and

that image facilitates the formation of overall product perception (Sikand 1999). The image of a country indeed represents a collection and judgment of attributes which suggest the levels of sophistication in product design and manufacturing processes, as well as convey a sense of cultural tradition associated with a product (Li *et al.* 2000). Thus, a positive reputation of country image enhances credibility toward product quality (Samiee 1994). Moreover, some studies also suggested that the image of a country held by individuals could be changed over time through strategic marketing programs or significant events such as the Olympic Games (Insch and McBride 1998; Papadopoulos and Heslop 2002). This issue will be further discussed in section 2.2.3. In the next section, the focus will be on how the global brand may overcome the COO effect.

2.2.1 Country-of-Origin and Brand

There is a contention that a strong global product brand name may overshadow the COO effect (Tse and Gorn 1993). This argument stems from the association of certain countries with large multi-national or global companies such as IBM and US or Sony with Japan. The existence of this association suggests that a brand name may activate a country image, which becomes a surrogate of the country effect (Ahmed and d'Astous 2001). However, the fact is that many brands and retailers' privately labelled products produced by original-equipment manufacturer (OEM) in countries with lower labour costs (Gao *et al.* 2003), leading many firms to produce their products outside their home country. It is possible for two independent brands' products to be produced by the same manufacturer (Choi 2002). The practice of OEM might raise the question concerning the level of credibility of consumers using brand names to judge product quality. Although a strong global brand name seems to be a dominant cue on product evaluations in today's market, some studies demonstrate that COO remains an important and more enduring factor (Han and Terpstar 1988; Tse and Gorn 1993; Ahmed *et al.* 1997; Ahmed and d'Astous 2001).

Furthermore, the brand name does not always serve the same function to every consumer. Gao, Woetzel and Yu (2003) assert that brand represents features and value

to most consumers in developed countries such as Europe. It is expected that the perception of product quality would relate positively to brand name in western markets. Therefore, consumers tend to purchase the same brand in their next purchase because they prefer to buy the product they already know. While consumers in a Confucian culture such as China place greater emphasis on the social value of brand (Tse 1996), because individuals attempt to demonstrate a position of higher social status through conspicuous consumption (Tse 1996; Anderson and He 1998). This segment of consumers tends to purchase a specific brand name in order to identify with his or her peers of similar social status. Thus, brand name in Chinese society is likely to serve as social tools to distinguish certain consumers from other social groups. Hence, the perception of product quality may not be necessarily linked with brand name.

Since the brand name may not always produce quality perceptions to consumers in non-western markets, the focus of this study is to examine how Chinese consumers judge product quality of their home country against that from foreign countries. Therefore, brand name is not considered in this investigation.

2.2.2 The Influence of Product Type

Some researchers suggest that the level of importance consumers placed on COO depends on product type (for example see Liefled 1993; Zhang 1996; Ahmed and d'Astous 2001). Many studies have confirmed that products with high complexity or luxury items such as cars, personal computers, cameras, VCRs, TVs, and home theatre systems are more likely to be affected by where the product is made (for example see Liefled 1993; Ahmed and d'Astous 1993; 2001; Okechuku and Onyemah 1999; Piron 2000). The studies referred to in Table 2.1 have shown that automobiles and household electronic items are widely used in COO examinations, and the majority of this research has provided evidence that COO represents a important indicator in signalling quality (for example see Han and Terpstra 1988; Zhang 1996; Rawwas *et al.* 1996; Okechuku and Onyemah 1999).

A similar claim was also provided by Lampert and Jaffe (1998), who reported that COO plays a smaller effect when products are homogeneous or standardized, but has a greater influence for goods with a high level of differentiation. Such a claim suggests that the COO effect is unlikely to take place for commodities but it has greater impact on prestige consumer products and high involvement products. An explanation of these findings is that high involvement or complex items and high prestige products, such as cars, which involve high degrees of perceived financial or social risks. (Neal *et al.* 2000). As the amount of money involved in the purchase of a car can be large, the perception of financial and performance risks cause consumers to have a stringent product assessment as well as extensive information search in order to avoid any potentially negative consequence. COO information is therefore likely to be included for judging the variance of quality in such a circumstance.

In addition, complex or high tech products are not easy to evaluate for consumers who are less knowledgeable, and consumers may be more likely to use COO information to simplify the information process and to reduce perceived risk (Papadopoulos and Heslop 2002). The purchase of a car may also involve social risk in that it may relate to the consumer's public image. As Sirgy, Johar, Samli and Claiborne (1991) suggested that, COO may indirectly link to consumers' image, with specific COO-related products enabling consumers to establish their personality or ego. Highly complex or high involvement products, unlike low involvement products such as toothpaste or coffee, are not considered as regular purchases (Neal *et al.* 2000). These latter product categories are less likely to be associated with high levels of perceived risk, where COO information is not expected to affect consumer product evaluation and purchase intention on such products (Lampert and Jaffe 1997). Based on the previous findings, it appears that the automobile serves as a suitable product for measuring COO effects (Hsieh 2004), which also explains why automobiles have been extensively studied in the COO field. For this reason the product categories selected for this present study will focus on the automobile and digital camera. Although it could be argued that a camera is not a luxury good, it has been chosen for this investigation because it can be considered to be a luxury good in China (Anderson and He 1998).

2.2.3 The Role of Country-of-Origin in Marketing Activities

Understanding how COO information affects consumer product assessment or consumers' perceptions held towards products across different countries will offer substantial benefits. As mentioned in section 2.2, there is a strong association between certain product categories with specific countries; thereby products from those countries often attempt to benefit from these linkages by emphasising the positive product-country image in marketing programs. In addition, the COO cue is an extrinsic cue, and is controllable by the marketers. Section 2.1 indicated extrinsic cues referred to those products' attributes that could be changed without altering the structure of the product such as price, brand name or COO. Since none of these attributes have a direct bearing on product performance (Peterson and Jolibert 1995; Sikand 1999), a firm may, therefore, vary consumer attitudes toward a country image attached to a product through appropriate manufacturing strategies (e.g. careful selection of location of production processes) or marketing efforts (e.g. effective advertising strategies may increase consumers perception of a particular country).

To date, many multinational firms have relocated various production activities (e.g. product design, product manufacture/assembly and product components supplier) in different countries around the world to reduce production costs and maximize their returns (Chao 1993; Insch and McBride 1998). For example, McDonald's Happy Meal toys for children, Swatch watch straps, Barbie and Ken and Disney figures are mostly produced in China. Brands like Reebok, IKEA, Toys "R" Us, Gap and many more are also increasingly sourced from China (Brandsma 2002). Other major multinational firms such as Sony Corporation have over 50 production plants around the world including China, Indonesia, Mexico and so on (Naclerio 1995). It is thus important for managers to understand how the COO information can be operationalised because it can serve as a strategic tool to position and market both locally made and imported goods.

From the promotional perspective, the knowledge of COO enables firms to develop effective communication and promotion strategies. The firm can emphasise or downplay the source country depending on consumers' perception of that country (Han and Terpstra 1988). Many studies have found that consumers generally have a positive attitude for products from more developed countries such as US, Japan or Germany compared to products from less developed countries such as Mexico or Indonesia (for example see Badri *et al.*1995; Zhang 1996; Hui and Zhou 2003). Such disposition indicates the emphasis on country information when products are sourced from developed countries would improve consumer perceptions of the product quality or increase their purchase intention (Han and Terpstra 1998).

From the pricing perspective, Kim (1996) indicates the COO has significant interaction with price, while Chao (1993) also found the product design country interacts significantly with price in influencing quality assessment. In fact, a particular COO may provide consumers with a unique value or favourable image (Kim 1996). As such, consumers may place greater value on any distinct attribute (e.g. high quality image or reputation) from that specific country product which differentiates it from other alternatives. Therefore, consumers are willing to pay more for such unique value or differentiated products (Lampert and Jaffe 1998). These findings suggest that products derived from favourable countries should be able to charge a price premium for their favourable image associations. Chao's study (1993) demonstrated that electronic products designed in Japan received high quality ratings both at the high and low levels of price setting. However, firms producing products designed in US or Taiwan obtained higher consumer rankings only in the high price setting. This finding reflects that Japan as a design country enjoys a distinct advantage and therefore greater flexibility over US or Taiwan products in the pricing strategies.

The role of the COO is not only constrained by the marketing strategies but it can facilitate the formulation of manufacturing or investment strategies for global firms. Since COO studies were extended to country of design, country of manufacture/assembly and country of components/parts, several studies reported that

industrialised countries such as Japan or Germany were perceived to be superior on design capability (Chao 1993; Li *et al.* 2000; Ahmed and d'Astous 2001). As such, firms may consider allocating or outsourcing the design activities for their product in these countries in order to enjoy a more positive stereotyping of the product design capabilities (Chao 1993). Other studies suggested that the importance of the three sub-components of COO tended to vary across products and consumers from different countries (Insch and McBride 1998). For instance, the overall quality perception for products such as athletic shoes was affected by design country but televisions were not (Insch and McBride 1998). Li, Murray and Scott (2000) revealed that design location had more impact over assembly location for electronic products. Additionally, Insch and McBride (1998) found that country of assembly for television sets had an effect on the overall quality perception for US consumers but not Mexican consumers. It appears that an understanding of production aspects may be product and consumer specific, enabling firms to develop better investment strategies or outsource location, as well as marketing programs.

In addition, some studies also found that consumer attitude toward specific countries changes over time as mentioned in section 2.2 (Bilkey and Nes 1982; Daling and Wood 1990; Verlegh and Steenkamp 1999; Darling and Puetz 2002). Whereas Japanese-made products were previously perceived as being of low quality and just a cheap imitation of industrialised countries' products in 1960s till 1970s, the "made in Japan" label now stands for high quality, excellent workmanship and innovative products since the 1980s. The alteration of the perceptions of Japanese products was strengthened through marketing efforts and transformation from a manufacturer of capital intensive to knowledge intensive products (Reierson 1966; Lampert and Jaffe 1998; Insch and McBride 1998). South Korea too, is now also managing the same improvement in perceptions (Insch and McBride 1998).

Country Stereotyping

Past studies reveal that country of origin stereotyping is prevalent for consumer perceptions and purchase intentions (for example see Kaynak and Gavusgil 1983; Kaynak *et al.* 2000). Stereotyping by consumers enables one to predict how they will react to COO information (Tse and Gorn 1993). It is found that products that are identical in every respect except for their COO are evaluated differently (for example see Al-Sulaiti and Baker 1998; Verlegh and Steenkamp 1999). Such differences could be explained by the country stereotyping, which provides consumers with quality estimations regarding the likelihood that a product manufactured in a certain country will have certain features (Yu and Albaum 1999). For instance, a country like Indonesia is viewed as possessing low technical expertise; consequently, consumers evaluate the quality of such products produced in Indonesia as low (Tse and Gorn 1993). This bias is similar to product country associations such Italian shoes, Australian fruits or German cars (Becker 1999; Acharya and Elliott 2003). Since these nations have established collective positive reputations on behalf of their industry toward related product categories, this has enabled consumers to use such reputations to judge product quality for individual manufacturers (Roosen *et al.* 2003).

Numerous studies have pointed to a systematic bias in favour of products toward countries such as Germany, US, Japan or Australia. The stereotype held by consumers toward such developed countries is understandable because these countries are perceived as having high levels of economic and technological development (for example see Wang and Lamb 1983; Ahmed and d'Astous 1999; Chinen *et al.* 2000; Huddles *et al.* 2001; Hsieh 2004). Consumers usually feel that products from highly industrialised countries are of better quality and perform better. The studies relating to consumers' country stereotyping suggest that the perception of product quality is a major dimension underlying the COO bias or country image (Yu and Albaum 1999). Some studies also indicate that consumers in developing countries often place a higher value on products from industrialised countries (La Tour and Henthorne 1990; Kaynak *et al.* 2000; Okechuku and Onyemah 1999). Such phenomena may be explained by

consumers' tendency to perceive the quality of products produced in developing countries as inferior against those from developed countries (Jaffe and Martinez 1995; Okechuku and Onyemah 1999). As such, it is expected that the stereotyping toward industrialised countries is likely to be greater for consumers in developing countries compared with consumers from developed countries.

2.3.1 Preference for Home and Foreign Products

The existence of a predisposition to a developed country's products has resulted in consumers in these countries adopting a positive stereotyping of their own country's products and they are more willing to buy local goods (Ahmed *et al.* 1997; Orbaiz and Papadopoulos 2003) whereas consumers in developing countries tend to prefer foreign goods and show a negative bias toward local products (Okechuku and Onyemah 1999; Kaynak *et al.* 2000). In particular, consumers in developed countries such as US or Canada tend to rate products made in their country more highly and prefer to buy domestic products (for example see Liefeld 1993; Ahmed *et al.* 1997; Knight 1999; Chinen *et a.l* 2000), but consumers from developing countries such as Nigeria or Mexico prefer foreign made products even though they are unfamiliar with that foreign country and its products (Jaffe and Martinez 1995; Okechuku and Onyemah 1999). Okechuku and Onyemah (1999) assert that consumers in America are concerned with COO because they want to make sure they purchase a domestic brand while Nigerian consumers are more sensitive with COO because they do not wish to purchase a domestic brand product.

Based on the previous findings, it appears that favouring foreign products seems to be prevalent in developing countries. However, Cordell (1992) indicates that consumer preferences for industrialised goods tend to be product specific. For instance, many studies have shown that Japanese electronic products received high quality evaluations (for example see Tse and Gorn 1993; Kaynak *et al.* 2000) while food products from Japan received lower ratings (Kaynak and Cavusgil 1983). Although consumer bias is not uniform across all product categories, some studies report that a new brand or

product from countries with a positive image tend to be easier to gain acceptance by consumers, the reasons for this were discussed in section 2.2 (Tse and Gorn 1993; Lampert and Jaffe 1998).

Preference for domestic versus foreign products can also be explained by a range of variables, such as consumer ethnocentrism, country capability, product ownership, purchase involvement, availability of alternatives or price (for example see Han 1988; Elliott and Cameron 1994; Brodowsky 1998; Kaynak *et al.* 2000; Mohamad *et al.* 2000). In particular, it is generally agreed in the literature that consumer ethnocentrism is an important factor in determining consumer product evaluation and purchase intentions between local versus foreign products (for example see Shimp and Sharma 1987; Han 1988; Brodowsky 1998). Thus, the impact of consumer ethnocentrism can be significant in generating an intangible barrier for imported products. Further discussion on this issue will be given on section 2.5.2.

Moharmad, Ahmed, Honeycutt and Tyebkhan (2000) observed that preferences for home products are also dependent on the COO of the alternatives. When the alternatives originate from countries with lower levels of economic or technological development compared to those from the consumers' home country, they display a preference for the local product and vice versa. While Elliott and Cameron (1994) reported that positive home country bias is product-specific, their study found that consumers preferred locally made products for the majority of product types when price and quality were comparable to foreign competition. However, this does not seem to be the case for complexity items such as cars, dishwashers or fashion goods such as sunglasses or jeans (Moharmad *et al.* 2000; Acharya and Elliott 2003).

2.4 Transformation of Country-of-Origin

As indicated earlier in section 2.1, the major limitation of previous research in the COO field has been that it is wholly based on the made-in label or sometimes referred to as country of manufacture (COM) to investigate consumer behaviour toward products

from different countries. More recently it has been extended to includes issues such as a product's design country (COD) and parts/components supply country (COP) since the 1990s (for example see Chao 1993; 2001; Insch and McBride 1998). The need for such an extension has occurred for a number of reasons. One of the factors is the growing body of empirical findings which suggested that COO appeared to be a multi-dimensional cue, while design location and parts/components supply country were viewed as a latent variable in influencing consumer product evaluation (for example see Chao 1993; Ahmed and d'Astous 2001). Other studies indicated that the different COO sub-components might be associated with or affect distinct sets of product quality attributes (Tse and Lee 1993). If each sub-components of COO does not equally convey the same set of information in forming product quality impression, it implies that some COO constructs may have more influence in affecting consumer evaluation of products than others (Li *et al.* 2000; Chao 2001).

In fact, the main rationale for the COO extension is that many multi-national companies operate on a global scale through international sourcing to perform different functions for their products, in order to obtain lower production cost, greater profits and access to new markets is a necessity (for example see Chao 1993; Samiee 1994; Economic Review 2002). The practice of global production has led to products being designed in one country, with components parts supplied by another country, and manufactured in yet other country. Such global production sharing is particularly so in the case of automobiles (for examples see Ettenson and Gaeth 1991; Tse and Lee 1993; Jaffe and Nebenzahl 2001). For example, GM cars may be designed in Italy, have the engine and transmission components produced in Japan and be assembled in Mexico (Jaffe and Nebenzahl 2001). Other products type such as computer or TV also experience this global production (Tse and Lee 1993; Li *et al.* 2000). For example, an IBM PC may have a monitor from South Korea, memory and CPU chips from Japan and casting from Singapore (Tse and Lee 1993). The international production has made the idea of COO increasingly complex and less well-defined. Thus, the varied forms of global sourcing necessitate the acquisition of an understanding of how consumers react to hybrid products.

Research focusing on the sub-components of COO began in early 1990's. Table 2.2 summarises the COO studies which decomposed the COO cue into COD, COA and COP. As can be seen from this summary table, research effort in this area appears relatively modest even though it has been generally acknowledged that the hybrid product phenomenon needs more research attention (Leclerc *et al.* 1994; Samiee 1994; Jaffe and Nebenzahl 2001). Products with several countries-of-origin are not a new phenomena (Insch and McBride 1998), and is likely to continue due to global economic downturn which has intensified competitive pressures on firms in searching maximum cost advantage and the trend of globalisation has accelerated around the global (Economic Review 2002; Suh and Kwon 2003). More studies are warranted that allow greater understanding in the use of the multiple COO facets on consumer behaviour. In the next section, the influence of multiple COO that has been discovered in the literature will be delineated and their definition provided.

2.4.1 The Impact of Various Country-of-Origin Sub-Components

Despite the scant research on the effect of COO sub-components in the literature, there are some studies of relevance. In general, existing studies associated with hybrid products include design location, assembly/manufacture location and components/parts supply location as indicated in the discussion of section 2.4. Country-of-design (COD) can be defined as the country where the product was conceived, designed or engineered; country-of-assembly (COA) can refer to the country where the product is assembled or manufactured and country-of-parts/components (COP) is the country where the parts/ components are made (Insch and McBride 1998; Ahmed and d'Astous 2001). The limited empirical studies provided some evidence that each of these COO sub-component did have an influence on consumer's evaluation of product quality (for example see Chao 1993; Insch and McBride 1998; Dzever and Quester 1999; Li *et al.* 2000), with Jaffe and Nebenzahl (2001) asserting that the perception of assembly country and design location also varies by product type and attributes.

Table 2.2 Summary of studies in which the COO construct is decomposed into COD, COA & COP

Author(s)/Year	Main focus	Variables	Products examined
Chao 1993	Design quality perception	COD, COA, Price	TV
Ahmed & d'Astous 1996	Perception of quality Purchase value	COA, COD Brand, Price, Service	Automobile, VCR, Shoes
Insch & McBride 1998	Perceived design quality Perceived manufacturing quality Perceived overall quality	COD, COA, COP	TV, Mountain Bike, Shoes
Brodowsky 1998	Product beliefs Attitudes toward buying ethnocentrism	COD, COA,	Automobile
Li *et al.* 2000	Perceived quality	COD, COA, COC, Warranty	TV
Chao 2001	Product attitudes Purchase intention	COD, COA, COP	TV, Stereo system
Ahmed & d'Astous 2001	Perceived quality Purchase value	COD, COA, COP, Brand, Warranty	Automobile, VCR
Acharya & Elliott 2003	Perceived quality Purchase intention	COD, COA, Ethnocentrism	Car, Tinned Pineapple, Jeans

Notes: COC represent Country Origin Corporation

Chao (1993) conducted one of the first studies on COO with various COO sub-components: country-of-assembly/manufacture (COA) and country-of-design (COD). He used television sets in an experiment and his findings showed that the design and assembly location influenced consumers' quality evaluation of product, but there was no interaction effect in design country with assembly country. Thus he concluded that consumers perceived these variables as different dimensions, so that poor assembly sites could not compensate for a favourable design location. While Tse and Lee (1993) decomposed the COO cue into parts/components origin (COP) and assembly origin (COA) they found that COP and COA could determine overall product evaluation. Li, Murray and Scott (2000) conducted a similar study to Chao (1993), and their results revealed that COD was more important than COA in judging product quality but they supported that there was no interaction effect between COD and COA. In addition,

Ahmed and d'Astous (2001) observed that COD, COA and COP all had a relatively strong impact with respect to perceived quality, although they did not investigate the interaction effects in their study.

Insch and McBride (1998) studied the impact of multiple countries of origin by examining the COD, COA and COP simultaneously across two countries: US and Mexico. Their findings supported that the impact of the three sub-components of COO varied according to product category. For instance, COP affects quality ratings for television but had no impact on athletic shoes, while COD influenced the athletic shoes quality rating, which was not the case for television while country of assembly was significant for athletic shoes but not for mountain bikes. These results illustrate that some COO dimensions seem to carry more weight than other dimensions in affecting consumer product evaluation which was discussed earlier in section 2.4. Insch and McBride's study also found significant interactions between COD and COA on mountain bikes among US consumers, while Chao (2001) also observed the interaction effect between COA and COD for stereo systems. As such, it is expected that the interaction among various COO sub-components may also depend on product categories.

Apart from the above findings, Insch and McBride (1998) also indicated that the influence of these COO sub-components differed somewhat between countries and which has been highlighted in section 2.2.3. For example, COD is significant for mountain bikes in the US samples but not for the Mexican consumers, while COA has influence on quality perception toward TVs among US but not Mexican consumers. The authors attempt to explain the reason why COA was important to US consumers but not to Mexican consumers which might be attributable to consumers awareness that most televisions are produced in Mexico, and this familiarity with locally made TV possibly overrides the influence of COA cues. Whereas COD was of less importance for mountain bikes to Mexican consumers, this may be because this product is unfamiliar to them and not commonly used, which may have influenced their product judgment. Insch and McBride's work implies that consumers in developed versus developing

countries hold different values for COD, COA and COP in evaluating quality of product. Although, this may be because consumers seem to recognise the specialised competencies of their home country and such recognition of specialisation probably reflects how individuals react to these multiple COO facets.

Reviewing the past studies associated with COD, COA and COP toward consumer perception of product, it is revealed that the influences of each COO sub-component on quality evaluation are not equally shared across all consumers and products. Research carried out in this area so far, has been largely based on samples in developed countries, but the fact is that consumers' experience of hybrid products is not confined to developed countries, but rather exists everywhere in the world. The limited number of studies on developing countries raises the question of whether the same findings will hold true in other countries. Consequently, more research is needed in the study of the three COO sub-components across nations in order to draw a generalisation with respect to the value of COD, COA and COP from the viewpoint of consumers from developed countries versus those from developing countries.

2.5 The Moderating Variables of Country-of-Origin Effect

This section will first present a brief overview regarding the factors that may affect the COO effect on product evaluation and purchase intentions with special attention given to the distinction between preferences of local versus foreign products. Some potential shortcomings with respect to this area of research will also be highlighted. After that, the sub-sections will provide detailed discussion with respect to country capability in section 2.5.1, and consumer ethnocentrism in 2.5.2.

The impact of COO information on consumer purchase processes has generally been agreed upon by the majority of studies as indicated in section 2.2. However, its effect can depend on a range of moderating variables. Studies dealing with the COO effect comparing domestic versus foreign products have identified a variety of moderators (Orbaiz and Papadopoulos 2003). These variables ranged from animosity toward a

specific country (Klein *et al.* 1998), ethnocentric preference for domestic goods (Shim and Sharma 1987), to world-mindedness resulting in favouring foreign products (Rawwas *et al.* 1996) as well as the culture variation (Gürhan-Canli and Maheswaran 2000). Each of these factors can be important since they identify a range of potential consumers' reactions (Orbaiz and Papadopoulos 2003).

Among these moderators, consumer ethnocentrism has been suggested to be an influential factor in determining product favouritism and even purchases decision —i.e. local versus foreign made. This issue will be elaborated further in section 2.5.2.

As indicated in section 2.3, consumers generally perceived products produced in developing countries as inferior to those from the developed countries. It is likely that consumers in developing countries will also reject local goods in favour of foreign ones. However, such an assumption may not hold true for consumers in developing countries who believe their country's products are not of a lower quality. As such, it is anticipated that the consumer attitude of country capabilities may influence their preference between domestic and foreign sourcing. Further discussion related to this issue will be given in section 2.5.1.

Although research studies dealing with the key factors in distinguishing home and imported preferences, these efforts largely come from developed and western countries (for example see Lantz and Loeb 1996; Watson and Wright 2000; Yagei 2001). The moderators identified above have seldom been examined in developing markets, such as China. This study attempts to provide further understanding of consumer behaviour in developing countries relating to those factors that are perceived as important in the evaluation of domestic and foreign goods in the China market. More details about the status of COO studies in China will be discussed in section 2.6.

2.5.1 Country Capability

According to Roth and Romeo (1992), "the concept of country quality is really what makes the COO effect take place". Although there is no exact definition of this concept in the literature, substantial COO empirical studies provide a basis for such a concept, i.e., consumer perception of different capabilities of different countries to produce high quality products (Bilkey and Nes 1982; Han 1989; Roth and Romeo 1992; Johansson 1993). For example, most consumers are aware of Japan's ability to produce sophisticated electronic equipment. As a consequence of such perception these consumers give Japanese electronic products a higher ranking. However, the same electronic product produced in Indonesia will certainly not receive the same quality ranking because Indonesia is not viewed as capable of making technological or sophisticated products (Tse and Gorn 1993). This explains why consumers respond differently to identical products coming from various countries, which in turn affect their choice between local and foreign purchases. Such a claim has also been purported in section 2.3. To investigate how consumers perceive various countries' ability in producing quality goods, the measure of "country's level of economic development" is often used in the literature to examine product evaluation from (1) poorest developing countries, (2) other developing countries, (3) OPEC countries and (4) developed countries (Wang and Lamb 1983; Crawford and Lumpkin 1993; Chinen *et al.* 2000). However, such measure tends to be based on a cognitive approach so it can highlight consumer beliefs of products across different groups. This is limited as it is unable to capture which specific dimensions cause consumers to have different product evaluations.

Some studies have demonstrated that superior product quality, which could include such attributes as reliability or excellent performance from a particular country is an important factor in influencing consumers perceived product quality and purchase likelihood (for example see Roth and Romeo 1992; Okechuku and Onyemah 1999; Chinen *et al.* 2000). Okechuku and Onyemah (1999) report that superior reliability and technological advancement of foreign products is the main reason why Nigerian

consumers purchase foreign products. This finding suggests that the attitude held by consumers toward a country's production capability to produce quality goods has an important effect on COO, which directly affects product assessment and purchasing decision.

There are a range of product attributes associated with a country's production toward quality products. The literature has examined the influence of attributes related to product attributes such as durability, reliability, prestige, style, technology advancement or design etc (for example see Roth and Romeo 1992; Li *et al.* 1997; Chao 1998; Hui and Zhou 2003). Consumers generally give different ratings based on country's ability in relation to particular attributes such as German products tend to be perceived as the most reliable made with careful and meticulous workmanship (Han and Terpstra 1988; LaTour and Hentone 1990) while Japanese products are likely to be considered as innovative (Siu and Chan 1997). This explains why consumers display a preference for products made in some countries more than others (for example see Cordell 1992; Roth and Romeo 1992).

Since there are many product attributes, it may be difficult to identify any specialisation or particular capability of a specific country from the perspective of consumers. Thus, it is expected that the classification of product attributes into related categories such as design ability, assembly/manufacture ability and parts/components ability will enable the identification of consumer attitude toward country capability into specific areas and to meaningfully examine how it affects consumers reaction of products between local and foreign sources. Besides, Chao (1993) suggested that the identification of different specialised tasks for countries would enable firms to be more effective in promoting those features in their marketing programs and the exploration of cooperative ventures with other countries. Such classification therefore will also permit a country to have better understanding of its strengths and weaknesses. To measure quality via design, manufacture or parts aspects of countries, Insch and McBride (1998) have classified product attributes which are generally used in COO studies into design, assembly and components/parts and their measures will be used for the present study.

2.5.2 Consumer Ethnocentrism Tendencies

As indicated earlier in section 2.3.1, consumers' ethnocentrism influences product evaluations of domestic and foreign products. The impact of consumer ethnocentrism can be a significant factor in moderating the COO effect. Shimp and Sharma (1987, p.280) assert that "ethnocentric consumers believe it is somehow wrong to purchase foreign-made products because this will hurt the domestic economy, cause loss of job and perceived as unpatriotic". Such perception may have a certain bearing in consumer behaviour toward local goods and overseas ones.

Consumer ethnocentrism focuses on the appropriateness and morality perceived of purchasing foreign goods and the loyalty of consumers to domestically produced goods (Shimp and Sharma 1987). Lantz and Loeb (1996, p.376) assert, "ethnocentrism is the term which has often been applied to the home buying portion of the COO effect". The majority of COO research has shown that consumer ethnocentrism significantly affects product attitudes and purchase intentions toward domestically produced products as against foreign made ones (for example see Watson and Wright 2000; Suh and Kwon 2002; Shoham and Brenčič 2003).

To examine the level of consumer ethnocentrism, Shimp and Sharma (1987) developed a 17-item scale to measure the construct and named it the Consumer Ethnocentric Tendency Scale (CETSCALE). Consumers with a high level of ethnocentrism tend to emphasize the positive aspects of domestic products and to discount the virtues of foreign made items (Rawwas *et al* 1996), they are also more likely to purchase local product (for example see Acharya and Elliott 2003; Shoham and Brenčič 2003). Sharma, Shimp and Shin (1995) report that consumer ethnocentrism may result in an overestimation of the attributes and overall quality of domestic products as well as an underestimation of the quality of foreign products. A recent study found that high consumer ethnocentrism expresses positive beliefs and attitudes towards buying products locally designed and assembled (Brodowsky 1998). Nevertheless, Acharya and Elliott (2003) reported a weak relationship between consumer ethnocentrism and the

quality perception of domestically designed products, but a strong relationship for products domestically assembled and manufactured. This implies that further studies are needed to investigate the influence of consumers ethnocentrism tendencies associated with country of design, country of assembly and country of parts.

Considerable research on consumer ethnocentrism has been studied for more than twenty years (for example see Shimp and Sharma 1987; Lantz and Loeb 1996; Brodowsky 1998; Watson and Wright 2000). These past studies have provided a fundamental knowledge on the impact of consumer ethnocentrism in regard to the COO effect. Some past studies found that gender has an influence on the ethnocentrism tendencies (Wall *et al.* 1985; Good and Huddleston 1995). In these studies, Good and Huddleston (1995) found that females exhibited greater consumer ethnocentric tendencies than males, but Kamaruddin, Mokhlis and Othman (2002) indicated that there is no such relationship between gender and ethnocentric tendencies. While some studies reported non-ethnocentric consumers are generally those with higher income, other studies have found income does not moderate ethnocentrism tendencies (Han 1988; Good and Huddleston 1995). These inconsistent results suggest demographic characteristics are not an important determinant in reflecting the level of ethnocentrism tendencies.

2.6 Research on Country-of-Origin in Asian Countries

Studies in the area of COO have been performed extensively in North America (see Table 2.3) and have been extrapolated to a global marketing context. Substantial studies performed in America have ranged from single COO effect (i.e. where is a product made) investigation to the effect of various COO sub-components (i.e. COD, COA and COP) and have examined a range of different factors (e.g. ethnocentrism, global openness, price, product experience or warranty) which could mediate the COO. The past studies have covered a variety of product types from durable goods such as household electronic products like TVs, VCRs or stereo systems (for example see d'Astous and ahmed 1997; Li *et al.* 2000; Chao 2001) as well as automobiles (for

example see Han 1988; Choe and Cho 2000; Ahmed and d'Astous 2001) to non-durable goods such as shoes or apparel (for example see Khachaturian and Morganosky 1990; Good and Huddleston 1995; Kaynak *et al.* 2000). Such a large number of COO studies with broad coverage in different aspects have made significant theoretical and practical contributions (Jaffe and Nebenzahl 2001). However, the literature does not provide deep insight into the relationships with Asian market.

Table 2.3 clearly shows that western countries are dominant in most COO research, and our knowledge about the effects of COO issues on consumers living in other parts of the world has been limited (Li *et al.* 1997), especially those in Asia-Pacific countries. Although some studies have examined other national settings it is necessary to include more focused COO issues in non-American situations, including some non-western countries, which include the world's fastest-growing economies of China, India and Vietnam (Faber 2003). The many differences between the Asian market and the American market present a great challenge to the creation and implementation of international marketing strategies. Therefore, the need to extend COO works to non-western countries is imperative to understand such differences. China, in particular, has become an attractive target for foreign companies that look to expand abroad due to its favourable economic performance over a decade, coupled with a market of over one billion consumers. China represents a huge potential market for multinational companies (Li *et al.* 1997).

Expanding the COO studies outside a western environment is required not only because of the marketing opportunities or global trend but also to validate the previous findings. Due to the large differences in market structures and consumer behaviour between highly industrialised countries and newly industrialised countries, the findings relating to western developed countries may not necessarily apply to developing countries. This would be particularly true for a transitional economy such as China (Ahmed and d'Astous 1999). The present study will carry out research into the China market to see how similar and dissimilar the COO effect is between western and non-western markets.

Table 2.3 Summary of COO studies in various countries

Author(s)/Year	North America	Latin America	Euro area	Asia	Aust and N.Z.
Ahmed & d'Astous 1993	√	√			
Chao 1993	√				
Han & Terpstra 1988	√				
Han 1988	√				
Tse & Gorn 1993	√				
Okechuku 1994			√		
Elliott & Cameron 1994					√
Jaffe & Martinez 1995		√			
Zhang 1996				√	
Lantz & Loeb 1996	√				
Brodowsky 1998	√				
Chao 1998	√				
Insch & McBride 1998	√	√			
Knight 1999	√				
Yu & Albaum 1999				√	
Piron 2000				√	
Li *et al.* 2000					√
Watson & Wright 2000					√
Mohamad *et al.* 2000				√	
Ahmed & d'Astous 2001	√				
Yagei 2001	√				
Acharya & Eliott 2003					√
Hui & Zhou 2003	√				
Orbiz & Pysarchik 2003			√		

Notes: North America — U.S. and Canada
Latin America — Mexico
Euro area — Germany, Belgium and Spain
Asia — China, Singapore, Hong Kong and Malaysia
Aust & N.Z. — Australia and New Zealand

To date, only a few studies have been undertaken to examine the phenomena of COO product perception in China (see Table 2.4). The scarcity of studies provides limited information regarding such fundamental COO knowledge. As discussed earlier in this section, the current COO literature has contributed significantly in providing understanding of consumers in developed countries, especially in the US and Canada. Table 2.4 shows that COO studies in China has been limited and more effort is needed on the study of this market. Although a number of products have been examined in COO research in China, there are very few studies to investigate COO effect by using automobile, while past studies demonstrate that COO information has been particularly important with respect to automobiles.

Table 2.4 Summary of COO studies in China Market

Author(s)/Year	Measure	Product s examined
LaTour & Henthorne 1990	Product perception	TV, Fridge, Washing machine
Zhang 1996	Product attitudes	TV, Shirts
Li *et al.* 1997	Product image Country image	N/A
Klein *et al.* 1998	Product judgments Willingness to buy	TV, VCR, Stereo, Radio, Camera, Fridge
Ahmed & d'Astous 1999	Perceive quality Purchase value	Fridge, Camera, T-shirts
Ouyang *et al.* 2003	Purchase choice	Beverage

China's economy has grown rapidly in recent years and it has become a target market for many multinational firms. As China continues to open its market to foreign competition, it is believed that there will be fierce competition between domestic and foreign goods. Investigating this market together with its consumer perceptions and purchase intentions in relation to COO provides a theoretical understanding of COO in the context of non-western markets but will also benefit both local and foreign firms in capturing more opportunities and increasing market share as well as enabling sound decision-making in regard to global sourcing.

2.7 Conclusion

The research efforts carried out in this area support that the origin of a product appears to be an important contributing factor in determining how COO would be received or rejected by consumers in terms of product perceptions and purchase intent. Certain key attributes such as country capability and ethnocentrism, which can interfere with the COO phenomena, have been identified. Despite the proliferation of hybrid products in the global marketplace, the effect of the three COO sub-components has not been studied in depth. Neither are there significant studies in regard to preference between domestic and foreign sources across the COO sub-components of COD, COA and COP. Although it cannot be said that COO research almost exclusively focuses on western markets or highly developed countries, nevertheless the number of investigations involving Asian or less developed countries is relatively scarce. Therefore, this research aims to complement such knowledge by studying the fast growing developing country of China in relation to the three sub-components of COO – COD, COA and COP.

In the next chapter, a theoretical framework will be developed to illustrate each of the salient variables and their relationships related to the COO effect. Specific hypotheses will be offered in support of these propositions.

Chapter 3

Theoretical Framework and Research Hypotheses

3.0 Introduction

In chapter two, we examined relevant literature on COO studies associated with consumer behaviour. To consolidate the existing COO literature related to the proposed investigation, a theoretical framework will be developed drawing on this literature, which will provide a foundation for the current study, and allows us to examine the important variables and relationships. The identification of the salient variables together with their associations allows the development of a theoretical framework, thus providing a logical basis for establishing appropriate hypotheses for testing. This chapter will identify the major variables of interest in this study and describes the nature and direction of these relationships. First, section 3.1 will specify the dependent and independent variables, as well as their relationship to be examined throughout the investigation. Second, sections 3.1.1 to 3.1.4 will indicate the hypotheses to be tested for the present study. The last section 3.2 will provide a conclusion of this chapter.

3.1 Identification of Variables and Their Relationships

As indicated earlier in section 2.2 and summarised in Table 2.1, there are various dependent variables that have been measured across previous COO studies, such as product attitude, perceived quality, consumer preference, and purchase intentions. "Perceived product quality" is the most common dependent measure of the COO effect in many past studies (Lantz 1998). In several meta-analyses, researchers have also indicated that product-country image research is more appropriate when studied together with perceived product quality (Liefeld 1993; Peterson and Jolibert 1995; Verlegh and Steenkamp 1999).

For reasons that will become apparent in our investigation, the perceived quality of the product is of primary interest in this study. In addition to quality perception, the other dependent variable to be examined is purchase intentions. This variable has also been examined in various COO studies (for example see Okechuku and Onyemah 1999; Chao 2001; Wang and Chen 2004). The strength of the relationship between the COO information and the estimation of consumer purchase intention has been found to be relatively weak in comparison with quality perception (Peterson and Jolibert 1995; Verlegh and Steenkamp 1999). However, Lantz (1998) suggested that a rational assessment of product quality was likely to become a leading contributor in the intention of purchase. Hence, purchase intentions will be investigated in the proposed study together with product perceived quality.

The literature review in last chapter has helped to identify a number of attributes that are important to the present study. The independent variables and moderating variables for this study are given below.

The independent variables include:

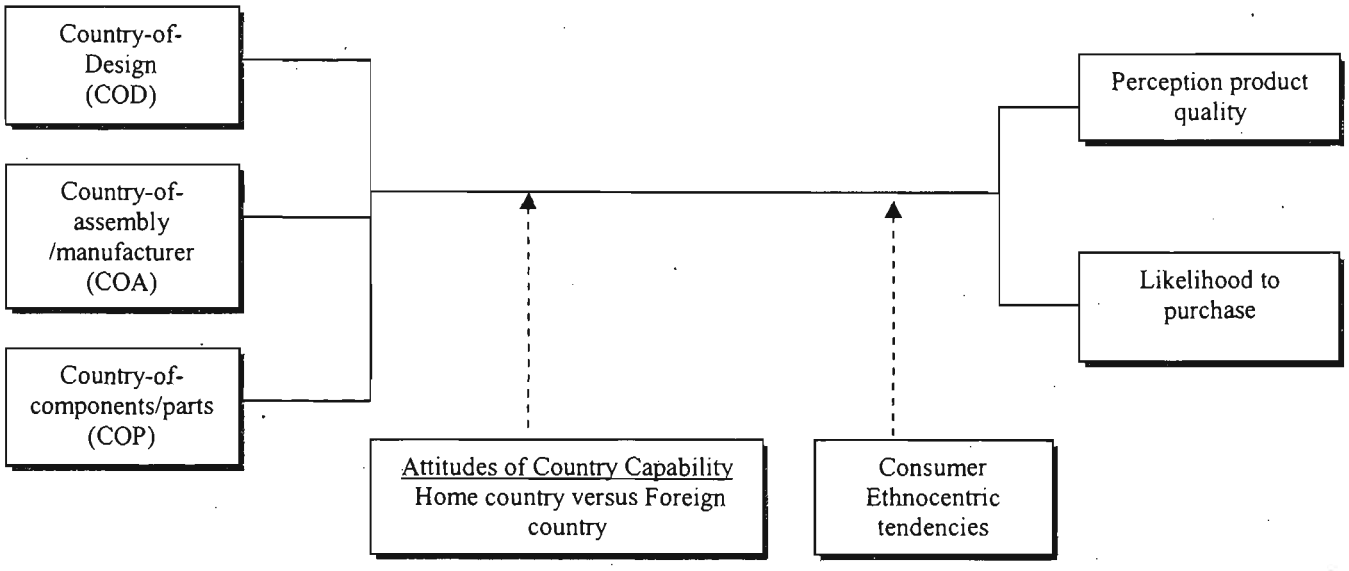
- country-of-design (COD) – the country where the product was conceived, designed or engineered
- country-of-assembly (COA) – the country where the product is assembled or manufactured
- country-of-parts/components (COP) – the country where the materials used in the product come from and/or the components/parts are made.

The moderating variables include:

- country capability – consumer perceived capabilities of different countries to produce high quality products
- consumer ethnocentrism – consumer loyalty towards domestically produced goods

A theoretical framework to be examined in this thesis is presented below, identifying possible relationships between the independent variables and the moderating variables. This framework highlights the focus of our study and the scope of the subsequent analysis. The relationships among the variables of interest will be discussed next.

Figure 3.1. Theoretical framework for assessing consumer product judgment



3.1.1 The Effect of the Three COO Sub-Components

The existence of the COO effect has been demonstrated in a variety of contexts and across a number of product classes (for example see Papadopolous and Heslop 1993; Peterson and Jolibert 1995). In chapter 2, a comprehensive literature review of COO issues was undertaken. In section 2.2, it has been explicitly stated that consumers had preconceived images of countries and that country image could affect consumers' quality evaluation of a product or service, which also influenced their purchase intentions. As such, this suggests that a possible relationship exists between the COO construct, product perception and purchase intentions. It has been suggested that the strength of this relationship appears to be relatively large for technically complex and expensive products (Liefeld 1993; Ahmed and d'Astous 2001). As indicated in section 2.2.2, several product categories have been extensively studied with regard to their COO effect, such as household electronic items and automobiles. Products associated with high perceived risk either socially or financially can lead to consumers seeking

more information to minimise making a wrong purchase decision. Therefore, it is anticipated that high involvement products are more appropriate for measuring the COO phenomena. It is for this reason that the present study integrates high involvement products in the experiments and these will be discussed further in chapter 4.

In the current business environment, the single country-of-origin designation does not adequately measure consumer reaction to products from various countries due to the acceleration of globalisation. The previous chapter (section 2.4 and 2.4.1) indicated that some researchers had already extended the single COO construct to cover other aspects (Chao 1993; 1998 McBride 1998; Li *et al.* 2000; Ahmed and d'Astous 2001), including country-of-design (COD), country-of-assembly/manufacture (COA) and country-of-parts/components (COP) in examining the COO phenomena. The distinctions have become highly important with the rapid globalisation of businesses and cross-country collaborations in global manufacturing (Chao 1993; Sikand 1999), and have led to the traditional use of the made-in concept in measuring COO effect as inadequate, since they are not able to effectively capture the relationship between the multiple countries production and overall product evaluation. To address this issue, the present study decomposes the COO construct into three sub-components: country-of-design (COD), country-of-assembly (COA) and country-of-parts/components (COP) to investigate COO phenomena in a multiple dimension context. The relationship between the various COO sub-components and product judgment has been examined in the literature as indicated in section 2.4 and 2.4.1, while several studies have generally confirmed the influence exercised by these COO sub-components (Tse and Lee 1993; Chao 1993; Insch and McBride 1998). Based on the above considerations, the following hypotheses are formulated for testing.

H1a: Consumer perception of product quality and purchase intention is influenced by *Country-of-Design (COD);*

H1b: Consumer perception of product quality and purchase intention is influenced by *Country-of- Assembly /Manufacture (COA)* and;

H1c: Consumer perception of product quality and purchase intention is influenced by *Country-of-Parts/Components (COP)*

3.1.2 The Interaction Effects

As indicated in section 2.2.2 and 2.4, the COO effect tends to be product specific (for example see Liefled 1993; Zhang 1996; Lampert and Jaffe 1998) while such patterns seem to exist in the three COO sub-components. It is observed that consumers appear to attach somewhat different importance toward the various COO sub-components. Some COO sub-components may have more influence with respect to judging quality for one product type but has lesser impact for another (Insch and McBride 1998; Li *et al.* 2000). For example, Li, Murray and Scott (2000) found that COA was less important for television sets than COD while Insch and McBride (1998) indicated that COA appeared to have greater importance than COP for shoes. In addition, Ahmed and d'Astous (2001) suggested that COD, COA and COP tended to have a relatively stronger effect on complex products such as automobile compared with relatively less complex products such as VCRs. According to these studies, it seems that consumers make a distinction toward various sub-components of COO in the evaluation of product quality, while each COO sub-component may carry different sets of information toward related product attributes.

In general, consumers appear to show more positive attitudes when congruency of sourcing location exists between COD, COA and COP, especially from favourable countries such as US designs, assembly and part/components (Chao 2001). This is similar to brand and product made-in country congruency (e.g. Sony TV made in Japan) which is likely to produce positive influences on product beliefs or attitudes (Tse and Gorn 1993; Hui and Zhou 2003). As discussed in chapter 2, past findings suggest that the effect of COO sub-components did not seem to have equal weight in affecting consumer judgment of product quality (Insch and McBride 1998; Li *et al.* 2000). Thus, even if a product is not sourced from a country with a favourable 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 favourable sourcing location (e.g. designed in Japan).

Chao (2001, p.69) posited that "consumer attitudes toward a negatively valued object can be expected to be adjusted to become less negative when associated with a more positively valued object". For instance, COD found in previous studies tended to be more important than COA for quality evaluations in TV sets (Li *et al.* 2000). The earlier sections (2.2.3 and 2.3) also mentioned consumers were likely to be favourable for products from US or Japan, but unfavourable for those from Indonesia or Mexico, and developed countries appear to be a particular advantage in design areas (Chao 1993; Ahmed and d'Astous 2001). As such, 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 unfavourable assembly location by favourable design location may reduce negative evaluation due to negative assembly countries. Based on this, we formulate the following related hypothesis:

H2: The COO sub-components of COD, COA and COP will interact to influence the evaluations of product quality and purchase intention

3.1.3 The Moderating Effect of Country Capability

Studies associated with the COO issue in the context of domestic versus foreign products have identified several key factors in moderating the COO effect (Shim and Sharma 1987; Rawwas *et al.* 1996; Klein *et al.* 1998). As discussed in section 2.5.1, attitudes of country capability to produce quality goods appear to have an impact in affecting consumer evaluation of products and purchase from a particular country (Okechuku and Onyemah 1999). In previous sections 2.3 and 2.3.1, it was indicated that consumers in developed countries tend to have more positive stereotyping toward their home country products while consumers from developing countries appear to have a negative bias of domestic source (for example see Jaffe and Martinez 1995; Ahmed *et al.* 1997; Knight 1999; Kaynak *et al.* 2000). Such differences may be due to consumer beliefs that workers of developed countries that are more technologically sophisticated so they are more capable of making quality products (Li and Monroe 1992; Ahmed and

d'Astous 2001). Therefore, it is anticipated that the effect of consumer perceived country capability will have an influence in forming product impressions and purchase intent between domestic and overseas sources. However, there are not many previous studies focused on the attitudes of country capability in the distinction of local and foreign preference toward the effect of COO sub-components, as indicated in section 2.5.1. It is proposed that the perceived country capability will moderate consumer judgment of product quality and purchase on the three sub-components of COO. Based on this, we formulate the following hypothesis:

H3: The impact of COD, COA and COP on consumer perception of product quality and purchase intention will be moderated by *country capability*

3.1.4 The Moderating Effect of Consumer Ethnocentrism

As discussed in section 2.5.2, another important factor affecting COO relationships is the consumers' level of ethnocentrism tendencies (Shimp and Sharma 1987; Han 1988; Brodowsky 1998). For instance, consumers with higher ethnocentrism tendencies tend to have more positive attitudes towards local products and display less receptiveness toward those from foreign sources (for example see Lantz and Loeb 1996; Brodowsky 1998; Watson and Wright 2000). The influence of consumer ethnocentrism on COO effect has been examined in the literature, which indicates that consumers level of ethnocentrism can lead to a preference for domestic design and manufacture (Brodowsky 1998; Acharya and Elliott 2003). These consumers are also likely to choose and purchase local goods, even though they may concede that foreign products are superior, due to a concern of morality under threat from imports toward personal or national well-being (Sharma *et al.* 1995; Acharya and Elliott 2003; Wang and Chen 2004). To date, there does not seem to be any study focusing on whether such a moderator has an impact on the country of parts. Given that ethnocentric consumers perceive they have a moral obligation toward their own country (Shimp and Sharma 1987; Han 1988; Wang and Chen 2004), they prefer domestically designed and manufactured goods, and this is likely to extend to parts/components aspect of COO because this also supports the domestic economy and would maintain employment.

Therefore, this thesis proposes that consumers with a high level of ethnocentrism are likely to hold a more favourable view of products with the three COO sub-components of home country. Such a proposition leads to the following hypothesis:

H4: The impact of COD, COA and COP on consumer perception of product quality and purchase intention will be moderated by the *level of consumer ethnocentrism*

3.2 Conclusion

This chapter has identified the possible links between the specific variables of interest in the current study. The integration of the variables based on the theoretical framework had led to the development of the proposed research model and the hypotheses to be tested. The development of the hypotheses facilitates the process of testing the theory of COO on consumer buying behaviour in the context of non-western market. The next chapter will describe the research methodology used to achieve the objectives of the study.

Chapter 4
Research Methodology

4.0 Introduction

The choice of a research methodology for any study should be determined by the nature of the research (e.g. exploratory or descriptive) under investigation. Studies related to COO on consumers evaluative reactions to products and purchase intentions have been studied for almost forty years (Papadopoulos and Heslop 2002; Dinnie 2004). This substantial body of empirical research has provided a broad range of approaches for examining the COO effect. Table 4.1 summarises the methodology used in various studies, which are drawn from Table 2.1 in chapter 2. As explained in section 2.1, the reason for the selection of these studies is because they examined multiple cues to investigate the COO phenomena, a similar focus to this thesis. As can be seen from Table 4.1, past COO studies have predominately used quantitative research with the survey method for data collection, and multivariate analysis techniques such as Multivariate Analysis of Variance and Conjoint Analysis. The subjects used in past studies consist of both student and non-student samples with sample size varying from approximately 100 to 800 respondents. Although there is an on going debate in the use of student sampling, it is generally agreed in the literature that there is no significant difference in COO effect between students and actual consumers (Liefeld 1993; Peterson and Jolibert 1995).

Given the large body of research available in the marketing literature on COO studies, the development of research design for this study is therefore guided by past COO studies. The purpose of this chapter is to specify and justify the use of appropriate methods in our investigation. The next section 4.1 will begin with the formulation of the research design, followed by the sampling design presented in section 4.2. Section 4.3 focuses on the development of the questionnaire, the process of pre-testing the questionnaire and the results of reliability tests using data collected from the pre-tested

respondents. The next section 4.4 is concerned with the procedure of data collection for the main study and the following section 4.5 is concerned with the selection of data analysis techniques. The last section will furnish a conclusion for this chapter.

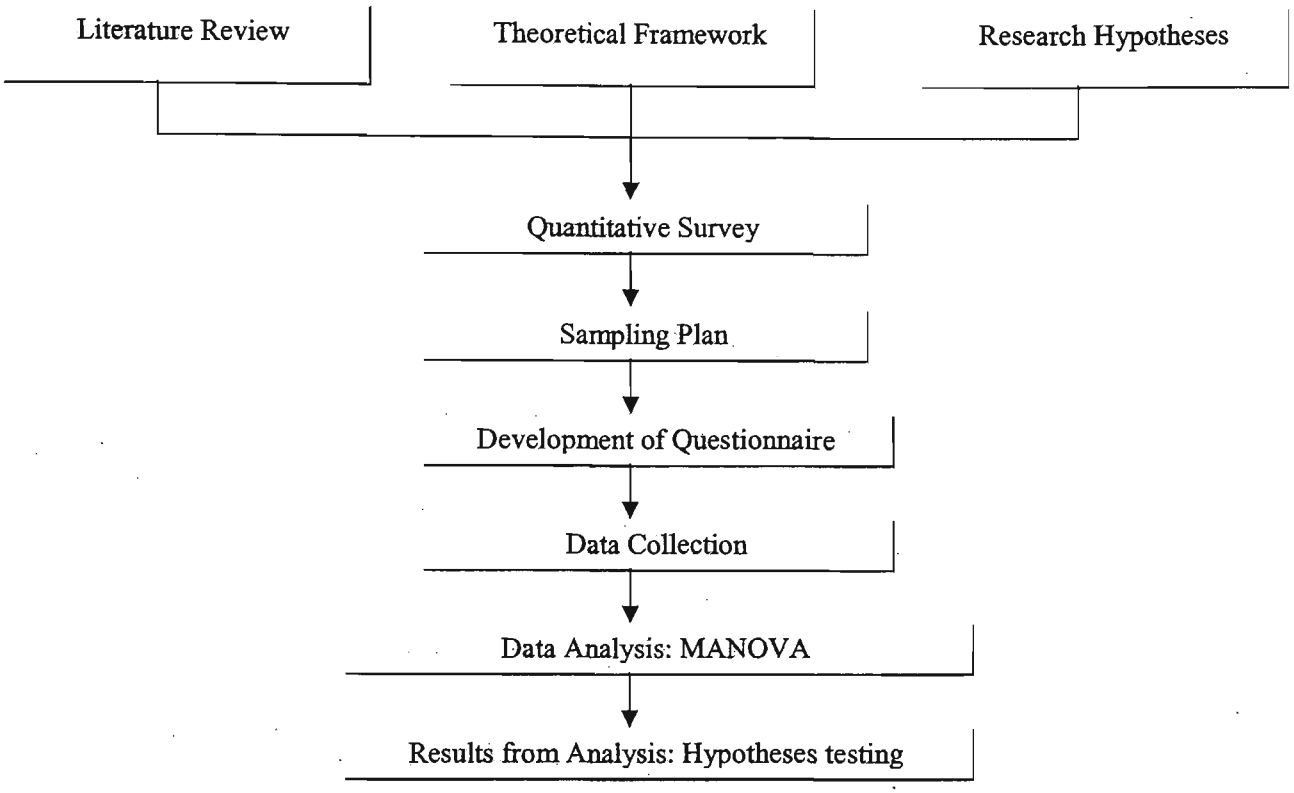
Table 4.1. Summary of research methodology in COO studies

Author(s)/Year	Subjects	Sample size	Data collection	Data analysis
Wall *et al.* 1991	Non-students	250	Survey	ANCOVA
Tse & Gorn 1993	Students	153	Survey	MANOVA
Jaffe and Martinez 1995	Non-students	228	Survey	MANOVA
Lantz and Loeb 1996	Students	74 in Canada 114 in US	Survey	Conjoint Analysis
Zhang 1996	Non-students	300	Survey	MANOVA
Brodowsky 1998	Non-students	393	Survey	MANOVA
Li *et al.* 2000	Students	319	Survey	MANOVA
Watson & Wright 2000	Non-students	421	Survey	ANOVA
Kaynak *et al.* 2000	Non-students	196	Survey	Correspondence Analysis
Pecotich and Rosenthal 2001	Students	87	Survey	MANOVA
Yagei 2001	Students	172	Survey	Regression Analysis
Chao 2001	Students	720	Survey	ANOVA
Ouyang *et al.* 2003	Students	100	Survey	Conjoint Analysis
Acharya & Elliott 2003	Students	248	Survey	Conjoint Analysis

4.1 Research Design

Past studies have provided guidance in the formulation of research design for obtaining the information needed. The present study adopts a quantitative approach using a survey method. As shown in Table 4.1, the selection of survey techniques for collecting data in previous COO studies is prevalent. The use of quantitative research enables the researcher to measure the phenomena under investigation (Sekaran 1992; Bordens and Abbott 2002); the sample size of quantitative research tends to be relatively large and representative so that it allows the use of statistical techniques for analysing the raw data (Bordens and Abbott 2002; Malhotra *et al.* 2002); the questions asked in the survey have a structured format and are presented in a prearranged order, which adopts a standardised approach in the data collection process (Malhotra *et al.* 2002). The research findings are therefore seen as objective, conclusive, and verifiable truths (Cavana *et al.*2001). This explains why numerous COO studies are performed using quantitative research. The design of questionnaires was drawn from the established survey instruments used in past COO studies, while further details related to the development of the questionnaire and measurement will be discussed in sections 4.3 and 4.3.1.

Figure 4.1 Research Design for the study



4.1.1 Country Selection

Data collection for the current study was carried out in mainland China, by surveying students enrolled in courses offered by one Australian University (details about sampling issue will be discussed in section 4.2). In this study China constituted the domestic product source and Germany, the country of foreign product source. There are several reasons in selecting these countries for our investigation. As discussed in the literature review (see section 2.6), much of the COO research has been dominated by studies carried out in Western and developed countries such as US and Canada. There is not much investigation relating to developing countries such as China in the COO field. Due to the differences in values, market structures and consumption pattern between Western nations and Asian countries (Ahmed and d'Astous 1999; Wang and Chen 2004), the results found in developed countries may not be generalisable to the developing countries. Thus more studies associated with developing countries are needed to validate the previous works. In addition to this, some researchers also suggest

that studies in countries where consumers did not know or were not familiar with the products might produce biased results (Samiee 1994; Dinnie 2004).

Consumers should generally be familiar with their home country's products so that Chinese consumers presumably are most familiar with products produced in China (Li *et al.* 1997). The selection of the foreign country in the experiment should be such that its products are also familiar to the Chinese respondents so as to minimise biased results. Hence, Germany was selected as the Country-of-Origin of foreign source in this research because they have a long history of trade and substantial investment in China. In 1972, the trade volume between the two countries was only US$274 million (People's Daily 2000) and yet it has reached a record high of more than US$40 billion in 2003 (Yin 2004), with most of the invested projects are concentrating in modern and high-tech production fields (People's Daily 2000).

In relation to the automobile industry, Germany was the first foreign investor in the China market (Liu and Deng 2003) with Volkswagen entering its first joint venture with China back in 1984 and a second one in 1987 (Wattanavitukul 2002). Many Chinese, including government officials, drive cars produced by Volkswagen in partnership with local automobile makers (Jebsen Consult 2001; Liu and Deng 2003). Wattanvitukul (2002) reported that the above two joint ventures between Volkswagen and local automobile manufacturers captured over 50% of the market share in China. Apart from the automobile industry, other German firms such as Siemens, which manufactures mobile phones also entered China. Thus, it is believed that Chinese consumers are familiar with products from Germany, especially motor vehicles. In fact, Japan was also a consideration for inclusion in the experiment, but it was excluded because of the concern that Chinese consumers might view Japan negatively due to past acts of aggression. Such animosity toward a foreign nation can affect consumers' buying behaviour of products from a given country (Klein *et al.* 1998).

4.1.2 Product Choice

The influence of COO towards consumers can vary by the product types. The selection of reference products for our study relates to high complexity and involvement products: automobiles and digital cameras. The selection of these products in the experiment is believed to be suitable and appropriate. Firstly, there is a growing demand of vehicles either for new buyers or for the replacement of old vehicles in China (Jebsen Consult 2001). The sales volumes of automobiles has increased every year over the last 15 years and the growth in vehicle demand is projected to expand further due to the rapid economic growth and the reshaping of the China automobile industry after joining the WTO (Jebsen Consult 2001; Jiang 2004). Xinhua (2000) also reported that over 70% of Chinese households in cities were planning to buy cars, and it was predicted that the peak period in car consumption would be between 2005 to 2010. Secondly, the literature as reviewed in chapter two indicated that automobiles had been examined by many COO studies with most of the studies finding a relationship between the COO cue and the consumer evaluation of product or purchase intent (for example see Lawrence 1992; Ahmed and d'Astous 1996; Okechuku and Onyemah 1999). Therefore, automobiles are a suitable product in examining the COO effect.

In addition to automobiles, digital cameras are also in high demand in the China market. According to Topology Research Institute (TRI 2002), the growth of digital camera sales was over 120% in 2002 compared with 2001 in China. The market demand for digital cameras is continually rising and this may be due to the increase of outbound and interstate travel that boosts the consumption (TRI 2002). Hence, it is anticipated that this item would be of relevance and interest to most Chinese consumers. Although digital cameras do not appear to share the same level of complexity as automobiles in product evaluation or purchase decision, this item can be considered as a high involvement product in China. Anderson and He (1998) revealed that cameras are viewed as a luxury good and its ownership demonstrated material success in China, since buying a camera may take a month's income. Thus, it is expected that the digital camera probably carries certain financial or social risks for Chinese consumers so that more stringent requirements were placed on making the right decision by seeking more

product information. Consequently, the digital camera was also examined in the present study.

4.1.3 Experimental Design

The use of factorial design in experiments is prevalent in many COO studies, especially research involving hybrid products (for example see Brodowsky 1998; Insch and McBride 1998; Chao 1998; 2001; Acharya and Elliott 2003). This design is used to measure the effects of two or more independent variables at various levels and allows for interactions between variables (Malhotra *et al.*2002; Bordens and Abbott 2002). By using factorial design, it allows researchers to manipulate the production location with respect to COD, COA and COP at predetermined levels to examine the hybrid products at each possible scenario in the experiment.

The 2 X 2 X 2 factorial design was used in our investigation for examining the effect of the three COO sub-components with two levels of design location (Germany/China), two levels of assembly location (Germany/China) and two levels of parts/components location (Germany/China). By varying these COO sub-components across Germany and China, it makes a total of 8 different combinations of treatments, and Table 4.2 displays all possible scenarios, which are being examined in the experiments. Both automobile and digital cameras are employed in 8 separate scenarios (i.e. 16 overall) and respondents were presented advertisements for each. Each respondent was randomly assigned into 2 of the 8 different treatments, with one scenario for an automobile and another scenario for a digital camera (i.e. each person responded to two scenarios).

Table 4.2. Treatment of the present study

Treatment	Design country	Assembly country	Components country
Scenario1	China	China	China
Scenario 2	China	China	Germany
Scenario 3	China	Germany	China
Scenario 4	China	Germany	Germany
Scenario 5	Germany	China	China
Scenario 6	Germany	China	Germany
Scenario 7	Germany	Germany	China
Scenario 8	Germany	Germany	Germany

Although several studies have found the between-subjects design produce smaller effect size than within-subjects (for example see Liefeld 1993; Verlegh and Steenkamp 1999), the use of between-subjects design first enables us to avoid the potential carryover effect on participants and reduces the time needed to complete the study (Bordens and Abbott 2002). If respondents are required to evaluate all 8 treatments with both products (i.e. 16 scenarios), they may respond differently to each treatment not because they feel the difference toward a scenario, but because of the difference in information (Han and Terpstra 1998). Moreover, if subjects are exposed to all the experimental treatment conditions, they may be aware of the actual purpose of our study and hence threaten external validity. Therefore, within-subjects design is not considered for examining the effect of COO sub-components on product judgment and purchase intentions.

The discussion in the literature review also underlined that two moderating variables consumer ethnocentrism tendencies and attitudes of country capability also needed to be included. Various studies have found these to moderate the COO effect between domestic and foreign sources. Thus, each respondent was asked to respond to a set of statements in order to investigate their ethnocentrism tendencies and what attitudes of country capability consumers held between domestic and foreign countries. The data analysis across these variables will be undertaken using MANOVA, which we will further discuss in section 4.5.

4.2 Sampling Design

The first step in the data collection was to identify the correct population group from which the sample should be drawn. The target population of our study therefore should be those likely to purchase or have already consumed either of the reference products, because these subjects are believed to have greater interest in commenting on the scenario. As such, student sampling is utilised for data collection while only those students who study in a local university that has a foreign program were selected to participate in the study. Although the household wealth in China is growing, the population that have direct income to purchase durable consumer goods such as cars or cameras are normally from the families with a higher income level. It is believed that the majority of students attending foreign cooperation programs in local institution partnerships generally come from high-income families, because of the high course fees. For instance, the tuition fees for most local universities in China are RMB6,000 approximately per year, while fees in the collaborative program examined are approximately RMB25,000 per year. Hence, students studying in "Sino-Overseas cooperation programs" are likely to have greater income, so they are more likely to be actively involved with our reference products or influence purchase decisions.

Some researchers have been concerned that student based samples may produce biased findings and limits the level of applicability in actual consumers (Liefeld 1993; Samiee 1994). As indicated in Table 4.1, student samples are commonly used in COO research. Several COO review studies using meta-analysis reported that there was no difference in quality perceptions between students and non-students in COO studies. However, in past studies the effect of COO on purchase intention was relatively low compared with perceived quality (Peterson and Jolibert 1995; Verlegh and Steenkamp 1999). This may be explained by the fact that students usually confront financial constraints differently compared with samples of consumers and business people (Peterson and Jolibert 1995). Yet China potentially represents a unique and distinctive market compared to other countries due to the effect of one-child policy, which has led to the average size of the families becoming smaller with the birth rate declining. These single children in the families are often called "Little Emperors" (DSMR 2001). They have significant

influence over their family's consumption behaviour such as brand choice, shopping location, information access, entertainment programs and family fashion as well as creating various patterns of demand for household goods (DSMR 2001). According to Li (1997) and DSMR (2001), the most dynamic consumer segment in China today is the population of 18-34 year olds; they are knowledgeable about product choices and have more disposable income to spend because they often still live with parents as well as receive different types of material goods from grandparents, aunts and uncles.

In addition, Lo (2001) revealed that among the people with a higher education level in China, there were a greater proportion of car owners. Although the sample of university students in the present study may not have sufficient resources to purchase cars at the moment, they will have a greater potential to be car buyers in the future when they go into workforce. In other words, these university students probably represent the future consumers in the automobile market. This suggests that student sampling is acceptable in collecting data because one of the reference products in the experiment is a car. In fact, studies also indicated that one of the issues that researchers commonly confront is the difficulty in collecting data in China (Li *et al.* 1997). The use of students is therefore deemed to be appropriate and suitable for this study.

It was planned to have 40 responses for each of the 8 treatment cells in order to provide a stronger test of the empirical generalisability of our findings. Each subject was required to evaluate two alternatives (one for automobile and one for digital camera); this means that 320 participants are required for our experiment. Such sample size is considered to be adequate because in Peterson and Joliber (1995), it is reported that effect sizes of the COO issue can be meaningfully measured when the sample size is larger than 260. Most importantly, Hair, Anderson, Tatham and Black (1995) suggest that the number of respondents in each treatment cell should be greater than the number of dependent variables included. There are five dependent measures in the current study; thus the inclusion of 40 subjects in each group is statistically sufficient for the experiment. In survey research, however, the researcher has less control over the achieved sample due to several common problems such as refusal to participate or

incompleteness of the questionnaire (Hair *et al.*1995). Hence, the actual number of questionnaires distributed in the field is more than the expected sample size.

4.3 Questionnaire Design

As indicated in section 4.1, the survey method was chosen as appropriate for the present study since questionnaires for collecting data enables one to directly question participants about behaviour such as their attitudes, beliefs or intentions (Bordens and Abbott 2002). The use of survey questionnaires allows one to obtain the relatively precise information needed by carefully designing and developing the questions. In other words, all of the questions to which participants respond in the questionnaire should reflect the objectives of the research.

The theoretical framework described in chapter three provides a basis for developing the questionnaire. The key variables drawn from the literature review relevant to our research topic have been clearly defined (see Figure 3.1), while the kind of relationships that might exist across these variables had been formulated into hypotheses (refer to section 3.1.1 to 3.1.4). These key variables and their potential relationships underlie what information is needed to be collected for the research project. To translate the necessary data into a set of specific questions for testing the research hypotheses, the survey measurements were drawn from past COO literature that met our research objectives with the additional test of reliability in this study. Further details for each measurement are given as follows.

4.3.1 Measurement

The self-completion questionnaire comprises of three major sections in addition to the demographic questions. The first section explored the consumer attitudes of country capability in relation to the design, assembly/manufacture and components/parts aspects toward their home country (i.e. China) against those of foreign origin, which included Germany, Japan and US. These countries were selected because they are the three top car-making countries and have been fierce rivals for China's market (Mu 2001), while

other consumer goods such as digital cameras produced by US Kodak or Japan Sony are also prevalent in China (TRI 2003). Thus, it is believed that Chinese consumers should be somewhat familiar with these country's products. In addition, the arrangement of evaluating four countries is also to minimise the demand effect. As indicated in section 4.1, Germany as a foreign source was the main focus in comparison with the domestic source of China in examining the COO effect. These two countries were employed in the experiment to determine their impact on quality perception and purchase intentions. If respondents are assigned to evaluate two countries (China and Germany) in the section of country capability instead of four countries, then as they move on to the next section of product assessment and the same country information was exposed, the respondents may begin to draw inference of what the survey is about (e.g. the comparison of two countries only) which differs from the intended purpose of the study. Thus, it is decided to have four countries in this section to reduce such demand effect.

For each country, respondents were asked "Please evaluate the ability to produce durable goods (e.g. car or television) from the three aspects: design, manufacture/assembly and components quality of the following countries (i.e. China, Germany, Japan and US)" and they are required to indicate their opinion on a semantic differential scale. The 14-item scale developed by Insch and McBride (1998) was used to measure the attitudes of country capability because such scales enable one to measure the three production capability of a country in producing related goods. These items include:

- 7 items concerned with design capability: unimaginative (1) to creative (7), unattractive (1) to attractive (7), obsolete (1) to state-of-the-art (7), inefficient (1) to efficient (7), common (1) to exclusive (7), poor performance (1) to excellent performance (7), and inferior product design (1) to superior product design (7);

- 4 items toward assembly capability: poor workmanship (1) to excellent workmanship (7), flimsy (1) to sturdy (7), low durability (1) to high durability (7) an unsatisfactory assembly (1) to exceptional assembly (7);

- 3 items refer to components/parts capability: shoddy components (1) to excellent components (7), unreliable components (1) to reliable components (7) and poor components quality (1) to excellent components quality (7).

The original scale was a 5-point scale but it is believed that using a 7-point scale enables greater variance to be captured. By extending the response options, it will allow finer discrimination among each construct (Malhotra *et al.* 2002), reveal wider differences in the phenomenon being investigated, and yield better variability (DeVellis 2003). The scores of each item of specific constructs were aggregated together to produce an overall design, assembly/manufacturer and components/parts capability toward countries. To ensure that the set of items to each specific constructs can be summed, it is therefore important to run the reliability tests in ensuring that each item consistently captures a specific constructs under investigation (Malhotra *et al.* 2002). Further details related to this and the results of the reliability coefficient will be presented in the section 4.3.3.

The second section of the questionnaire forms the main focus of this study. Respondents are required to make product judgment and indicate their purchase intentions for various products. The dependent variables used throughout the experiments were "overall perceived product quality" and "purchase likelihood", which are the most commonly employed measures in COO studies as discussed in chapter three (section 3.1). In this section of the questionnaire, two copies of an advertisement showing a picture of car first, and then a digital camera, both accompanied by product features, price and a series of structured scenarios of product origin with respect to country of design (China or Germany), country of assembly (China or Germany) and country of parts (China or Germany). A realistic market price was specified in order to minimize bias response and should provide data having greater validity. All respondents received identical information with product attributes and price except for the COO information in the experiment. As described in section 4.1.3, there were 8 different production scenarios being examined in this study such as German design, Chinese parts/components and assembly or Chinese design and assembly with German parts/components (see Table

4.2). Thus, the eight different survey questionnaires were developed and respondents are randomly assigned to a set containing one for automobile and one for digital camera.

Each respondent was requested to answer two questions after examining the products displayed in the ads, which included "Please indicate your opinion of the above automobile/digital camera" and "Please indicate how likely you will purchase the above automobile/digital camera if it was available". The items used to measure the dependent variable related to quality perceptions drawn from Chao (1998) with four 7-point scales items include poor workmanship (1) to excellent workmanship (7), not durable (1) to very durable (7), not reliable (1) to very reliable (7) and poor quality (1) and excellent quality (7). The adoption of Chao's scale was used because his earlier study had used such items to measure quality perception while the design, manufacture and components locations were manipulated. With respect to other dependent measure of purchase intentions, respondents were asked to indicate their purchase estimation on the 7-point scale: very unlikely to purchase (1) to very likely to purchase (7).

The third section determined the level of consumers' ethnocentrism tendencies, using Shimp and Sharma's (1987) original CETSCALE. Respondents are asked to respond to a set of 17 statements (see Table 4.3), which measured the construct of the ethnocentric tendencies. Respondents were required to indicate the level of agreement across these statements using a 7-point scale (1 = strongly disagree to 7 = strongly agree). The 17 items are aggregated to form a total ethnocentrism score for each respondent, while the mean value of ethnocentrism tendencies from our study will be used to determine whether participants have a high level of ethnocentrism or low ethnocentrism tendencies. Further details related to this will be presented in the next chapter. Moreover, the scale had been tested in several countries such as West Germany, France, Japan, India, Taiwan and China (for example see Netemeyer *et al.* 1991; Pereira *et al.* 2002). Results confirmed that the CETSCALE's unidimensionality and internal consistency was reliable across these countries.

Table 4.3 The Consumer Ethnocentrism Scale: CETSCALE

1. Chinese people should always buy China-made products instead of imports.
2. Only those products that are unavailable in the China should be imported.
3. Buy Chinese-made products. Keep Chinese working.
4. Chinese products, first, last, and foremost.
5. Purchasing foreign-made products is un-Chinese.
6. It is not right to purchase foreign products, because it puts Chinese out of jobs.
7. A real Chinese should always buy Chinese-made products.
8. We should purchase products manufactured in Chinese instead of letting other countries get rich off us.
9. It is always best to purchase American products.
10. There should be very little trading or purchasing of goods from other countries unless out of necessity.
11. Chinese should not buy foreign products, because this hurts China business and causes unemployment.
12. Curbs should be put on all imports.
13. It may cost me in the long-run but I prefer to support Chinese products.
14. Foreigners should not be allowed to put their products on our markets.
15. Foreign products should be taxed heavily to reduce their entry into the China.
16. We should buy from foreign countries only those products that we cannot obtain within our own country.
17. Chinese consumers who purchase products made in other countries are responsible for putting their fellow Chinese out of work.

Response format is a 7-point Likert-type scale (strong agree = 7, strong disagree = 1).

The last section provided demographic questions relating to product ownership, purchase involvement in decision making, gender and income. As indicated in the section on sampling design, the university students of our sample are unlikely to have a car now but rather their family may have already purchased a car so the question of product ownership for cars is more focused on family ownership. Dichotomous questions were used and respondents were asked to respond to the question "Have you or any one in your family ever purchased an automobile/digital camera?" If respondents have consumed any of these products, they were required to specify the brand they had purchased toward both products. The next question was about whether respondents have

an influence on such purchased decision. If so, they were also required to specify the degree of involvement in that buying decision on the scale: (1) extremely low involvement to (7) extremely high involvement. There are three questions related to demographics such as age, gender and annual income level are included at the end of the questionnaire. Respondents first were asked to indicate their gender and then specify their age. The last question required respondents to provide their annual household income under a predetermined set of responses with five levels: below RMB30,000; RMB30,000 — RMB50,000; RMB50,000 — RMB70,000; RMB70,000 — RMB100,000 and over RMB100,000. Such income intervals were used in a recent survey released by the Hong Kong Trade Development Council, which reports that the annual income of major car owners was between RMB30,000 to over RMB100,00 in China (Lo 2001).

A questionnaire totalling seven pages was developed and is provided in Appendix II. It was originally written in English and then translated into Chinese, then back translated into English to ensure consistency with the original. Appropriate arrangements for accurate translations were performed by an accredited person from the National Accreditation Authority for Translators and Interpreters Ltd (NAATI). A covering letter is also attached to the questionnaire, which provided specific information on the aims of the project, value of their information, indication of anonymity and the approximate time to complete the questionnaire (see Appendix I). The questionnaire was pre-tested in Melbourne prior to the main study to ensure it was well-designed. The next section will give more details relating to this.

4.3.2 Pre-testing the Questionnaire

Pre-testing the questionnaire provides useful information such as the clarity of the instructions, respondents understanding of the questionnaire, and the reliability and validity of the measurements (Bordens and Abbott 2002; Malhotra *et al.* 2002). The pre-testing process is therefore essential and important so that there will be fewer errors when the main study gets under way.

The pre-testing of the questionnaire was conducted in Australia and only Chinese students from China were selected to participate in the pre-test survey. While it may be suggested that use of Chinese students in Australia is not sufficiently representative, it should be pointed out that psychological acculturation is a long process and the adjustment of immigrants to new environments in another country/region could take a significant amount of time (Chung and Pysarchil 2000). Dion and Dion (1996) reported that the adaptation of foreign culture for Chinese is a complex and long process. Even for immigrants who live in the US for less than six years displayed greater difficulties in psychological adjustment compared to those living there for over six years (Dion and Dion 1996). Hence, it is expected that living in Australia temporarily will not significantly change the deep-seated cultural norms and views of these international Chinese students.

A group of 50 international students from China are drawn from two campuses of one Australian University in Melbourne between the middle of April to early May 2004. The survey was hand delivered and collected by the researcher. Respondents were also asked to provide an appraisal of the instrument and to make comments on issues such as difficulties with question wording, content of the questionnaires for clarity, problems with leading questions, and level of difficulties for completion. The opinions obtained from the pre-test respondents identified that the questionnaire was properly designed, while questions related to purchase involvement appeared not to be clear, so minor changes were made to the wording and phrasing of those questions. Moreover, the reliability test was also run to examine the measurement scales, which will be discussed in the next section.

4.3.3 Reliability Test

Reliability refers to the extent to which a scale produces consistent results if repeated measurements are made (Malhotra *et al.* 2002). Cronbach's alpha is a reliability coefficient that reflects how well a set of items to each concept are positively correlated to one another (Sekaran 1992). As specified in section 4.3.1, the attitudes of country capability and ethnocentrism tendencies were measured using multiple items. It is

essential and important to perform reliability assessment to ensure that these scale items are capable of measuring the constructs under investigation. High reliability coefficients reinforce that the score of these multi-item measurement scales can be aggregated. Table 4.3 indicates the Cronbach alpha coefficient from the pre-test data for the measures of country capability of design, assembly/manufacture and components/parts on each country. The high reliability coefficient of our results suggests the set of items captures the construct and is shared in the common core of the construct.

The measure of consumers' ethnocentrism tendencies (CETSCALE) also achieved high reliability scores where the alpha was 0.88. The high reliability of CETSCALE indicates that this scale is able to measure consumer ethnocentrism tendencies among Chinese respondents. Such result is consistent with many previous studies. Specifically, Pereira, Hsu and Kundu (2002) conducted a cross-national study by examining ethnocentrism tendencies scale across three countries where the alpha values for China samples were 0.88, Taiwan samples were 0.89 and India samples were 0.92. As Sekaran (1983) indicated, a concept and its corresponding scale developed in one culture may not necessarily be applicable to other cultures. The high reliability of CETSCALE found in many past studies across different countries reflects that this scale is able to capture the construct measured regardless of the culture background of respondents. In addition, the scale for measuring the product evaluation also received high reliability with an alpha of 0.86 for the car and 0.88 for the camera. The results obtained in the pre-test stage enhance confidence that these instruments are capable of reliably examining the COO effect in China. Since the data for the main study was collected in China, the reliability test was re-run on the actual data to ensure that the scale is reliable within the Chinese cultural background regardless of the country where the Chinese respondents are located. The results of the reliability test for the main study will be presented in the next chapter.

Table 4.4 Results of Cronbach's Alpha from pre-test data for "County Capability" measures

Constructs/Measures	Alpha (C)	Alpha (G)	Alpha (J)	Alpha (US)
Country Capability of Design Unimaginative/Creative Unattractive/Attractive Obsolete/State-of-the-art Inefficient/Efficient Common/Exclusive Poor Performance/Excellent Performance	.87	.74	.80	.90
Country Capability of Assembly/Manufacture Poor Workmanship/Excellent Workmanship Flimsy/Sturdy Low Durability/High Durability Unsatisfactory Assembly/Exceptional Assembly	.90	.85	.85	.84
Country Capability of Components/Parts Shoddy Components/Excellent Components Unreliable Components/Reliable Components Poor Components Quality/Excellent Components Quality	.90	.80	.90	.81

Notes: "C" represents China, "G" represents Germany and "J" represents Japan.

4.4 Procedure of Data Collection

Data were collected from Chinese university students who enrolled in various business courses in an Australian University run in collaboration with a Chinese University in North East China. The reason and justification for choosing these students for our study has already been discussed in section 4.2. The survey questionnaire was completed on a voluntary basis and students were told that they were participating in academic research in order to encourage participation. As mentioned in section 4.2, the use of survey research in data collection has less control in achieving the predetermined sample size due to the possibility of refusal to participate or incompleteness of the questionnaire. Thus, even though the proposed study has determined a sample size of 320, the actual number of questionnaires distributed in the field needs to be higher. Staff from the Australian University teaching in China distributed the surveys to students during a class and the completed surveys were collected at a subsequent class. A total of 283 completed questionnaires were returned to the researcher in the middle of June 2004. Of

the returned questionnaires, 272 were considered useable. These numbers are somewhat lower than expected but it still meets the ideal level of participants of 260 in COO research (Peterson and Jolibert 1995).

4.5 Data Analysis Techniques

The data from the questionnaires were entered using Statistical Package for the Social Sciences (SPSS). First, initial descriptive statistical measures such as frequency distributions, t-tests and pair t-tests were used to explore the characteristics of the data such as gender, income level, product ownership and ethnocentrism tendencies of the sample. Second, multivariate analysis of variance (MANOVA) was conducted to analyse the data and test the hypotheses previously stated in chapter three.

As shown in Table 4.1, MANOVA has often been used in the COO field because this technique is useful when the researcher designs an experimental situation associated with the manipulation of several independent variables to test hypotheses concerning the variance of group responses on two or more dependent variables (Hair *et al.* 1995; Tabacknick and Fidell 2001). In the context of MANOVA, it allows one to detect 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). As such, the data collected toward each unique combination of production scenarios in our experiment through the use of MANOVA enable us to investigate what might be expected under the hypotheses. For example, Hypothesis 1a, 1b and 1c are related to whether consumer product evaluation and purchase likelihood is affected by each of the COO sub-components. If the main effects of COD, COD and COP are significant ($p < .10$), this means that the three COO sub-components has a significant impact on quality judgment of product and purchase intention.

Furthermore, various studies that attempt to identify if COO effect between local and foreign aspects may be mediated by any given moderators such as ethnocentrism or demographic factors through the use of MANOVA (Jaffe and Martinez 1995; Rawwas

et al. 1996; Brodowsky 1998). In using MANOVA, it permits us to examine differences between groups on one treatment variable varies depending on the level on the other treatment variables (Tabacknick and Fidell 2001). For example, Hypothesis 4 is related to whether the influence of the three sub-components of COO on product evaluation and purchase likelihood is moderated by the level of consumer ethnocentrism. The use of MANOVA enables us to determine if the effect of the COO sub-components (i.e. the choice of domestic and foreign sources) depends on the level of ethnocentrism (high versus low) consumers hold. If the *p*-value is significant at the .10 level of significance, this means that the level of consumer ethnocentrism has an impact on product assessment and purchase intention in relation to the three COO sub-components.

To make a decision whether each hypothesis should be accepted or rejected, it is essential to set the level of significance because the significance or alpha (α) level represents the standard of proof that the phenomenon exists, and is the probability of rejecting the hypothesis when it is true (Cohen 1988; Hair *et al.* 1995). As indicated in the above discussion, the alpha level of .10 was applied in this study. In fact, there are three levels of α that are most widely used in behavioural science research, namely .01, .05 and .10, while α levels greater than .10 are seldomly used due to an insufficient level of power (Weinberg and Abramowitz 2001). The α level of .01 is most stringent and is recommended for studies involving a large number of variables to control the incidence of spurious results (Cohen and Cohen 1975). For the present study, there are not many independent variables so we have set up the α levels at .05 and .10 to determine statistical significance, and these significant levels are commonly used in many COO studies. Hence, the hypothesis is accepted if the significant value is less than .10 and we specify the significant results are at either .05 or .10 level when reporting the results.

4.6 Conclusion

In summary, the quantitative approach was selected for the present study and self-completion questionnaires were undertaken to collect the data. The investigation involves products from two countries – China and Germany – for the design, assembly/manufacture and components/parts location with two product categories – automobile and digital camera, using factorial design and between-subject designs in the experiment for evaluating product and purchase. A convenience sampling technique of university students are employed due to operational constraints, but the advantage of such sampling techniques is that data can be obtained speedily at lower cost. The identification of the existing survey instrument from the literature, which assisted in the development of the questionnaire have also been presented in this chapter. The questionnaire had been pre-tested before conducting the main study. The reliability test had been performed on each construct and all alpha coefficients are at a high level. Multivariate is the major method used in analysing the data of our research.

The following chapter will provide the results from the analysis. This includes profiles of the sample, the main effect of the three COO sub-components and the moderating variables as well as their relationships.

Chapter 5

Results and Discussions

5.0 Introduction

The data analysis described in this chapter examines the impact of the three sub-components of COO on quality perception and purchase intentions, and the moderating variables that influence the COO effects. The relationships among all the relevant variables have been formulated into hypotheses and were presented in chapter 3.

The outline of this chapter is as follow. Section 5.1 describes the sample characteristics including gender, income level, product ownership and distribution of specific brand ownership. In section 5.2, the reliability coefficients of constructs are examined to ensure the composite scales are reliable. Section 5.3 provides the description of respondents' relative attitudes of country capabilities and the level of consumer ethnocentrism. Finally, section 5.4 discusses the main analysis of our study. This includes analysing the strength of each COO sub-component in consumer evaluation of products, purchase likelihood. We also examine the interactions among the COO sub-components, as well as the role of country capability and consumer ethnocentrism in mediating the COO effects. The hypotheses stated in chapter 3 will be confirmed or rejected based on this analysis. The last section 5.5 furnishes a conclusion for the findings.

5.1 Sample Characteristics

Of the 272 respondents who participated in this study, there were 185 females and 87 males (see Table 5.1). In regard to the annual household income level, the majority of respondents' net annual household income was under RMB50,000. One quarter earn below RMB30,000 while another quarter earn between RMB30,000 — RMB50,000

respectively; 19.5% households earn between RMB50,000 – RMB70,000; 12.9% households earn between RMB70,000 – RMB100,000; and 12.9% households earn over RMB100,000 whereas 2.6% respondents did not indicate their annual household income (see Table 5.1).

Since the sample consisted of university students, it was not expected that there would be a large variance in age among the respondents. As such, 98.1% of the respondents were between the ages of 20 to 22 years, which was anticipated.

Table 5.1 Demographic Characteristics of Studied Samples

Respondents characteristics	Frequency (N=272)	Percent
Gender		
Female	185	68%
Male	87	32%
Annual Household Income Level		
Below RMB30,000	70	25.7%
RMB30,000 – RMB50,000	72	26.5%
RMB50,000 – RMB70,000	53	19.5%
RMB70,000 – RMB100,000	35	12.9%
Over RMB100,000	35	12.9%
Missing Data	7	2.6%

Automobile Ownership

In terms of family car ownership, 38% of respondents indicated that their family own a car. As Table 5.2 shows, 30% owned a Chinese brand; 24.3% owned a Japanese brand; 24.3% owned a German brand; about 5% owned a US brand; 2% owned a French brand; 1% owned a Korean brand; and 1% owned a Russian brand. According to ARA (2003), foreign brands from Chinese joint venture with Germany's Volkswagen represent one third of the market share in China by 2003. It was report the sales of Japanese car brand are also increasing. Domestic automobile brands which are solely Chinese manufactured and designed were also one of the five best selling cars in 1999 (China Online 1999). Based on the data from our sample, it appears that the majority of respondents' family own a car brand from China, Germany and Japan. Among the respondents whose family purchased a car, over 50% of respondents have been involved in this purchase decision.

Table 5.2 Specific Brand origin of Car owned by Samples

Brand Origin	Frequency (N=103)	Percent
China	31	30%
Japan	25	24.3%
Germany	25	24.3%
US	5	4.9%
France	2	1.9%
Korea	1	1%
Russia	1	1%
Missing data	13	12.6%
	Total	100%

Digital Camera Ownership

With respect to digital camera ownership, 92 respondents (89%) owned a digital camera. Among these camera owners, over 80% respondents owned a Japanese brand, which might seem to suggest that Chinese consumers prefer Japanese electronic products. Although it should be noted that the digital camera market in China is dominated by Japanese brands which have almost 50% (Ipsos 2003). This finding appear to support many previous studies that consumers from both developing and developed countries, have a preference for Japanese household electronic items and rate these products highly (for example see Romeo and Roth 1992; Jaffe and Martinez 1995; Chinen *et al.* 2000; Kaynak *et al.* 2000; Choe and Cho 2001). Other brands of digital cameras owned by respondents include: Chinese (5.4%), Korea (6.5%) and 2.2% US (see Table 5.3). About 70% of respondents indicated they had an influence on the purchase decision for their digital camera. The number of respondents who have had an influence in the purchase of a digital camera is higher than those for automobiles (55.3%). This suggests that university students seem to be more likely to be involved in the purchase of digital cameras over automobiles.

Table 5.3 Specific Brand origin of Digital Cameras owned by Samples

Brand Origin	Frequency (N=92)	Percent
Japan	77	83.7%
China	5	5.4%
Korea	6	6.5%
US	2	2.2%
Missing data	2	2.2%
	Total	100%

5.2 Re-Examining the Reliability

Although the survey instruments employed in this study were found to be reliable in the pre-testing stage (see section 4.3.3), the reliability assessments were performed again in the main study to verify scales reliability. The re-evaluation of reliability of country capability only examined capability evaluation of Germany because this was the foreign source examined in the study. As mentioned in chapter four (section 4.3.1), the inclusion of three foreign countries was done to minimise the demand effect caused by consumers drawing unwarranted inference from our study. Table 5.4, reports the Cronbach's alpha coefficient for country capability with the main study. The alpha values are all over 0.80 and suggests that the instrument captures consumers' attitudes toward country capability. We therefore are able to sum up the score of each construct to provide the overall value on the country capability. The CETSCALE was also sufficient reliable with an alpha of 0.91, while the scale measuring product quality obtained an alpha of 0.83 for automobile evaluation and 0.85 for digital camera. The high reliability in both studies supports the reliability of these measures.

Table 5.4 Results of Cronbach's Alpha for "County Capability" measures in main study

Constructs/Measures	Alpha (China)	Alpha (Germany)
Country Capability of Design Unimaginative/Creative Unattractive/Attractive Obsolete/State-of-the-art Inefficient/Efficient Common/Exclusive Poor Performance/Excellent Performance	.87	.84
Country Capability of Assembly/Manufacture Poor Workmanship/Excellent Workmanship Flimsy/Sturdy Low Durability/High Durability Unsatisfactory Assembly/Exceptional Assembly	.86	.82
Country Capability of Components/Parts Shoddy Components/Excellent Components Unreliable Components/Reliable Components Poor Components Quality/Excellent Components Quality	.88	.82

5.3 Examining the Country Capability and Ethnocentrism Tendencies

This section seeks to use descriptive statistics to explore of how Chinese view China's (home) and Germany (foreign) country's capability design, assembly/manufacture and parts/components. The score of each capability construct for each country were summed to identify consumer preference of country capability in producing durable domestic versus foreign products. This is used for later MANOVA investigation to examine if perceived country capability mediates the effects of the three COO sub-components. Secondly, consumer ethnocentrism tendencies were examined to classify participants into high and low ethnocentrism groups based on whether they were above or below the mean value of the CETSCALE. The findings and discussions are presented into the next two sub-sections 5.3.1 and 5.3.2 respectively.

5.3.1 Difference in Attitudes of Country Capability

The results presented in Table 5.5 summarise the mean composite score of consumer attitudes of country capability with respect to the design (COD), assembly/manufacturer (COA) and parts/components (COP) for China and Germany. Paired *t*-tests were applied to examine if differences in attitude of country capability exist between the two countries. Statistically significant differences are indicated in Table 5.5.

Table 5.5 Summaries of Mean Value and *t*-test of Country Capability

Items	Mean (COD)	Mean (COA)	Mean (COP)	Mean (Overall)
China	29.33	17.65	12.48	59.46
Germany	36.81	21.57	16.75	75.13
Mean Difference	- 7.48	- 3.93	- 4.27	- 15.67
t-value	- 15.693	- 10.427	- 15.952	- 15.882
Significance	.000*	.000*	.000*	.000*

* Statistically significant ($p < .05$)

As shown in Table 5.5, Chinese respondents gave higher ratings to Germany compared with their home country (i.e. China) with respect to design capability (t = -15.693, p < .05), assembly capability (t = -10.427, p < .05), parts/components capability (t = -15.952, p < .05), as well as the overall country capability (t = -15.882, p < .05). This suggests that Chinese consumers perceive Germany significantly more favourably for each capability. This result is also consistent with previous studies conducted in China where Chinese display favourable rating to those developed countries such as Japan, US and Germany but are less favourable to their home country (LaTour and Henthorne 1990; Li *et al.* 1997).

Germany has directly invested over 2,000 projects in China up to the year 2000, with most of the projects mainly in the modern production fields such as auto manufacture, electronics, chemical industry and other high-tech industries (People's Daily 2000). Given that Germany has a long investment history in China and the majority of their invested projects are associated with high technological areas or involve sophisticated

skills. This might have strengthened why Germany is perceived to be more capable of producing high complexity and durable goods.

As indicated earlier in the literature review (refer to section 2.5.1), consumers' attitude toward the capability of different countries in producing quality goods would affect their evaluation of products. Thus, a positive attitude toward the capability of a country would result in a more favourable product evaluation, while a negative attitude would result in an unfavourable evaluation. As the purpose of this study is to determine how consumers react to the capability of their home country versus foreign ones in mediating the sub-components of COO effects, it is necessary to identify how such bias – whether for or against their home country - might influence consumers' product judgement and purchase intentions between domestic versus foreign sources goods. The classification of groups as having a local or foreign favourable attitude based on scores reported on in table 5.5 will be used in the later MANOVA investigation to determine whether country capability has an impact toward the three COO sub-components.

To categorise respondent's attitudes of country capability, overall country capability of China were subtracted from the overall country capability of Germany. We found that more than 80% of respondents viewed China more negatively compared Germany with a mean value of –15.67. This implies that most Chinese respondents believe Germany's production capabilities are superior to China's production capabilities. The majority of Chinese respondents had a negative score (i.e. 85 percent), indicating that they perceived Germany capabilities to be "better" than China. To differentiate these respondents further we split all those with a negative score into two groups using the mid point of –18, which was the mean value for all negative scores. Respondents who score –19 or below are categorized as having highly favourable attitudes toward Germany, and the rest of the respondents with negative score are classified as having moderately favourable attitudes toward Germany, while those with positive scores are labelled as having favourable attitudes toward China. Thus, a total of 3 groups of Chinese consumers are identified in regard to the attitudes of country capability for home country and foreign one (i.e. Germany). As a result, 34.2% of respondents had a

highly favourable bias for Germany, 51.1% had a moderately favourable bias for Germany, and 14.7% of respondents had a favourable bias for China. Thus, there are three groups having different attitudes of country capability toward Germany and their home country.

5.3.2 Level of Consumers' Ethnocentrism

As was mentioned in chapter four, the CETSCALE (Shimp and Sharma 1987) was used to measure consumer ethnocentrism among Chinese respondents. The CETSCALE is a 7-point scale associated with 17 items – ranging between 17 to 119. A higher mean score indicates higher consumer ethnocentrism. The mean score value is the predictor of the intensity of consumers' ethnocentrism (Shimp and Sharma 1987). The mean value of consumers' ethnocentrism tendencies in the present study is 56.25 and with a standard deviation of 14.6. This result is similar to the study found by Pereira, Hsu and Kundu (2002) where the average score in their study was 57.97 among Chinese respondents. The mean values from both studies suggest that Chinese consumers exhibit a moderate level of ethnocentrism as measured by CETSCALE. Our result is also similar for consumers from other countries such as Australia where the mean CETSCALE value was 56.31 (Acharya and Elliott 2003) and Taiwan where the average level of consumers' ethnocentrism is 56.1 (Pereira *et al.* 2002). Based on the findings from past research, our respondents appear to display a similar level of consumer ethnocentrism in relation to foreign countries.

To facilitate further analysis on the impact of ethnocentrism toward multiple COO effects on product evaluation and purchase intentions, respondents were split into two groups – a high ethnocentric group and a low ethnocentric group. Respondents were categorised as having high levels of ethnocentrism tendencies if they received a score greater than the mean response of 56.25 or as low if their CETSCALE score was less than the mean response of 56.25. Table 5.6 shows that the number of consumer with lower ethnocentrism tendencies is slightly higher among Chinese respondents. As Ouyang, Zhang and Zhou (2003) indicated, the Chinese university students tend to be

open-minded and were therefore probability less patriotic. This may explain why over 50% of respondents in this study appear to have lower ethnocentrism tendencies.

Table 5.6 The distribution of Consumers' Ethnocentrism Tendencies of Studied Sample

Respondents characteristics	Frequencies (N=272)	Percent
Low level of consumer's ethnocentrism	147	54%
High level of consumer's ethnocentrism	125	46%
	Total:	100%

5.4 Overall MANOVA Results

This section discusses the main analysis of our study. It provides an examination of the overall impact of the three COO sub-components and their affect on consumer product evaluation and purchase likelihood using Multivariate analysis of variance (MANOVA) via the GLM multivariate function in SPSS version 11.0. Two moderating effects of country attitudes and consumer ethnocentrism are also included in the MANOVA examination, in order to identify if these variables moderate the effect of the three sub-components of COO on product assessment and purchase intentions. The MANOVA test allows one to make a decision on whether the previous stated hypotheses should be rejected under the pre-determined alpha levels of 0.05 and 0.10 (see section 4.5).

To determine the appropriateness of the analysis, the Box test was undertaken. To check the equality of covariance matrices across groups, a Box test value greater than zero suggests that MANOVA techniques are appropriate to the investigation (Hall 2002). The Box's test of current study gives a value of .056 for responses related to the automobile which means that it is appropriate to use the MANOVA test. The Box's test is zero for responses related to the digital cameras, which suggests that the result represents a conservative estimation at best.

The multivariate *p*-value for all main effects and interactions for automobiles and digital cameras are summarized in Table 5.7. The following sections 5.4.1 and 5.4.1.1 will provide a summary and conclusion of each hypothesis tested as well as other significant results. Sections 5.4.2 to 5.4.4 will provide further discussion and analysis include the

effect of COD, COA and COP and the interaction effect among the COO sub-components, as well as the moderating effects of ethnocentrism and country capability toward the these COO sub-components. Section 5.5 provides a conclusion for the major results associated with the hypotheses.

5.4.1 The Main Effects

Table 5.7 reported on the main effect of COD, COA and COP on consumer perceptions of product quality and purchase intentions for automobiles and digital cameras for the five dependent variables – workmanship, durability, reliability, quality and purchase likelihood. All one way effects are insignificant since the *p*-values are greater than .10 (see row 1 to 3, column A to J in Table 5.7). Thus hypotheses H1a, H1b and H1c should be rejected. That is, the three COO sub-components do not influence young Chinese consumers' judgment of product quality and purchase likelihood. Additionally, the claim that the perception of product quality and purchase intention differ according to the level of ethnocentrism is not supported as the *p*-value is greater than .10 for both products (see row 4, column A to J in Table 5.7). This indicates that no difference is detected among low and high ethnocentrism groups in perceived product quality and purchase likelihood. Furthermore, no significant main effect was found for the attitude of country capability on all the dependent measures as the *p*-value is again greater than .10 (see row 5, column A to J in Table 5.7). This suggests that the product evaluation and purchase intention among the three groups, with different attitudes toward country capability are not statistically different.

Table 5.7 MANOVA Results on Consumer Perception of Product Quality and Purchase Likelihood: Multivariate *p*-values for all Variables

		A	B	C	D	E	F	G	H	I	J
		Car					Camera				
	Factor	W	D	R	Q	P	W	D	R	Q	P
1	COD	.446	.647	.216	.475	.798	.243	.802	.773	.726	.934.
2	COA	.852	.914	.693	.499	.340	.124	.142	.635	.857	.956
3	COP	.857	.302	.209	.686	.883	.646	.663	.198	.551	.662.
4	Ethnocentrism (Ethno)	.614	.685	.699	.951	.334	.404	.665	.283	.246	.826.
5	Attitudes of Country Capability	.516	.554	.650	.911	.810	.768.	.739	.888.	.677.	.468.
6	COD X COA	.192	.773	.146	.193	.808	.438	.586	.214	.787	.857
7	COD X COP	.445	.898	.831	.677	.409	**.093****	**.053****	**.074****	**.076****	**.047***
8	COA X COP	.914	.954	.865	.326	.230	.325	.629	.530	.942	.347
9	COD X COA X COP	.183	.153	.230	.230	.848	.414	.428	.418	.702	.400
10	COD X Ethnocentrism	.144	.715	.260	.574	.937	**.076****	.661	.330	.335	.650.
11	COA X Ethnocentrism	.734	.315	.830	.926	.420	.663	.732	.182	.420.	.350.
12	COD X COA X Ethnocentrism	.148	.989	.291	.735	.269	.299	.555	.973	.991.	.860.
13	COP X Ethnocentrism	.955	.343	.727	.933	**.086****	.114.	.512.	**.029***	.246	.720
14	COD X COP X Ethnocentrism	.583	.107	.613	.862	.935	.764	.524	.503	.535	.893
15	COA X COP X Ethnocentrism	.189	.564	.871	.756	.326	.860	.565	.114	.334	.864
16	COD X COA X COP X Ethnocentrism	.562	.922	.671	.281	.189	.508.	.794	.610	.698	.288.
17	COD X Country Capability	.536	.424	.215	.265	.373	.516.	.246	.781	.243	.724
18	COA X Country Capability	.856	.962	.854	.701	.198	.433	.675	.934	.392	.835
19	COD X COA X Country Capability	.899	.278	.163	.715.	.530	.979	.818	.271	.661	.216
20	COP X Country Capability	.766	.206	.376	.992	.702	.198	**.058****	**.006***	**.050***	**.016***
21	COD X COP X Country Capability	.164	.738	**.017***	.330	**.033***	.508	**.086****	.666	.530	.273.
22	COA X COP X Country Capability	.910	.644.	.159	.639	.379	.890	.903	.951	.855.	**.082****
23	COD X COA X COP X Country Capability	**.040***	**.071****	**.047***	.929	.491	**.042***	.280	.349	.390	**.097****
24	Ethno X Country Capability	.546	.114	.517	.344	.902	.836	.570	.275	.965	.324
25	COD X Ethno X Country Capability	.718	.900	**.061****	**.089****	.680	.597	.972	.715	.908	.959
26	COA X Ethno X Country Capability	**.049***	.713	.167	.823	.508	.980	.219	.208	.137	.617
27	COD X COA X Ethno. X Country Capability	.217	.555	.172	.256	.344	.555	.957	.276	.328	.374
28	COP X Ethno X Country Capability	.171	.389	.819	.663	.119	.746	.645	.863	.705	.822
29	COD X COP X Ethno X Country Capability	.902	.552	.856	.922	.448	.240	**.029***	.662	.393	.198
30	COA X COP X Ethno X Country Capability	.634	.337	.387	.288	.910	.671	.974	.294	.222	.318
31	COD X COA X COP X Ethno X Country Capability	.198	.598	**.067****	.622	.653	.701	.595	.616	.407	.578
	W=Workmanship D=Durability			R=Reliability		Q=Quality			P=Purchase likelihood		

* Statistically Significant ($p < .05$)

** Statistically Significant ($p < .10$)

5.4.1.1 The Interaction Effects

The multivariate results reveal that some significant interaction effects exist across the three independent variables and the two moderating variables. Firstly, the interaction effect among the three COO sub-components exists in the case of digital cameras (see row 7, column F to J in Table 5.7). The two-way interaction between COD by COP was significant at the .10 level for the four dependent measures relating to workmanship, durability, reliability and quality (see row 7, column F to I in Table 5.7) and at the .05 level for purchase likelihood (see row 7, column J in Table 5.7). Therefore, there appears to be some evidence to support H2 that the three COO sub-components can interact in affecting product perception and purchase intention in the case of digital cameras but *not* automobiles. This result implies that the interaction effect between COD, COA and COP could be product specific.

Secondly, the MANOVA test identified that there are a number of interaction effects between the three sub-components of COO and country capability. In the case of automobiles, the three-way interaction among COD, COP and country capability is significant at the .05 level of significance for reliability and purchase likelihood (see row 21, column C and E in Table 5.7). There is also a significant interaction among COD, COA, COP and country capability for workmanship and reliability at .05 level of significance (see row 23, column A and C in Table 5.7) and durability at .10 level of significance (see row 23, column B in Table 5.7).

With respect to the digital camera, significant two-way interactions are found between COP and country capability for the reliability, quality and purchase likelihood at the .05 level of significance (see row 20, column H to J in Table 5.7) and for durability ($p < .10$) (see row 20, column G in Table 5.7). There are two significant three-way interactions, one is among COD, COP and country capability on durability and the other one is among COA, COP and country capability for purchase likelihood at the .10 level (see row 21, column G and row 22, column J in Table 5.7). The four-way interaction among COD, COA, COP and country capability is also significant for workmanship at .05 level

(see row 23, column F in Table 5.7) and purchase likelihood at .10 level (see row 23, column J in Table 5.7). Based on these results, H3 is partly supported. That is, attitudes of country capability appear to probability moderate the three sub-components of COO in regards to consumer product evaluation and purchase likelihood for both automobiles and digital cameras.

Thirdly, the interaction of the three COO sub-components and consumer ethnocentrism occurs for both products. The two-way interaction between COD by ethnocentrism was significant with an alpha level of .10 for workmanship with respect to digital cameras (see row 10, column F in Table 5.7). Another significant two-way interaction effect arises between COP by ethnocentrism at .10 level of significance for automobiles for the purchase likelihood (see row 13, column E in Table 5.7) and at the .05 level for digital cameras on the reliability attribute (see row 13, column H in Table 5.7). On the basis of these findings, there is limited evidence to support H4, i.e. that the impact of COD, COA and COP on product evaluation and purchase likelihood are moderated by the level of consumer ethnocentrism. However, the influences of consumer ethnocentrism in moderating the effect of the three COO sub-components in this study were found for COD and COP but *not* COA. This result implies that the relationship between ethnocentrism and the three sub-components of COO appears to have limited impact because only three significant results exist in our study. As such, it seems to suggest that consumer ethnocentrism does have an influence on the effect of COO sub-components; however, it seems to be a weak one. In addition, the findings show that the number of significant interactions for country capability is higher (13) compared with 3 significant results for ethnocentrism. This suggests that respondents' attitude towards country capability seems to have greater influence than consumer ethnocentrism in relation to COD, COA and COP.

Finally, some statistically significant relationships were observed among the COD, COA, COP, consumer ethnocentrism, and country capability. Four significant interaction effects are found for automobiles. Two interactions appear for COD by ethnocentrism by country capability on reliability and quality attributes at the .10 level

of significance (see row 25, column C and D in Table 5.7). One interaction of effect arises for COA by ethnocentrism by country capability for workmanship at the .05 level of significance (see row 26, column A in Table 5.7). The five-way interaction among the three COO sub-components, ethnocentrism, and country capability on reliability variable is also significant at .10 level (see row 31, column C in Table 5.7). For the digital camera, there was one significant interaction between COD, COP, ethnocentrism and country capability for the durability attributes at .05 level of significance (see row 29, column G in Table 5.7).

These interaction effects were not hypothesised and were unexpected. Hair, Anderson, Tatham and Black (1995) indicate that joint effect might exist among two or more independent variables for a given factorial design experiment. Thus in this particularly context, it is possible that the effect of one variable (e.g. COD) may be moderated differently by other variables (e.g. ethnocentrism and country capability) (Pecotich and Rosenthal 2001). Since the examination of such interactions is beyond the scope of the present study, future investigations on these complex interactions should be undertaken.

In summary, there were 31 effects examined within the MANOVA tests for each product, which included 5 main effects (rows 1 to 5, columns A to J) and 26 different types of interaction effects (rows 6 to 31, columns A to J). These effects result from 3 independent variables – COD, COA and COP, and 2 moderating variables – consumer ethnocentrism and country capability. Our findings show 10 significant effects for automobiles occur and 16 significant effects occur for digital cameras. These results will be discussed in more detail in the following sub-sections.

5.4.2 The Effect of the Three COO Sub-Components

The MANOVA results presented in Table 5.7 provides an overview of the findings. Within this section, a deeper discussion and analysis of the findings are provided with respect to the three independent variables (i.e. the three sub-components of COO –

COD, COA and COP) and interactions amongst them. Table 5.8 summarises all the *p*-values among all these effects.

Table 5.8 MANOVA Results for COO Sub-Components on Consumer Perception of Product Quality and Purchase Likelihood: Multivariate *p*-values

Factor	Workmanship	Durability	Reliability	Quality	Purchase Likelihood
Car					
COD	.446	.647	.216	.475	.798
COA	.852	.914	.693	.499	.340
COP	.857	.302	.209	.686	.883
COD X COA	.192	.773	.146	.193	.808
COD X COP	.445	.898	.831	.677	.409
COA X COP	.914	.954	.865	.326	.230
COD X COA X COP	.183	.153	.230	.230	.848
Camera					
COD	.243	.802	.773	.726	.934
COA	.124	.142	.635	.857	.956
COP	.646	.663	.198	.551	.662
COD X COA	.438	.586	.214	.787	.857
COD X COP	.093**	.053**	.074**	.076**	.047*
COA X COP	.325	.629	.530	.942	.347
COD X COA X COP	.414	.428	.418	.702	.400

* Statistical Significant ($p < .05$)
** Statistical Significant ($p < .10$)

As specified earlier in section 5.4.1, no direct main effects exist for the three COO sub-components. These research findings indicate that there is no significant difference between the average quality rating and purchase intentions given to domestic (i.e., China) and foreign country (i.e., Germany) for either the automobile or digital camera across COD, COA and COP ($p > .10$). In other words, none of the COO sub-components are a significant indicator for quality perceptions and purchase likelihood. The results suggest that the effect of the three COO sub-components with respect to design location, assembly/manufacture location and components/parts location on consumer product evaluation and purchase intentions may not be a universal phenomenon, at least in regard to Chinese students and high involvement products.

Although some previous studies have claimed that there was significant impact of the three COO sub-components toward consumer product evaluation and purchase

intentions (Insch and McBride 1998; Chao 1998; 2001; Ahmed and d'Astous 2001), this does not seem to be the case in the context of the China market based on the finding of our research. Some possible explanations for the results in this study are presented in the following sections.

The Perceived Value of COO Information

As indicated in chapter two, global sourcing and global strategic alliances are becoming increasingly common in the international market place and more products are emerging as a result of multi-firm and multi-country arrangements (Tse and Lee 1993; Chao 1993; Acharya and Elliott 2003). For many multi-national firms, their production activities are largely operated by products assembly or manufacture in less developed countries but designed in and/or carry brand names associated with highly industrialised countries, and the parts/components aspect is also increasingly being outsourced (Li *et al.* 2000; Ahmed and d'Astous 2001; Chao 2001). Due to the trends for increasing global production sharing, many hybrid products are cultivated in today's marketplace. This might result in products from low production cost countries with unfavourable country images, becoming well accepted by consumers (Tse and Lee 1993). The acceptance of products from less developed countries implies that the perceived difference in product quality between highly industrialised countries and new industrialised countries might be declining. If this is the case, the power of COO for evaluating product quality may become weaker in the future.

Global production sharing and the increase of strategic alliances through inter-firm and inter-country collaboration have enabled products to be produced anywhere in the world. Products need not be produced by a single country and various countries can contribute to a product simultaneously. For instance, Sony Corporation has a global manufacturing plant network that includes Japan, North America, Asia and Europe (Naclerio 1995) and also purchased Ericsson. Therefore, Sony can produce products in any low cost location or in countries where it has competitive know-how. As indicated in chapter two, multiple country production means that a Sony television can be designed in Japan, have parts and components supplied from China, and be assembled in Malaysia (Li *et al.*

2000). This multinational manufacturing process means that numerous products and brands are manufactured outside the firm's home country (Yagei 2001). As such, consumers in China and elsewhere experience many hybrid products. This increase exposure to hybrids products might result in their no longer perceiving differences toward products produced in a given countries or multiple countries.

In fact, some studies have already suggested that the widespread production of global products may have lowered the information value of the three COO sub-components (Li *et al.* 2000; Chao 2001). Thus consumers may not make a distinction between uni-national products or bi-national ones, nor might be they concerned with domestic versus foreign origins. This could possibly contribute to the lack of sufficient significance of the COO sub-components in our study.

Familiarity with Domestic Products

The rapid economic growth and liberal international trade over the last two decades in China has led to significant changes to the market and living standards. The economic and market reforms provided Chinese society with access to the outside world, which brought a flood of new products and services from many different countries, as well as allowed Chinese consumers access to global cultures. Many multi-national enterprises have entered China since the 1980's; these include various well known foreign brand products such as Coco Cola, KFC, IBM, AT & T, Mary Kay, Sony, Nokia, Audi or Honda and many others (Li 1997; Wattanavitukul 2002; Jiang 2004).

Today, China has dominated world manufacturing because of its low-cost labour (Jonathan 2003). The world's biggest brands as well as retailers' private labels are largely supplied by Chinese manufacturers or foreign companies that have set up production plants in China (Wattanavitukul 2002; Gao *et. al.* 2003; Ipsos 2003). Many multinational corporations have moved or are moving into China to exploit its production potential as well as to access the Chinese market (Brandsma 2002).

Chinese consumers are aware of this increase "foreign" product in China (Au and Sha 2003) including clothes, household electronic appliances and automobiles. This awareness could cause Chinese consumers to place less importance on COO information compared with consumers in other developed countries. This explanation has been suggested by Insch and McBride (1998) found that assembly location was significant for US consumers but not for Mexican consumer (see section 2.4.1). The authors attributed such findings to the fact that Mexico was one of the world's largest producers of television, and this is fairly well known in Mexico but not in the US, thus the familiarity with domestically made television by Mexicans could have dispelled the influence of made-in information (Insch and McBride 1998).

Prevalence of Joint Venture Investments

Many foreign firms have been active in China via joint ventures since the mid 1980's especially in the automobile sector (Brandsma 2002). This includes the numerous joint venture projects generated over the last twenty years between Shanghai Automobile Industry Corporation (SAIC), Dongfeng Motor Corporation (DMC), First Auto Works (FAW) and the top foreign car makers such as Volkswagen, Honda and Ford (Trueson 2001; Wattanavitukul 2002; China.com 2004; Liu 2004). These cross-country collaborations have produced 2.07 million automobiles by 2000 and have over 90% market share in China (Trueson 2001; China.com 2004; Liu 2004). This demonstrates that joint venture in the cars industry have been widespread throughout China and that consumers have long been exposed to such hybrid products. Thus, exposure to multiple country products, say, German designed with parts/components from Korea and China assembly, is not a new phenomenon. Hence, some Chinese consumers may be less inclined to make a distinction between local or foreign products.

According to official statistics, the best selling cars in China are joint venture products between China and Germany (ARA 2003). In fact, the automobiles produced by the joint ventures between China and Germany have dominated the China market for many years (Wattanavitukul 2002). Most domestic automobile makers in China are engaged in assembling or manufacturing process, using partially imported parts/components

from Germany, Japan, Germany or US (Madslien 2002; TDC 2003; Liu and Deng 2003), as well as increasingly outsourcing the design and engineering of new vehicles to Italy or collaborating with foreign partners (Ciferri 2004). This reflects that cars produced by multiple partners in China are the norm and consumers have clearly accepted on hybrid cars. Thus, COO information for cars may be less important than other attributes such as value for money or brand when consumers are evaluate quality or making a purchase decision.

Product Image

Li (1997) indicated that consumers in China not only look for material quality but they also want everyone to know they purchased quality products. In other words, the label or brand is perhaps as important as the product for Chinese consumers' product assessment. Brands enable the development of a product's personality which can impact on whether consumers decide the product's image is consistent with their own image (Herbig and Milewica 1995; Aaker 1997). Whether the brand is from China or elsewhere may be of little concern, as the brand's image is more important than its country association (Ouyang *et al.* 2003).

In addition, Yagi (2001) indicated that an important factor that influences the COO impact in today's marketplace is the complex global production sharing. He suggests that brands may have a greater impact on hybrid products toward quality perception because brand name provides a customer with readily recognised information about a firm's product (Ahmed and d'Astous 1996). This is especially the case for those products associated with a strong brand image such as Sony or BMW. Some studies found that foreign production associated with less reputed countries had less influence on the evaluation of products carrying high brand equity (Yagei 2001; Hui and Zhou 2003). Thus, firms producing products under global brands may have greater benefit by focusing on the brand image rather than the country appeal, especially in the context of the China market among young consumers who tend to be even more brand conscious than the average consumer (Li 1997; Quyang *et al.* 2003; Yau 2005) . All of this might

therefore partly explain the lack of a statistically significant effect of the three COO sub-components in our investigation.

The Level of Market Development

Hsieh (2004) suggested that the COO effect on consumer behaviour could be influenced by the level of market development — i.e. the availability of international brands in a given market. In highly developed markets, COO effect tends to be weaker because many international brands are available and significant product attribute information is readily accessible. Thus COO information in such market is perhaps just one of the many attributes considered by consumers in the evaluation of a product, who rely on intrinsic cues rather than COO cues (Hsieh 2004). For less developed markets, however, the availability of international brands is limited and product specific information is relatively scarce, so COO might play a more important role for consumers in these kinds of markets (Hsieh 2004).

In the current China market, international brands are widely available across a wide range of product categories. For example in the digital camera market in China, there are a large number of foreign and domestic brands available to consumers such as Kodak, Olympus, Fujitsu, Sony, Canon, Nikon, Espon, Sanyo, Mirnolta, AGFA and Lenovo (Ipsos 2003). In the automobile sector, the top ten global automotive suppliers have also set up production in China (Madslien 2002). This includes such as Korea's Hyundai and Kia, Germany's Volkswagen and Mercedes, Japan's Honda, Toyota and Suzuki, US's Ford and GM, as well as French PSA Peugeot Citroen (ARA 2003; China.com 2004). Moreover, the China vehicle market has become more transparent (Qiu *et al.* 2003), and consumers are able to access more product information (e.g. retail price, product features, warranty, brands comparison and many others) from various information channels such as Internet Sites (e.g. www.carguide.com.cn), car magazines (e.g. Auto Fan, AUTOCAR (CN) or Auto Knowledge), or even the radio. This could reduce the value of COO cues (Hsieh 2004).

Inconsistency of Affective and Cognition Process

As we found (see section 5.3.1) that respondents generally exhibit a favourable attitude toward Germany's production capabilities compared with China. Thus, it is expected that respondents would also hold a positive perception in their product evaluation and have greater intention to purchase goods sourced from Germany. However, the results appear to indicate that respondents made no distinction between products sourced between local and foreign countries with respect to COD, COA, and COP. This apparent inconsistency in Chinese consumer behaviour has previously also been noted by Ouyang, Zhang and Zhou (2003) and it thus not unique to the results of this thesis.

On the one hand, many young people show strong nationalism in protesting against the US; on the other hand, they buy American goods and seek all possible opportunities to study and work there (Ouyang *et al.* 2003). In other words, although the present study suggest that young Chinese respondents perceive Germany as superior to China with respect to production capabilities such positive attitudes do not necessarily translate into concrete product evaluations and purchase behaviour decisions. The somewhat equivocal finding implies that young Chinese consumer feelings toward a given country (affective component) might be inconsistent with product judgments (cognition component).

5.4.2.1 The Interaction Effects of the Three COO Sub-Components

In relation to the interaction effects, the previous section 5.4.1.1 discussed significant relationships between design and parts location for workmanship ($p = .093$), durability ($p = .053$), reliability ($p = .074$) quality ($p = .076$), and purchase likelihood ($p = .047$) for digital cameras. No interaction effects were detected for automobiles. Thus, it seems to suggest that the relationship among COO sub-components might be dependent on the product category being examined. This finding appears to be consistent with that of Insch and McBride (1998) who found significant interactions for mountain bikes, but not television and athletic shoes.

The difference in interaction effects among the three COO sub-components for cameras as compared to automobiles might be explained by several possible reasons. One is that digital cameras appear to less frequently be engaged in global production sharing as compared with automobiles, and digital cameras are less established than automobile (Ipsos 2003). While various brands of digital camera are now available in China, both from foreign and domestic producers (as mentioned earlier in section 5.4.2), foreign based Chinese products only started production in early 2000's (Digital Photography Review 2001; TRI 2003; Shanghai Daily 2003). Since China based production of digital camera products is still in it 'infancy', joint ventures may still not be widespread in the market. Thus, Chinese consumers may be less likely to see digital cameras as hybrid products which possibly contribute to the significant interaction effects identified in the present study.

Another possible reason for different results between products could be the fact that China has a comparative disadvantage in producing digital cameras (TRI 2002; Ipsos 2003). According to a 2002 survey, Sony, Canon and Fujitsu were ranked in the top three brands with market shares of 19.7%, 16.5% and 10.8% in China respectively (Ipsos 2003). Domestic brands accounted for only 4.6% of the market (TRI 2003). TRI (2002) indicated that China remained relatively weak in the development of technology, and also lack competitive know-how in manufacturing parts/components in the use of electronic products (TRI 2003; Ipsos 2003). The lack of competitive know-how is the biggest disadvantage for domestic digital camera manufacturers (TRI 2002; Ipsos 2003). If consumers are aware of Chinas relatively low level of technological capabilities for cameras, this could lead to Chinese consumers holding less positive perceptions toward Chinese cameras. As such, unfavourable domestic manufacturing abilities combined with favourable foreign origin views must affect consumers' product perceptions and purchase intentions. Thus potentially contributing to the significant interaction effect for cameras in the present study.

As discussed in section 5.4.2, automobiles are often produced through multiple countries collaboration in China, so that this product category is likely to be viewed as

global products by the consumer. Such production practices may limit the significance of any interaction among the sourcing locations because consumers tend to be aware that a car can be designed in one country, assembled/manufactured in another country and its components/parts supplied by yet another country. The recognition of bi-national products probably reinforces market acceptances of such hybrid cars, and therefore consumers' product perception does not appear to be affected by any interaction among sourcing country factors.

Moreover, China's automobile industry has been well established over the last 50 years, and has accumulated substantial skills and technologies in building vehicles (Liu and Deng 2003; Lu *et al.* 2003). The manufacturing parts/components for automobiles is developing and growing steadily while capability in the development of new products is also increasing via the continuous collaboration with foreign partnership (Lu *et al.* 2003). Today, China's vehicle industry has a large and growing pool of skilled engineers to develop their own products which are comparable to foreign ones (Lu *et al.* 2003; Liu 2004). Perhaps, this is reducing some Chinese consumer perceptions of differences between local against foreign sources. Whereas, for digital cameras, even if China was capable of producing them, they would still lag behind foreign technologies. Thus, overseas participation with developed countries in manufacturing hi-tech items is welcome, and this may explain why there are significant interaction effects for digital cameras.

5.4.3 Summary of COO Findings

On the basis of these findings, we suggest that firms engaged in marketing hybrid products do not need to be overly concerned with the negative effect of product sourcing from less reputed countries, because the present study does not support the influence of COD, COA and COP on consumers' evaluations of product quality and purchase intention for young consumers in the China market for high involvement products. As such, it appears that firms might have greater flexibility in making

decisions of global production sharing in either developed or developing countries without placing too much consideration on country image.

As more products are manufactured in China from joint ventures with foreign corporations, the number of hybrid products was increased, probability resulting in consumers accepting that a product is often associated with several countries; they might also be aware of global production sharing, which frequently involves less developed countries taking advantage of their lower operating cost. Although past studies have found that consumer perceptions generally were less positive when products were sourced from countries with less reputation or less technology image (Ahmed *et al.* 1997; Insch and McBride 1998; Chao 1998; Ahmed and d'Astous 2001), the research was largely conducted in Western and developed countries (Wang and Chen 2004; Speece ad Nguyen 2005). Ahmed and d'Astous (1996) asserted that the reason for stereotyping could be attributed by consumers being unaware of the progress made in developing countries. Thus, consumers in developed countries may still hold negative stereotyping toward developing countries even through some developing countries such as China have grown dramatically in production capabilities over the past years (Li 1997).

Given that the three COO sub-components or their interaction effect did not appear to have strong impact on consumer product perceptions and purchase intentions, firms attempting to use COO information to appeal to Chinese consumers for hybrid products may – not bring the desired benefits. However, it might be useful to develop a favourable or positive brand or product image, as some studies suggest product or brand image appears to be more important for young Chinese consumers (Li 1997; Quyang *et al.* 2003). Discussion and analysis in the next section will focus on to the moderating effect of consumer ethnocentrism and country capability.

5.4.4 The Moderating Effect of Consumer Ethnocentrism

The objective in this section is to identify if the impact of COO sub-components on consumer product judgment and purchase intentions is mediated by consumer

ethnocentrism tendencies. Table 5.9 summarises the MANOVA results relating to consumer ethnocentrism associated with the three COO sub-components.

As can be seen in Table 5.9, the results suggest that there is minimal impact of ethnocentrism tendencies on the three sub-components of COO across the five dependent variables. Among the three sourcing issues, consumer ethnocentrism only has a statistically significant influence on the COP and purchase likelihood (p = .086) for automobiles, and reliability (p = .029) for digital cameras, as well as COD on workmanship (p = .076) for digital cameras. There is no interaction between ethnocentrism and COA for automobiles or digital cameras on any dependent variables. If ethnocentrism tendencies have a strong influence on the COO effects and foreign sources as some previous studies claimed, this effect should have been found to exist more COO sub-components and should also be consistent across products. However, this is not observed.

Table 5.9 MANOVA Results of Ethnocentrism and Relationship with the COO Sub-Components: Multivariate *p*-values

Factor	Workmanship	Durability	Reliability	Quality	Purchase Likelihood
Car					
Ethnocentrism (Ethno.)	.614	.685	.699	.951	.334
COD X Ethno.	.144	.715	.260	.574	.937
COA X Ethno.	.734	.315	.830	.926	.420
COD X COA X Ethno.	.148	.989	.291	.735	.269
COP X Ethno.	.955	.343	.727	.993	.086**
COD X COP X Ethno.	.583	.107	.631	.862	.935
COA X COP X Ethno.	.189	.564	.871	.756	.326
COD X COA X COP X Ethno.	.562	.922	.671	.281	.189
Camera					
Ethnocentrism (Ethno.)	.404	.665	.283	.246	.826
COD X Ethno.	.076**	.661	.330	.335	.650
COA X Ethno.	.663	.732	.182	.420	.350
COD X COA X Ethno.	.299	.555	.973	.991	.860
COP X Ethno.	.114	.512	.029*	.246	.720
COD X COP X Ethno.	.764	.524	.503	.535	.893
COA X COP X Ethno.	.860	.565	.114	.334	.864
COD X COA X COP X Ethno.	.508	.794	.610	.698	.288

* Statistically Significant ($p < .05$) ** Statistically Significant ($p < .10$)

Although various previous studies reported that ethnocentric consumers would consistently reject products from foreign origin (Han 1988; Brodowsky 1998), there are very few significant findings identified in the current investigation. This might suggest that consumer ethnocentrism has possibly a limited effect on moderating product judgment and purchase likelihood between domestic versus foreign sourcing for young consumers in the Chinese market. In addition, the lack of a clear pattern in the results across products categories seem to suggest that there is little evidence to support the existence of a relationship between ethnocentrism and favourable evaluation of domestic sources among young Chinese consumers. Several possible explanations are given below.

Acharya and Elliott (2003) suggested that consumer ethnocentrism may not have a strong influence on purchase decision, especially for high involvement products. In this case they suggest that consumers tend to be more objective and less emotional in order to avoid making incorrect purchase choices. Thus ethnocentrism tendencies perhaps do not play an important role in high involvement purchase (Acharya and Elliott 2003).

As indicated earlier in section 5.3.2, Chinese respondents in the present study displayed moderate levels of consumer ethnocentrism. Some studies revealed that such views of ethnocentrism as measured by CETSCALE results in consumers being are less likely to judge products based on source of origin, and the levels of ethnocentrism had limited influence over their purchase decisions (Brodowsky 1998; Acharya and Elliott 2003). Thus low CETSCALE scores might partly explain the lack of a moderating effect for ethnocentrism on various COO sub-components in our findings among young Chinese respondents.

Products are now rarely produced by a single country, especially those carrying international brand name. The focus of the CETSCALE on manufacturing aspects perhaps makes it difficult to measure hybrid products in the choice of local versus foreign sources when other aspects are also involved such as design and

parts/components. As Yagei (2001) suggested, brand appeared to have more impact for hybrid products, and future studies dealing with COO effect of domestic and foreign aspect related to hybrid products may consider another approach such as " company owned by" or "brand owned by".

In addition, a recent study by Ouyang, Zhang and Zhou (2003) indicated that patriotic feelings which are similar to ethnocentrism, were not an important attribute in the choice decisions among young Chinese consumers (Ouyang *et al.* 2003). Further, Wang and Chen (2004) found that the relationship between consumer ethnocentrism and choice behaviour of domestic products tended to be weaker for those with high conscious consumption values. Since Chinese are also concerned with the social visibility in their consumption of products (Li 1997), this may explain the weak impact of ethnocentrism on the three COO sub-components toward product judgment and purchase likelihood in this study. As such, companies attempting to use nationalistic appeals or buy domestic campaigns to affect product perceptions and purchase intention may not be very successful when targeting these young Chinese consumer. Rather, marketers should consider enhancing a product's image which has more influence on Chinese consumers' perceptions (Li 1997; Ouyang *et al.* 2003; Yau 2005).

In fact, Acharya and Elliott (2003) and this current research are among the few studies to examine product judgement and purchase intentions using CETSCALE associated with country, of manufacture/assembly location (known as made in) and design and parts /components location. While Acharya and Elliott (2003) suggested ethnocentrism tendencies appeared to have greater link with COA than COD as indicated in section 2.5.2, the current study does not detect any association between COA and consumer ethnocentrism. The inconsistent results between this thesis and Acharya and Elliott (2003) raise some possible concerns about the true impact of consumer ethnocentrism and more research in this area is needed.

5.4.5 The Moderating Effect of Country Capability

The effect of attitudes toward country capability and its impact on consumers' product judgment and purchase intentions is another aspect of interest in this study. To make the analysis more manageable, we recoded the attitudes of country capability into three groups – highly favourable attitude for Germany capability, moderately favourable attitudes for Germany capability, and favourable attitudes for China capability. Table 5.10 summarises the *p*-value of the three sub-components of COO associates with country capability. In section 5.4.1, we indicated that country capability has no direct effect on product assessment and purchase intention ($p > .10$), but it has some moderating effects on interactions, as indicated in the asterisked entries in Table 5.10. The following discussion will focus on the relationship concerning the country capability and the various sub-components of COO.

Table 5.10 MANOVA Results of Country Capability and Relationship with the COO Sub-Components: Multivariate *p*-values

Factor	Workmanship	Durability	Reliability	Quality	Purchase Likelihood
Car					
Attitudes of Country Capability (Country Cap.)	.516	.554	.650	.911	.810
COD X Country Cap.	.536	.424	.215	.265	.373
COA X Country Cap.	.856	.962	.854	.701	.198
COD X COA X Country Cap.	.899	.278	.163	.715	.530
COP X Country Cap.	.766	.206	.376	.992	.702
COD X COP X Country Cap.	.164	.738	.017*	.330	.033*
COA X COP X Country Cap.	.910	.644	.159	.639	.379
COD X COA X COP X Country Cap.	.040*	.071**	.047*	.929	.491
Camera					
Attitudes of country Capability (Country Cap.)	.768	.739	.888	.677	.468
COD X Country Cap.	.516	.246	.781	.243	.724
COA X Country Cap.	.433	.675	.934	.392	.835
COD X COA X Country Cap.	.979	.818	.271	.661	.216
COP X Country Cap.	.198	.058**	.006*	.050*	.016*
COD X COP X Country Cap.	.508	.086**	.666	.530	.273
COA X COP X Country Cap.	.890	.903	.951	.855	.082**
COD X COA X COP X Country Cap.	.042*	.280	.349	.390	.097**

* Statistically Significant ($p < .05$)

** Statistically Significant ($p < .10$)

In contrast to the moderator of ethnocentrism, country capability seems to have a greater number of interactions with the three COO sub-components for both products examined. With respect to automobiles, significant interactions can be found between COD X COP X country capability on reliability (p = .017) and purchase likelihood (p = .033), as well as the four-way interaction among COD X COA X COP X country capability on workmanship (p = .040), durability (p = .071) and reliability (p = .047), i.e. there are four interactions overall. Regarding the digital camera, there are eight interactions, including COP X country capability on durability (p = .058), reliability (p = .006), quality (p = .050) and purchase likelihood (p = .016); COD by COP by country capability on durability (p = 0.86); COA X COP X country capability on purchase likelihood (p=.082), and COD X COA X COP X country capability on purchase likelihood (p = .097).

On the basis of these findings, it appears that the attitude of overall country capability held by young Chinese respondents do appear to interact with the COD, COA and COP, and therefore moderate product assessment and purchase intentions. This implies that the effect of COD, COA and COP on the evaluation of product and purchase likelihood may be affected by consumers' perceived country capability. The findings also indicate that there is greater interaction between various COO sub-components and country capability on digital cameras than automobiles. This may reflect that consumer attitudes of country capability are more influential for digital cameras than automobiles. Such apparent inconsistent results can perhaps be explained by the fact that China has a relatively strong automobile industry over digital camera manufacturing.

As discussed in section 5.4.2.1, China has a comparative disadvantage in producing electronic products due to their relatively lower level of technological development, as compared with developed countries such as Japan or Germany (Shanghai Daily 2003; Ipsos 2003). In the case of digital cameras, the Chinese products available in the market are lower-end digital cameras (Ipsos 2003). In contrast, China has had experience in vehicle manufacturing for 50 years and the quality of cars produced domestically is comparable to those produced by foreign countries (Liu 2004). As such, the perceived

difference of country capability in manufacturing various product categories may contribute to the different levels of interactions in affecting product judgment and purchase likelihood.

As mentioned in section 5.3.1, Chinese respondents held favourable attitudes toward Germany with respect to the three production capabilities, as compared to their home country (i.e. China). For product evaluations, these respondents do not perceive products sourced domestically or from foreign sources differently. The results in table 5.10 suggest that country capability might interact with the COO sub-components. This equivocal result, once more, illustrates the fact that there may be a degree of contradiction in the minds of Chinese respondents (Quyang *et al.* 2003). As such, general positive attitudes might not always translate into concrete purchase behaviour.

5.5 Conclusion

The purpose of this study is to examine the impacts of the COD, COA and COP on consumer product perception and purchase likelihood, as well as variables that may moderate the effect of the three sub-components of COO — ethnocentrism tendencies and country capability. Several hypotheses were tested and these are summarised in Table 5.11. The first hypotheses of H1a, H1b and H1c were rejected as the consumers' perceptions of product quality and purchase likelihood was not affected by COD, COA and COP. The second hypothesis H2, is concerned with the likelihood of interaction among the various sub-components of COO. H2 was partly supported for digital cameras only. For H3, there was some evidence to support that country capability mediates the sub-components of COO. The fourth hypothesis H4, relates to the impact of consumer ethnocentrism in moderating the effect of various COO sub-components between domestic and foreign sources. This hypothesis was also weakly supported, as there were some significant results across COD and COP components, but not COA.

In summary, the results appear to indicate that country of origin information might not have a significant direct main effect on quality perception of products and purchase

intentions. This implies that difference in product perception between domestic (i.e. China) and foreign countries (i.e. Germany) in terms of design, assembly/manufacture and parts/components might not exist based on the findings in the context of the young Chinese consumers. Many foreign corporations have entered the China via joint ventures over the last two decades (Brandsma 2002). The large number of joint venture projects and foreign investments has results in numerous hybrid products within China. Consumers might therefore view these hybrid products as a norm which could perhaps lower the importance of COO information in consumers' evaluation of products and their purchase intentions.

Table 5.11 Summary of Hypotheses and Outcomes

Hypothesis	**Outcome**
H1a: Consumer perception of product quality and purchase intention is influenced by *Country-of-Design (COD)*	Reject
H1b: Consumer perception of product quality and purchase intention is influenced by *Country-of- Assembly /Manufacture (COA)*	Reject
H1c: Consumer perception of product quality and purchase intention is influenced by *Country-of-Components/Parts (COP)*	Reject
H2: The COO dimensions of COD, COA and COP will interact affecting the evaluations of product quality and purchase behaviour	Accept (Digital Camera) Reject (Automobile)
H3: The impact of COD, COA and COP on consumer perception of (a) product quality and (b) purchase intention will be moderated by perceived *country capability*	Partially Accept
H4: The impact of COD, COA and COP on consumer perception of product quality and purchase intention will be moderated by the *level of consumer ethnocentrism*	Partially Accept

Global sourcing has increasingly become a common practice of the majority of multi-national firms, especially with assembling/manufacturing done in low cost countries and

parts/components sourced from other countries (Li *et al.* 2000; Chao 2001). Thus, many foreign companies choose to have their well-known brand products produced in China not only for reasons of lower cost, but also because of China's increasing ability to produce quality products (Brandsma 2002; Shanghai Daily 2004). Consumers around the world can walk into a department store today and find "Made in China" on many kinds of consumer goods (Brandsma 2002; Madslien 2002).

Although past studies found China was generally associated with an unfavourable or low technology image (Zhang 1996; Li *et al.* 1997), government effects at deregulating the market, increasing economic development and a willingness to collaborate with foreign companies (Biggs 2004) possibly has reduced consumers' negative image of China. Furthermore, the acceleration of globalisation around the world might result in consumers having a greater acceptance of foreign products (Suh and Kwon 2003). There also might be a sense that the world is becoming a single market with national differences diminishing (Robertson and Lechner 1985; Johansson 1993). This could result in consumers feeling that local sources are as good as foreign ones. As such, firms planning a global product strategy or selecting a strategic partner overseas might be able to seek the combination of the three sub-components of the COO constructs based on low relative cost, while maximising product quality, without possibly needing to be excessively concerned with country-of-design, country-of-assembly and country-of-parts stereotyping. However, more research might be needed to see if the results for young Chinese consumers apply across China or in other country.

This study also suggests that ethnocentrism does not seem to be as important as previously identified in regards to the COO effects, and young Chinese consumers from affluent families seem to be less concerned with nationalistic sentiments when making purchase decisions. This could possibly contribute to the weak relationship between ethnocentrism and the three sub-components of COO. In fact, other recent studies also indicate that country association appears to be less important for young Chinese while a favourable product image may have greater influence toward the young segment in China (Ouyang *et al.* 2003).

Moreover, our result suggests that the attitudes of country capability appear to have a limited effect on the various sub-components of COO in influencing consumer quality perception and purchase intention. However, this finding seems to be inconsistent with the results as mentioned earlier (see section 5.4.5) that consumers do not perceive differences for products source from local versus foreign countries with respect to design, assembly/manufacture and parts/components. Once again, this finding is not surprising because Chinese consumers' feelings toward a given country are not necessarily consistent with their perception of products from that country (see section 5.4.2). Hence, the influence of country capability in moderating on the effect of each COO sub-component is a conservative estimation.

Chapter 6
Conclusion

6.0 Introduction

The Country of Origin (COO) effect has been the subject of a substantial research over the past forty years in the international business and marketing literature (Zhang 1996). As a result of the growth of global production sharing, the evolution of COO studies on consumer buying behaviour has moved from simply viewing this construct as the location of manufacturing during the 1960's through to the 1980's, to a more comprehensive approach by bringing in other factors which can also have an impact on the COO cue such as; country of corporation (e.g. IBM known as a U.S. firm or BMW known as a German firm), place of design; and location of parts/components manufacture. Research into COO over the past four decades has resulted in additional moderate factors such as country capability and consumer ethnocentrism. The purpose of this study has been to investigate the effect of COO by breaking it down into Country of Design (COD), Country of Assembly/Manufacture (COA) and Country of Parts/Components (COP) in the context of local and foreign aspects, as well as to examine the moderating effect of country capability and consumer ethnocentrism which may interact with the three COO sub-components. This study has provided useful information regarding the impact of the above factors on product perception and purchase likelihood under the investigation in an experimental setting.

6.1 Summary of Findings

In decomposing the single COO cue into COD, COA and COP, our study has measured the effects of these components on consumer product evaluation and purchase likelihood. This study found that there appear to be no support for a direct effect of these three COO sub-components on consumer product assessment and purchase intentions in the context of the young Chinese consumers for the two high involvement

products examined — automobiles and digital cameras. Some interaction effects between COD, COA, and COP were observed. However, the importance of such effects appears to potentially be product specific. Thus, while the effect of various COO sub-components on consumer evaluation of products or purchase intention was identified being significant in the past, this study casts some possible doubt on its continuing importance, especially with the increased existence of hybrid products that appear to be the norm and consumers therefore may be modifies their views to accept these

We have also studied the moderating effects of ethnocentrism and country capability on the sub-components of COO. The results seem to suggest that neither ethnocentrism nor country capability are as important as they were in the past in determining consumer preference for domestic and foreign sources.

There are a number of possible reasons for these results. First of all, the diffusion of hybrid products and the acceleration of globalisation seem to be possibly in lessening the effect of COD, COA and COP as useful indicators of product quality and purchase intentions (Li *et al.* 2000; Chao 2001). With globalisation becoming the order of business, firms have every incentive to outsource various parts of their production and operations to different countries in search of the lowest possible cost (Bigg 2004). As such, hybrid products associated with several countries of origin are becoming common. Consumers might find it difficult to integrate several countries' cues into their product evaluation; as such integration would require a more complex and demanding cognitive task (Li *et al.* 2000).

Secondly, globalisation could possibly lead 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 in China. Chinese consumers might be able to recognize if a brand of product is produced from a joint venture with multi-national 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 might probably find it unnecessary to make a fine distinction as to whether products are being sourced domestically or from foreign sources.

With respect to ethnocentrism, this sentiment appears to have limited influence on product judgement and purchase likelihood among young Chinese consumers. We suggest three possible reasons. Firstly, the acceleration of economic globalisation would tend to reduce its importance because world economic prosperity requires the joint input of various countries, leading consumers possibly to adopt a more global perspective (Suh and Kwon 2002). Secondly, consumers tend to be more objective and less emotional for high involvement product purchases (Acharya and Elliott 2003). Thirdly, patriotic feelings do not seem to play an important role in affecting Chinese consumers purchase decision making (Quyang *et al.* 2003). Also, the perceived capability of a country in producing quality goods appears to have an impact in moderating the three COO sub-components. This suggests that Chinese consumer evaluation of products and purchase intent does determine by their attitudes on specific countries. However, this result must be used with some caution because our study found earlier that there was no difference in consumer perception of quality for products from local and foreign sources in relation to design and assembly location, as well as where parts are made (see section 5.4.2). This equivocal result makes it difficult to conclude that country capability has a consistent influence on the three sub-components of COO. Such inconsistency between quality views and behaviours is not a new phenomenon in China and has already been noted by Quyang, Zhang and Zhou (2003).

6.2 Theoretical Implications

Although past studies showed that the COO cue did have an impact on consumer product perception in China (for example see Zhang 1996; Li *et al.* 1997; Ahmed and d'Astous 1999), and that Chinese consumers generally held positive stereotyping towards developed or industrialised countries, while expressing a negative bias against their home country (LaTour and Henthorne 1990; Li *et al.* 1997), these studies were mainly carried out in the 1990's. Today, China is a very different marketplace and Papadopoulos and Heslop (2002) indicate that significant events can alter one's

perception for a given country. In this case, China's entry into WTO, its hosting the forthcoming 2008 Olympic Games, government efforts in deregulation and willingness to collaborate with foreign partners in technology development (Schifferes 2001; Brandsma 2002; Biggs 2004) possibly will contribute to a re-shaping of Chinese consumers' perception and estimation of their country in relation to others.

Moreover, some studies (Li and Monroe 1992; Ahmed and d'Astous 2001) suggest that consumers in developed countries believe that developing countries still have a lower level of technological sophistication, and as a result, western consumers tend to give greater importance to COO information for product evaluation. In the case of China, since it has opened its market to foreign firms, many modern production technologies have been transferred to China across a wide range of product categories (People's Daily 2000; Liu and Deng 2003; Shanghai Daily 2003). Chinese consumers may have become aware that production in China is more sophisticated which could possibly explain why the perceived value of COO information among young Chinese respondents in the present study is not as high as has been previously reported in a Western context.

The result of this study should be of interest to COO researchers and to corporations involved in global marketing. Past researchers have already argued for the recognition of COD, COA and COP due to the increasing practices of global sourcing (Liefeld 1993; Samiee 1994; Ahmed and d'Astous 1996; Insch and McBride 1998), and that the COO effect might weaken after the COO construct was decomposed from the single made-in concept into multiples facets (Tse and Lee 1993; Li *et al.* 2000). Our results seem to support such a finding, as the present study did not find that the three sub-components of COO influenced product evaluation or purchase intention in the context of young Chinese consumers.

6.3 Practical Implications

Currently, China plays an ever-growing role in the global economy (People's Daily 2003), and such growing economic power may result in China becoming a strong

collaborative partner for many multi-national firms (Biggs 2004). For instance, China has recently agreed to work with Japan and South Korea in various research fields such as 4G, RFID (radio frequency identification) and open-source software (Biggs 2004). This type of collaboration enables China to improve its product image from the higher quality perception and designing capabilities of Japan. As a result of this, it is believe that products associate with China will have more favourable perception in the future.

In the past, the collaboration among countries tended to be primarily concerned with cost, supply or operational aspects. In the global market, the purpose of collaboration is not only limited to these factors, but also to establish a global standard while lowering the risk of failure and increasing the possibility of global adoption (Biggs 2004). In the case of China, co-operation with developed countries such as that indicated above, will possibly result in China improving their level of technological development and possibly bring about a reduction in differences in production capability as compared to developed countries and elsewhere. If this assumption holds true, consumers in China may no longer to make a distinction between domestic and foreign sources. As a consequence of this, firms may find that it is not necessary to differentiate the locations of design, assembly or parts/components as they appear not to affect product assessment or purchase intentions based on our findings. In such circumstances, the effect of COO sub-components in the China market could become less important and would not produce a strong impact on consumer behaviour. Thus, it is suggest that firms engaged in producing products associated with global production sharing may need to pay less attention on young Chinese consumers' reaction to COO information.

Our findings suggest that firms might not benefit from providing young consumers in China with detailed global sourcing information such as COD, COA and COP on the product label. Since COO information is often inconsistent (e.g. Germany design, components/part from Singapore and China assembly) in the marketplace today, and may in fact reduce consumer confidence in using the three COO information in product evaluation (Li *et al.* 2000). However, it is recommended that firms should generally aim to develop high image products or to establish favourable brand image as a global strategy, which would help all consumers to differentiate firms' products from those of

their competitors' (Ahmed and d'Astous 1996; Srinivasan and Till 2002). In doing this, it also simplifies product evaluation process while helping to communicate quality rather than integrating information on various country-of-origins components.

Moreover, the potentially relatively minor impact of consumer ethnocentrism found in the current study indicates that patriotism may not seem to play an important role in affecting young consumer behaviour in China between home and foreign sources. Consequently, both local and foreign firms market China might not need to be overly concerned with the source of location because consumer ethnocentrism appears to have little effect beyond the various COO sub-components. This implies that companies attempting to use nationalistic appeals or buy domestic campaigns in affecting product perception and purchase intention toward local consumers might not be very successful. Rather, marketers are encouraged to consider enhancing a product's image because it has been found to have more influence on young Chinese consumers (Ouyang *et al.* 2003).

6.4 Limitations and Future Studies

Despite our distinctive findings in the China market, there are limitations associated with this research. As LaTour and Henthorne (1990) have reported COO effect in China might vary across geographic regions. The data of the present study was collected from Northeast China so that the large-scale generalisation of these results to the rest of the country should be undertaken with caution. It should also be recognised that the use of a student sample in this study may not necessarily be wholly representative of the entire population because university students tend to be younger, so any further studies should be based on using random samples in order to make generalised findings. Some studies suggest that direct experience with products from countries where they are made can affect consumers' perception to a given country (Jaffe and Martinez 1995; Siu and Chan 1997). Our student respondents are unlikely to have direct product experience especially for automobiles, thus it is suggested that future studies may select sample subjects with direct product or purchase experience in order to examine whether or not direct experience has any impact on the three COO sub-components in the context of the

China market. Since our research finds that Chinese consumers might not regard COD, COA and COP as having a high predictive value in quality perceptions, due to the current practice of multiple countries production or inter-firms collaboration. This implies that Chinese consumers might prefer to use brand name to infer product quality and evaluate their purchase intention. Hence, future research could incorporate brand names into COO studies.

Our study applied the CETSCALE to measure the level of consumer ethnocentrism tendencies toward the effect of various sub-components of COO. The establishment of CETSCALE is based on the "made-in" concept in explaining COO effect toward local goods versus foreign ones (Acharya and Elliott 2003). Thus, the use of the CETSCALE when the COO is decomposed into separate parts might be limited, and there have not been many studies so far that examine the association between ethnocentrism and the COO sub-components (for example see Brodowsky 1998; Acharya and Elliott 2003). The appropriateness of the CETSCALE in measuring consumer behaviour when other aspects of COO are included will also possibly benefit from further investigation.

The present study attempts to approximate a real market situation by examining as many variables within one experiment. However, limited resources for the current study did not allow for the inclusion of all relevant variables (e.g. price or warranty) in the research design. Despite the limitations, we suggest the research has been able to provide potentially useful insights into how Chinese consumers might react to the various sub-components of COO in today's global marketplace where multi-country production and collaboration is rampant.

In addition, this research can be further extended in a number of directions. In this study, we employ the products of automobile and digital camera. Future research may examine different high involvement products as well as expanded to low involvement products. The results of our study are based on young consumers in one regional Chinese market, and it would be useful to conduct the experiments in other regions in China or other countries of non-western settings. Such countries can include well-developed ones and

developing ones. Moreover, in our research, the foreign developed country of Germany is used. Future studies may make use of other developed countries for comparison.

Appendix I

Covering Letter Attached to the Questionnaire

Professor Michael Polonsky
Phone: (613) 9688 4625
Email: michael.polonsky@vu.edu.au

Dear Sir/Madam,

I am postgraduate student doing a Master of Business degree in Marketing at Victoria University in Melbourne Australia supervised by Professor Michael Polonsky. I am currently conducting a study regarding Country-of-Origin (COO) issues and consumer behaviour in China. The main aims of this project are as follows:

- To investigate the effects of Country-of-design (COD), Country-of-manufacture/assembly (COM) and Country-of-components (COC) together with their interaction on perceptions of product quality and consumer attitudes
- To identify the factors which may influence the resulting consumer perception of product quality and purchase behaviour concerning local and foreign source preferences

The survey is an essential part of my research. It is expected to be applied to international marketing practice by highlighting the effectiveness of COO in the formulation of manufacturing, investment or marketing strategies. Thus, the information you provide will be extremely useful for the current project.

This research is conducted for academic purpose only and your participation is completely voluntary. All information collected will be treated in the strictest confidence and anonymous. I sincerely wish that you could spend a small amount of your valuable time (approximate 15 min.) to complete the questionnaire and please return it in the attached envelop to your lecturer. Your participation and help in this will be very much appreciated. If you have any questions in relation to my study please contact me or my supervisor.

Yours sincerely

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Appendix II

Questionnaire

Perception of country capability

1. Please evaluate the ability to produce durable goods (e.g. car or television) from the three aspects: design, manufacture/assembly and components quality of the following countries. *(Please circle the number which best describes your answer)*

   For example, if you perceive products produced in China as creative, you should select a point towards the right-hand side of the scale (e.g. 5, 6, or 7). If not, you should select a point towards the left-hand side (e.g. 1, 2 or 3).

China

(a) Quality of Design in China

Unimaginative	1	2	3	4	5	6	7	Creative
Unattractive	1	2	3	4	5	6	7	Attractive
Obsolete	1	2	3	4	5	6	7	State-of-the-art
Inefficient	1	2	3	4	5	6	7	Efficient
Common	1	2	3	4	5	6	7	Exclusive
Poor Performance	1	2	3	4	5	6	7	Excellent Performance
Inferior Product Design	1	2	3	4	5	6	7	Superior Product Design

(b) Quality of Manufacturing/Assembly in China

Poor Workmanship	1	2	3	4	5	6	7	Excellent Workmanship
Flimsy	1	2	3	4	5	6	7	Sturdy
Low Durability	1	2	3	4	5	6	7	High Durability
Unsatisfactory Assembly	1	2	3	4	5	6	7	Exceptional Assembly

(c) Quality of Components made in China

Shoddy Components	1	2	3	4	5	6	7	Excellent Components
Unreliable Components	1	2	3	4	5	6	7	Reliable Components
Poor Components Quality	1	2	3	4	5	6	7	Excellent Components Quality

Germany

(a) Quality of Design in Germany

Unimaginative	1	2	3	4	5	6	7	Creative
Unattractive	1	2	3	4	5	6	7	Attractive
Obsolete	1	2	3	4	5	6	7	State-of-the-art
Inefficient	1	2	3	4	5	6	7	Efficient
Common	1	2	3	4	5	6	7	Exclusive
Poor Performance	1	2	3	4	5	6	7	Excellent Performance
Inferior Product Design	1	2	3	4	5	6	7	Superior Product Design

(b) Quality of Manufacturing/Assembly in Germany

Poor Workmanship	1	2	3	4	5	6	7	Excellent Workmanship
Flimsy	1	2	3	4	5	6	7	Sturdy
Low Durability	1	2	3	4	5	6	7	High Durability
Unsatisfactory Assembly	1	2	3	4	5	6	7	Exceptional Assembly

(c) Quality of Components made in Germany

Shoddy Components	1	2	3	4	5	6	7	Excellent Components
Unreliable Components	1	2	3	4	5	6	7	Reliable Components
Poor Components Quality	1	2	3	4	5	6	7	Excellent Components Quality

Japan

(a) Quality of Design in Japan

Unimaginative	1	2	3	4	5	6	7	Creative
Unattractive	1	2	3	4	5	6	7	Attractive
Obsolete	1	2	3	4	5	6	7	State-of-the-art
Inefficient	1	2	3	4	5	6	7	Efficient
Common	1	2	3	4	5	6	7	Exclusive
Poor Performance	1	2	3	4	5	6	7	Excellent Performance
Inferior Product Design	1	2	3	4	5	6	7	Superior Product Design

(b) Quality of Manufacturing/Assembly in Japan

Poor Workmanship	1	2	3	4	5	6	7	Excellent Workmanship
Flimsy	1	2	3	4	5	6	7	Sturdy
Low Durability	1	2	3	4	5	6	7	High Durability
Unsatisfactory Assembly	1	2	3	4	5	6	7	Exceptional Assembly

(c) Quality of Components made in Japan

Shoddy Components	1	2	3	4	5	6	7	Excellent Components
Unreliable Components	1	2	3	4	5	6	7	Reliable Components
Poor Components Quality	1	2	3	4	5	6	7	Excellent Components Quality

USA

(a) Quality of Design in USA

Unimaginative	1	2	3	4	5	6	7	Creative
Unattractive	1	2	3	4	5	6	7	Attractive
Obsolete	1	2	3	4	5	6	7	State-of-the-art
Inefficient	1	2	3	4	5	6	7	Efficient
Common	1	2	3	4	5	6	7	Exclusive

Poor Performance	1	2	3	4	5	6	7	Excellent Performance
Inferior Product Design	1	2	3	4	5	6	7	Superior Product Design

(b) Quality of Manufacturing/Assembly in USA

Poor Workmanship	1	2	3	4	5	6	7	Excellent Workmanship
Flimsy	1	2	3	4	5	6	7	Sturdy
Low Durability	1	2	3	4	5	6	7	High Durability
Unsatisfactory Assembly	1	2	3	4	5	6	7	Exceptional Assembly

(c) Quality of Components made in USA

Shoddy Components	1	2	3	4	5	6	7	Excellent Components
Unreliable Components	1	2	3	4	5	6	7	Reliable Components
Poor Components Quality	1	2	3	4	5	6	7	Excellent Components Quality

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

Product evaluation

Please circle the number which best describes your answer

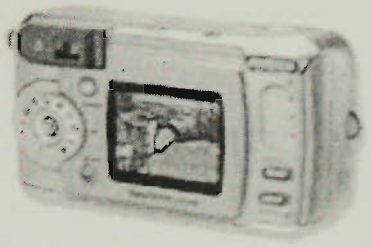
2. Please indicate your opinion of the above automobile.

Poor workmanship	1	2	3	4	5	6	7	Excellent workmanship
Not durable	1	2	3	4	5	6	7	Very durable
Not reliable	1	2	3	4	5	6	7	Very reliable
Poor quality	1	2	3	4	5	6	7	Excellent quality

3. Please indicate how likely you will purchase the above automobile if it was available.

Very unlikely to purchase 1 2 3 4 5 6 7 Very likely to purchase

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

Product evaluation

Please circle the number which best describes your answer

4. Please indicate your opinion of the quality of the above digital camera.

Poor workmanship	1	2	3	4	5	6	7	Excellent workmanship
Not durable	1	2	3	4	5	6	7	Very durable
Not reliable	1	2	3	4	5	6	7	Very reliable
Poor quality	1	2	3	4	5	6	7	Excellent quality

5. Please indicate how likely you will purchase the above digital camera if it was in the market

Very unlikely to purchase	1	2	3	4	5	6	7	Very likely to purchase

Consumers' level of Ethnocentrism

6. Please put an ***x*** in the most appropriate response to indicate your level of aggreement or disagreement with the following statements.

1 = strongly disagree 2 = very disagree 3 = disagree 4 = neutal 5 = agree 6 = very agree 7 = strongly agree

	1	2	3	4	5	6	7
Chinese people should always buy Chinese products instead of imports	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Only those products that are unavilable in China should be imported	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Buy Chinese-made products. Keep China working	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Chinese products, first, last, and foremost	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Purchasing foreign-made products is un-Chinese	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
It is not right to purchase foreign products, because it puts Chinese peopleout of jobs	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
A real Chinese should always buy Chinese-made products	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
We should purchase products manufactured in China instead of letting other countries get rich from us	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
It is always best to purchase Chinese products	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
There should be very little trading or purchasing of goods from other countries unless out of necessity	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Chinese should not buy foreign products, because this hurts Chinese business and causes unemployment	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Curbs should be put on all imports	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
It may cost me in the long run buy I prefer to support Chinese products	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Foreigners should not be allowed to pur their products on our markets	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Foreign product should be taxed heavily to reduct their entry into China	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
We should buy from foreign countries only those products that we cannot obtain within our own country	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Chinese consumers who purchase products made in other countries are responsible for putting their fellow China out of work	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Other relevant information

7. Have you or any one in your family ever purchased an automobile?

   □ Yes
   □ No (go to question 11)

8. Please specific which brand you purchased. _____

9. Did you have any influence on your family in regard to which automobile was purchased?

   □ Yes
   □ No (go to question 11)

10. To what extend were you involved in the purchase decision?

    Very low involved 1 2 3 4 5 6 7 Extremely involved

11. Have you or any one in your family ever purchased a digital camera?

    □ Yes
    □ No (go to question 15)

12. Please specific which brand you purchased. _____

13. Did you have any influence on which digital camera was purchased?

    □ Yes
    □ No (go to question 15)

14. To what extend were you involved in purchase decision?

    Very low involved 1 2 3 4 5 6 7 Extremely involved

15. Gender: □ Male □ Female

16. Age: _____ Years

17. What is your net annual household income?

    □ below RMB30,000
    □ RMB30,001 — 50,000
    □ RMB50,001 — 70,000
    □ RMB70,001 — 100,000
    □ over RMB100,000

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