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**MODELING THE DIFFERENTIAL EFFECTS OF BRAND IMAGE AND
COUNTRY-OF-MANUFACTURE ON KOREAN CONSUMERS'
PURCHASING BEHAVIOR OF HYBRID PRODUCTS**

By

Jae-Eun Chung

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ABSTRACT

MODELING THE DIFFERENTIAL EFFECTS OF BRAND IMAGE AND COUNTRY-OF-MANUFACTURE ON KOREAN CONSUMERS' PURCHASING BEHAVIOR OF HYBRID PRODUCTS

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A comprehensive model was proposed to explain the relative importance of country-of-manufacture (COM) and brand image on product evaluation, purchase attitudes, and purchase intention for hybrid products on the basis of selected quality dimensions (design, performance, serviceability, brand prestige, and technical prestige). The current study also proposed models of the differential effects of COM and brand image on the quality perception of hybrid products using brand and COM familiarities as moderating variables.

Based on information gathered from focus group interviews with Koreans, quantitative survey instruments were designed including three products, Canon cameras made in Japan versus China, Lucky Gold Star TVs made in S. Korea versus Malaysia, and Ralph Lauren sweaters made in the U.S. versus Mexico. Data were collected in Korea from consumers during June and July 1997. Four hundred and fifty six useable questionnaires were collected, yielding an 82 percent response rate.

The results of structural equation modeling (EQS 5.1) indicated that regarding TVs and cameras, brand image was more important than COM in most decision-making processes for Korean consumers. Moving production facilities to developing countries, however, was found to damage performance evaluation, prestigious brand and technical

images, and attitudes toward purchasing the product. For sweaters, the brand image strongly influenced Korean consumers' product evaluations, purchase attitudes, and purchase intention, while COM had little influence on these processes.

The current study failed to test the moderating effects of brand and COM familiarities on the relationships among COM, brand image and quality perception. Because the brands employed in this study were well known to Korean consumers, we were unable to identify a group of low brand familiar consumers within the sample.

Based on these findings, managerial implications were provided. International managers in the electronic industries should be cautious about sourcing from developing countries even for companies with favorable brand images. For international apparel managers, on the other hand, country-sourcing considerations become less significant for strong and favorable apparel brands. Limitations of the study and recommendations for future studies were provided.

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To My Husband, No-Wook



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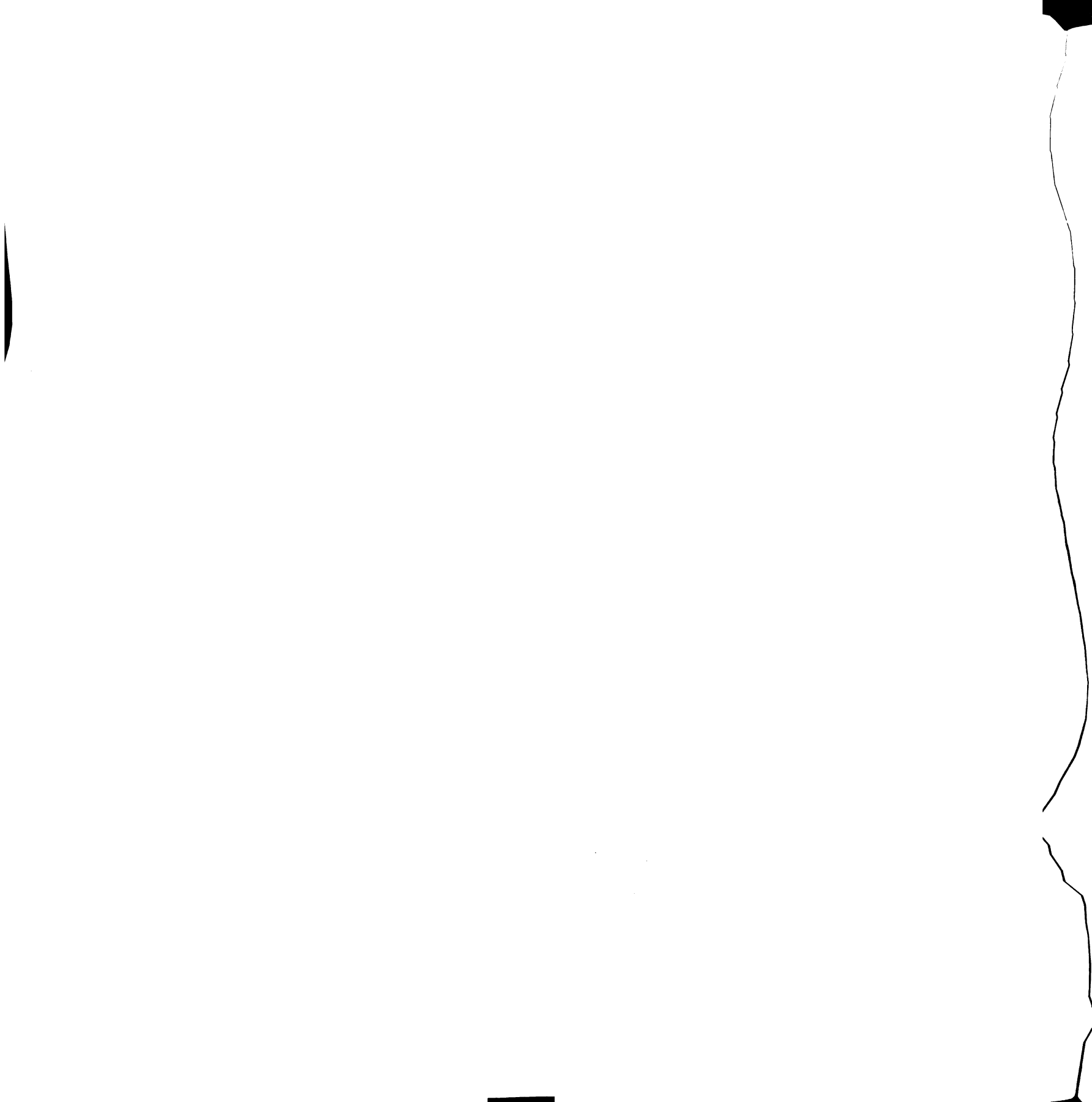
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CHAPTER I

INTRODUCTION

South Korea has been recognized for its economic expansion, which was in a shorter period of time than any other country in modern history (Holstein & Nakarmi, 1995). Due to its strong economic growth, dynamic markets, industrialization, and stable government, the U.S. Department of Commerce identified South Korea (hereafter referred to as "Korea") as one of the ten "Big Emerging Markets (BEMs) (Aguilar & Singer, 1996). For these reasons, the U.S. viewed S. Korea to be "vital to America's national interest" (Garten, 1997, p. xix). During the economic prosperity of the 1980s and early 1990s, Koreans' purchasing power increased dramatically and Koreans become passionate consumers of imported as well as domestic goods (Schuman, 1996).

Korea's meteoric economic expansion, however, faced a breaking point in early 1997, when the Asian financial crisis began (Anonymous, 1997). After experiencing a 5.8 percent decline in GDP in 1998, Korea is slowly recovering from the catastrophic 1997-98 economic crisis and reported GDP growth of 8.8 percent in 2000 and 2.7 percent in 2001 (Bureau of Economic and Business Affairs, 2002, pp.1-3). Despite Korea's current economic fluctuation, it is still a major U.S. export market. In 2001, Korea was the eighth largest overall trade partner of the U.S., up from ninth in 1998 (U.S. Census Bureau, 2001, p.8). Korea is the sixth largest market for U.S. exports (U.S. Census Bureau, 2001, p.8) and the U.S. provided twenty percent of Korea's imports for the first eight months of 2001 (Bureau of Economic and Business Affairs, 2002, pp.1-3). With

increasing trade between the U.S. and Korea, it is important for U.S. exporters who are targeting Korean markets, to understand Korean consumers' purchasing behavior.

In the past decade, with unprecedented technical and communication advances, firms have pursued global market expansion more than ever before, and also have been able to create global brands. The global brand is no longer exclusively associated with one country since firms have taken advantage of lower wage rates by moving their manufacturing or assembling locations to developing countries. They have even increased outsourcing of various components (or parts), designs and engineering tasks by collaborating with foreign partner firms or establishing design centers overseas (Chao, 1998). Accordingly, these activities have contributed to the proliferation of country of origin (COO) designations, which now may include country of manufacturing (COM), country of design (COD), country of brand (COB), country of parts (COP) or country of component (COC), and country of assembly (COA).

The traditional COO research paradigm, which typically assumed that a product was exclusively tied to one country, therefore, is changing in this new era of hybrid products. Thus, further studies are required to understand consumers' behavior regarding hybrid products. This study, therefore, develops a model of Korean consumers' purchasing behavior regarding hybrid products. The statement of the research problem is provided in the next section.

Statement of the Problem

Existing COO research has been criticized as being atheoretical (Liefeld, 1993; Nebenzahl, Jaffe, & Lampert, 1997; Samiee, 1994). This criticism can be partly attributed to the lack of well-defined quality dimensions (Li & Darit, 1997). Recent COO

studies reveal that product **evaluation** involves three aspects: *overall quality*, *product dimensions* (for example, *performance* or serviceability), and *product attributes* (for example, picture or sound for **TV**). Many studies employed overall quality as a dependent variable (Liefeld, 1993). This construct, however, is too abstract to be useful in understanding the effect of COO on quality perceptions. Examining the effect of COO on product attributes, on the other hand, has its own deficiency. It is too specific to construct a theory that can be generalized across different product categories. Therefore, several researchers have examined the effect of COO on product evaluation at the quality dimension level. (See Li & Dant, 1997.) These studies, however, lacked a set of widely accepted general quality dimensions because these are not well defined (Thakor & Katsanis, 1997; Li & Dant, 1997). Thus, a determination of quality dimensions that could be used across product classes is needed.

/ In addition, COO researchers have identified that research on the hybrid product phenomenon is lacking (Johansson, 1989; Obermiller & Spangenberg, 1989; Samiee, 1994). For example, the relative importance of brand image and the various components of COO in consumers' decision making is still in question. This issue is especially important for global products because their established brand reputation could be damaged by moving their production location to places that are perceived unfavorably. The existing COO literature indicates mixed results regarding this issue. In some studies, it is argued that brand name might not compensate for the negative image of COO (Nes & Bilkey, 1993; Heslop, Liefeld, & Wall, 1987; Tse & Gorn, 1993). In other studies, brand name has been found to be a more important predictor of perceived quality and

purchase value than COO (Chao 1989; Tse & Lee, 1993; Ulgado & Lee, 1993). Thus, more research is required to inform the discussion of this concept.

Further, product familiarity has been identified as an important influence on the relationship between COO and product evaluation. (See Johansson, 1989 and Samiee, 1994 for a review of relevant studies.) In the previous COO studies, product familiarity is defined as the "number of product-related experiences that have been accumulated by the consumer" (Alba & Hutchinson, 1987, p. 411) and as "the subjects' perceived knowledge with respect to the brands in a product class" (Park & Lessig, 1981, p. 223). Such product familiarity definitions are too vague to indicate whether or not product familiarity is the same as brand familiarity. Furthermore, in the case of hybrid products, COM is not the same as COB, where the company's headquarters are located. Thus, brand familiarity does not necessarily mean familiarity with the country where the product is manufactured. Therefore, the concept of product familiarity should be redefined and reexamined in the context of hybrid products.

Finally, existing COO researchers have failed to provide a comprehensive view of the effect of COO on the consumer's decision making. That is, product evaluations or beliefs about product quality (Brodowsky, 1996; Liefeld, 1993; Samiee, 1994) are the most frequently studied as dependent variables based on the information-processing perspective (Erickson, Johansson, & Chao, 1984; Hong & Wyer, Jr., 1989, 1990; Obermiller & Spangenberg, 1989). These studies have emphasized the COO effect on overall product evaluation as a cognitive process (Erickson et al., 1984; Hong & Wyer, Jr., 1989, 1990). In consumer behavior research, however, there have been many arguments about the overall evaluation of quality by consumers (Compeau, Grewal, &

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Monroe, 1998; Erickson et al., 1984; Johansson, Douglas, & Nonaka, 1985; Rao & Monroe, 1989). For example, a recent study by Compeau et al. (1998) indicates that quality evaluation has not only a cognitive component but also an affective component. With a few exceptions, however, COO researchers have not attempted to define the construct of overall quality perception and overlooked the affective component (Erickson et al., 1984; Johansson et al., 1985; Obermiller & Spangenberg, 1989). Accordingly, a more comprehensive model of the effect of COO on quality is needed.

Research Objectives

To address some of the unresolved issues in the existing literature, the objectives of this study are to develop a model of Korean consumers' behavior regarding 1) the quality dimensions of product evaluation; 2) the effects of country of manufacture (COM) and brand image on product evaluation (cognitive component), product-specific purchase attitudes (affective component), and purchase intention for hybrid products (behavioral component); and 3) the effects of brand and COM familiarity on the relationships among COM, brand image, and product evaluation of hybrid products.

The remainder of the dissertation is organized as follows. Chapter 2 provides a comprehensive review of the COO, product quality, and product evaluation literature. In Chapter 3, the proposed theoretical models are discussed. Research design, questionnaire development, and data collection are provided in Chapter 4, while Chapter 5 contains the research findings. Finally, in Chapter 6, the dissertation is summarized and implications of the study are discussed as well as directions for future research.

CHAPTER II

REVIEW OF LITERATURE

In this chapter, the literature is reviewed relevant to the research objects: country image, brand, quality perception, country of origin (COO), multi-attributes/multi-dimensions of quality, purchase intention, and product familiarity. The literature review is organized on the basis of studies of uninational products or hybrid products, and further classified on the effect of single or multiple cues on COO. More emphasis is placed on the previous studies of hybrid products since the objectives of the current study involve the effect of country of manufacture (COM) for hybrid products.

Country Image and Quality Perception

One of the early studies to examine country image and product perception was Nagashima's (1970) cross-cultural survey of the image of "made in" labels among U.S. and Japanese businessmen. In this study, country image was defined as follows:

The picture, the reputation, the stereotype that businessmen and consumers attach to products of a specific country. This image is created by such variables as representative products, national characteristics, economic and political background, history, and traditions (Nagashima, 1970, p.68).

Similarly, according to Narayana (1981) "the aggregate image for any particular country's product refers to the entire connotative file associated with that country's product offerings, as perceived by consumers" (p. 32). Thus, the concept of country image in the '70s and early '80s was broad and general.

COO researchers, however, began to narrow the concept of country image to a marketing perspective. That is, they viewed country image as the consumers' general

quality perceptions of products made in the country in question (*Bilkey & Nes, 1982; Han, 1989*). Roth and Romeo (1992) defined country image by elaborating on the marketing perspective as follows :

The overall perception consumers form of products from a particular country, based on their prior perceptions of the country's production and marketing strengths and weaknesses (p. 480).

Thus, based on this definition, country image is identical to the consumer's overall evaluation of the quality of products made in a given country, and country-image dimensions are equivalent to quality dimensions.

COO and Overall Quality Perception

Product quality, as a dependent variable, has been well researched in studies of uninational products as well as of hybrid products. As previously mentioned, product quality can be measured at three levels: overall quality, product dimensions, and product attributes. In this section, studies of the effect of COO on overall quality perception in single-cue and multiple-cue situations for uninational and hybrid products will be reviewed.

COO and Overall Quality Perception of Uninational Products: Single-Cue Situations

The simplest studies have been those in which respondents rated the overall quality of products made in a single country based on a single cue--COO (Brodowsky, 1996). Most of these studies found that generally COO had a positive effect for domestically-made products and a negative effect for foreign-made products (Schooler, 1965; Reiersen, 1967; Schooler, 1971; Wall & Heslop, 1986). For instance, Wall and

Heslop (1986) found that, in general, Canadian consumers rated *Canadian-made products* (cars, wine, clothing, footwear, and home electronics) significantly higher than those made in foreign countries such as Brazil, Taiwan, Hong Kong or from some European countries such as Italy, Sweden, France, USSR, Czech, and PRC.

Researchers also found that the perceived quality of products made in developed countries was significantly higher than that of products made in developing countries (Gaedeke, 1973; Reiersen, 1967; Wall & Heslop, 1986). For example, Gaedeke (1973) found that American consumers rated the quality of several American-made products significantly higher than that of products made in less developed countries such as Brazil, Taiwan, Argentina, Mexico, S. Korea, India, and Turkey.

Single-cue COO studies, however, have been criticized because the purchasing context is not realistic. In fact, consumers are considering many intrinsic cues (such as style, color, and texture) and extrinsic cues (such as brand or price) when they purchase a product. The COO studies with multiple cues for uninational products will be reviewed in the following section.

COO and Overall Quality Perception of Uninational Products: Multi-Cue Situations

Multiple-cue studies are those in which respondents are asked to rate products based on the COO cue as well as other product information¹. The earliest multiple-cue study was done by Schooler and Wildt (1968) in the U.S. They investigated whether or

¹ If a study manipulated product brand names as well-known versus unknown names along with the manipulation of COO information, this was considered to be a study of hybrid products, although the researchers did not identify these products as hybrid products.

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not a negative country image **could** be compensated for by pricing **a foreign product** at a lower cost than a domestic **product**. First, respondents were asked to rate the quality of glassware based only on the "made-in" label (Japan or the United States). The mean evaluations of U.S. products **were** significantly higher than those of the Japanese products.

Price was then offered as a second cue. Respondents were given the same price for the American product, but they were divided into six groups in which different pricing information for the Japanese product was given. When respondents were asked to rate the quality of these products, the quality ratings were not different across groups. This indicated that price had no effect on quality evaluation.

COO and Overall Quality Perception: Hybrid Products

Major studies of COO on hybrid products are summarized in Table 1. Table 1 shows that most of these studies used multiple cues -- at least two, country and brand -- to provide product information to respondents. Since one of the interests of this study is to identify the relative importance of brand and COO for hybrid products, the effects of brand as well as those of COO are discussed.

As shown in Table 1, several studies of hybrid products examined overall quality perception as a dependent variable. Most of these studies measured overall quality by a single item (Ahmed & d'Astous, 1996; Cordell, 1992; Iyer & Kalita, 1997; Heslop et al., 1987; Nes & Bilkey, 1993; Ulgado & Lee, 1993). Each of these studies is discussed below.

Table 1. Summary of Product-Country-Image Literature: Hybrid Products

Author(s)/Year	Cue	Dependent Variable	Product Categories	Nation Subjects	Nation Products	Findings
Johansson & Nebenzahl (1986)	Country Brand	Dollar-preference Brand image/country image using two dimensions, status and economy based on thirteen attributes	Car	U.S. N=320	U.S. West Germany Japan S. Korea Mexico Philippines	West Germany was evaluated as the best country in which to manufacture a car and the images of all brands in this study were improved by moving production to West Germany. On the other hand, moving production to a low -image country would have a negative impact on brand image.
Heslop, Liefeld, & Wall (1987)	COO Brand Price	Product overall quality	Shirts Wallet Telephone	Canada n=480	Canada U.S. South Korea Hong Kong Taiwan	COO effect was greater in the single-cue (COO only) situation and the importance of the COO cue decreased in the presence of price and brand cues. Based on the result of no significant interaction among COO, price, and brand, a negative country image might not be compensated for by brand or price.
Han & Terpstra (1988)	Country Brand	Tech. Advanced Prestige Workmanship Serviceability Economy Overall quality	Television Automobiles	U.S. n=150	U.S. Japan South Korea Germany	Significant main effects were found for COM and brand name for TV's and automobiles. For both products significant interaction was found in most cases. In the cases of U.S.-Japan and U.S.-Germany, the effect of source country was stronger than that of brand name. In the case of U.S.-Korea design, the opposite relationship was found. COO effects were product-dimension specific. Serviceability and workmanship were more sensitive to the sourcing country than brand name.
Cordell (1992)	Country Brand Price Risk	Overall quality Preference	Watch Shoes	U.S. n=199	Pakistan West Germany	The effect of country was greater when the brand was unfamiliar than when it was familiar in the case of the watch, but this was not true in the case of the shoes. In addition, the negative product evaluation associated with a less developed country of origin was greater when the product performance risk was high than when the risk was low.
Tse & Gorn (1993)	COO Brand Before and after	Five attributes: Sound quality Product performance Appropriateness of size Workmanship Likelihood of break-down after warranty Four overall qualities: As a gift Liking Product quality Product worth	Stereo systems	U.S. n=153	Japan Indonesia	COO and brand name were equally salient, and COO seemed to be a more enduring factor in consumer product evaluation. No significant interaction between COO and brand name was found. COO effect and brand effect declined after experience, but experience did not remove the COO effect.

COA = Country of Assembly; COB = Country of Brand; COC = Country of Component; COD = Country of Design; COM = Country of Manufacture; COO = Country of Origin; COP = Country of Parts

Table 1. Cont'd

Author(s)/Year	Cue	Dependent Variable	Product Categories	Nation Subjects	Nation Products	Findings
Nes & Bilkey (1993)	Country Brand Risk class (high vs. low)	Perceived risk Overall quality	Flashlight Towel Glue Toothbrush Power drill Clock radio Hair dryer Car tire	U.S. n=96	Various countries representing low, medium, and high levels of economic development for each product	Products made in less developed countries (LDCs) were perceived to be riskier and of lower quality than products having "no COO" label. Products made in LDCs were perceived to be riskier and of lower quality than products labeled as made in developed countries. Products from LDCs were rated as being lower in quality and higher in risk regardless of brand name.
Tse & Lee (1993)	COA COC Brand Product experience	Performance attributes Long-term attributes Social attributes Purchase value Overall evaluations Confidence	Stereo systems	U.S. n=134 in study 1 n=178 in study 2	Japan South Korea	When decomposed, the effects due to component and assembly origins were less than those found in earlier COO studies. A well-known global brand was found to override a negative effect of the component origin. After experience with the product, a sound system assembled in South Korea was found to have a higher perceived purchase value than the one assembled in Japan.
Chao (1993)	COA COD Price	Product quality - average of four attributes Design quality - average of three attributes	TV	U.S. n=120	U.S. Japan Taiwan	Significant price and COD main effects on design quality perception were found, but there were no significant COA main effects and no interaction effects between COD and COA. Price, COD and COA all had significant effects on overall quality perception. There was no significant interaction between COD and COA.
Ulgado & Lee (1993)	Brand COM	Overall quality	TV Athletic shoes	U.S. n=95 in Study 1 n=93 in Study 2	Germany Taiwan UK Mexico	When only brand and COM were given as stimuli, both had significant effect on respondents' quality perception. When other intrinsic information was given as well as brand and COM, only brand had a significant effect on quality perception.
Ahmed & d'Astous (1996)	COA COD Brand Price Satisfaction assurance	Overall quality Perceived value	Automobile VCR Shoe	Canada n=365	Canada Japan Italy South Korea Mexico	In general, COD explained the largest proportion of common variance, followed by COA and brand name for the quality measure. Price played a minor role in explaining product evaluations. The favorableness of a brand or COO was affected by providing additional product-related information. A brand's quality image decreased if it was designed or assembled in a less prestigious country, but the reverse appeared to be less true. Satisfaction assurance was the most important attribute to affect purchase value for all of the three products, followed by COA and COD.

COA = Country of Assembly; COB = Country of Brand; COC = Country of Component; COD = Country of Design; COM = Country of Manufacture; COO = Country of Origin;

COP = Country of Parts

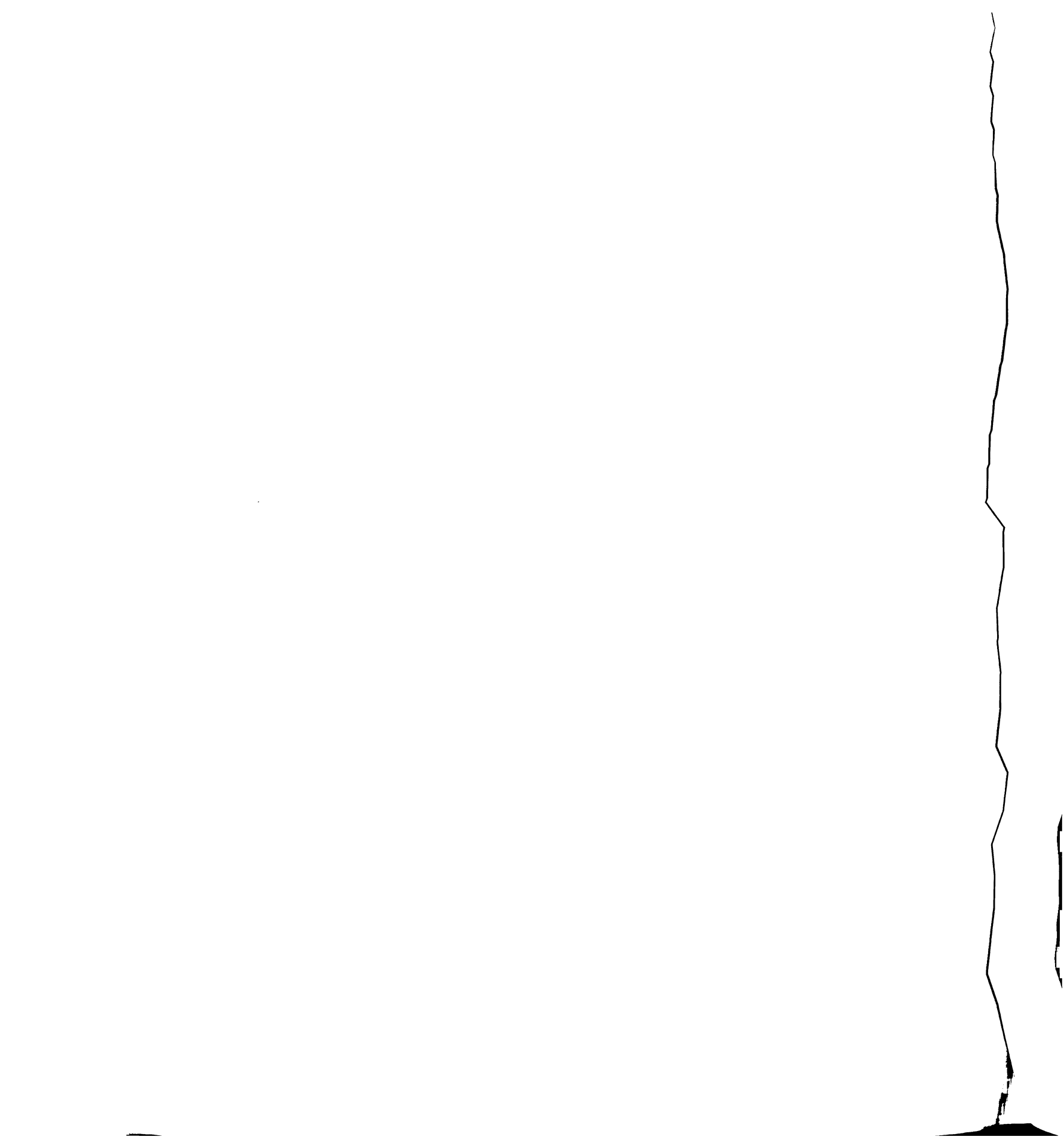


Table 1. Cont'd

Author(s)/Year	Cue	Dependent Variable	Product Categories	Nation Subjects	Nation Products	Findings
Iyer & Kalita (1997)	Price (high vs. low) COB COM Prior knowledge	Overall quality Perceived value Willingness to buy	Sneakers Jeans Stereos Watches	U.S. n=275	U.S. South Korea China	Products manufactured in developed countries were perceived to be of higher quality than those manufactured in newly industrialized or developing countries. Quality perceptions of products with U.S. brand origins were different from those for products with European brand origins at all levels of price and COM. While COM cues were important in assessing quality at all knowledge levels, COB cues were also used at low levels of knowledge for some products. In the presence of COB and COM information, price cues had a lower impact on brand choice (willingness to buy).
Li and Dant (1997)	COO Brand	Performance Serviceability Reliability Durability Aesthetics Conformance Features Image	Men's dress shirts	U.S. n=764	U.S. Italy Hong Kong Indonesia	Significant effects of COO on seven of the eight quality dimensions were found except for serviceability. Significant main effects of brand were found only for performance, reliability, durability, and conformance. Significant interaction effects between COO and brand were found for reliability, aesthetics, features, and image.
Chao (1998)	COA COD COP	Product quality - average of four attributes Design quality - average of three attributes	TV	U.S. n=360	U.S. Mexico	COA and COP had significant impact on product quality perception, but COD had no impact, nor do any of the interaction effects. On the other hand, the COD had a significant effect on design quality perception, but COA and COP had no effect. The significant three-way interaction among COA, COD, and COP implied that whereas a strong COD stereotype reinforced by using parts from the U.S. could not be used to overcome a weak COA stereotype, U.S. parts could be used to improve a negative COD stereotype when the product was shown to be assembled in Mexico.

COA = Country of Assembly; COB = Country of Brand; COC = Country of Component; COD = Country of Design; COM = Country of Manufacture; COO = Country of Origin; COP = Country of Parts

Heslop, Liefeld and Wall (1987) compared Canadian views of the effect of COO on product-quality evaluation in a single-cue versus a multiple-cue situation for three products (shirt, telephone, and wallet). In the single-cue treatment study, only the country information was manipulated (domestic [Canada], developed [U.S.], less developed [South Korea for shirt, Taiwan for wallet, Hong Kong for telephone]). On the other hand, in the multiple-cue situation, Canadian respondents were assigned to one of twelve treatment groups resulting from a two price (high/low) x 3 country (domestic [Canada], developed [U.S.], less developed [South Korea for shirt, Taiwan for wallet, Hong Kong for telephone]) x 2 brand (well-known/unknown) factorial design.

Results of the single-cue situation indicated a significant effect of COO. Each of the three products from a less-developed country received a lower quality evaluation. For the shirt and telephone, Canadian respondents generally perceived Canadian products to have higher quality, but rated the quality of the Italian-made wallet higher than that of the Canadian-made. Results from the multiple-cue situation revealed no significant main effects (of COO, brand, and price) or interactions for the shirt. The overall model for quality perception of the wallet was insignificant, but the COO main effect was significant. In the case of the telephone, the overall model and the COO main effect were significant. Thus, the authors concluded that the COO effect is greater in the single-cue situation and that the importance of the COO cue seems to decrease in the presence of price and brand cues. The authors also concluded, based on the result of no significant interaction among COO, price, and brand, that a negative country image might not be compensated for by brand or price.

Ulgado and Lee (1993) criticized previous studies in which a significant effect of COO was found because these studies did not consider consumers' real purchase situations. They included only two cues, COO and brand name, while much more information is available to consumers in reality. Thus, Ulgado and Lee (1993) conducted two studies. In the first, brand name and COM were the only information given about the product and in the second, product information on specific attributes was given in addition to the brand name and COM. They found that both brand and country information had significant effects on quality perception, when only these two stimuli were available to respondents. When they presented other intrinsic information, only brand had a significant effect on quality perception. These results imply that a well-known brand name can overcome the negative COM effect when other intrinsic attribute information is available.

Similarly, Nes and Bilkey (1993) studied the effects of brand name and COO using tangible products due to the importance of intrinsic information to consumers' product evaluation. They classified COO using three levels, low, medium, and high income based on each country's national income. Brand names were classified into two categories, unknown and well-known. They found significant main effects of COO and brand name on product quality and risk perception. That is, products made in less developed countries (LDC) were perceived to be riskier and of lower quality than products made in developed countries. In addition, if the brand name was well known, it was perceived as being of higher quality and as less risky than if the brand name was unknown. According to the ANOVA results, brand name seemed to have a stronger effect than COO. Moreover, no significant interaction between COO and brand name

was found. In other words, if the products were made in LDCs, they were rated as being lower in quality and higher in risk than those from developed countries regardless of brand name.

In the study by Cordell (1992), however, the interaction effect between COO and brand name was significant. He found that preference for Timex, a well-known brand name, decreased only slightly when the product was made in Pakistan as opposed to West Germany. In the case of a watch with an unfamiliar name, Tempomax, preference declined sharply when the product was manufactured in Pakistan rather than in West Germany. Thus, this study indicates established global brands may override the COO effect, and unknown brands may improve consumers' quality perception by moving production to developed countries.

Ahmed and d'Astous (1996) examined the effect of a multidimensional formulation of COO, namely country of design (COD), where a product is designed or engineered, and country of assembly (COA), where a product is assembled, on consumers' perceived quality and purchase value. Brand name and other product information also were given. They found that the combined effects of COD and COA cues had a stronger impact than brand name on consumers' evaluation of the quality and the purchase value of automobiles, VCRs and shoes. Specifically, COD explained the largest proportion of the common variance, followed by COA and brand name for the measure of quality. Price played a minor role in explaining product evaluations. In addition, a brand or COO's favorable perception was affected by providing additional product-related information. That is, the evaluations of products from prestigious developed countries (like Italy and Japan) went down considerably when other product

information was provided, and evaluations of products from newly industrialized countries (such as Mexico) went up. Similarly, after additional product information was provided, the evaluation of brands from developed countries dropped slightly, and evaluations of brands from developing countries increased slightly. Finally, the authors suggested that a brand's quality image might decrease if it was designed or assembled in a less prestigious country. The evaluations of brands from newly industrialized countries, however, were less affected even if these brands were manufactured in prestigious countries.

Iyer and Kalita (1997) also distinguished between COO -- as COM and country of brand origin (COB) -- and examined the effect of these two dimensions of COO and price cues on consumer perceptions of quality and value. They used within-subjects designs with 2 price (high and low) x 2 COB (US, and an appropriate European country) x 3 COM (U.S., one newly industrialized country [South Korea], and one developing country [China]). They found significant effects of COM and COB cues. Price cues were found to have less impact on brand choice when COM and COB information was given. This study, however, did not include information on specific brands.

COO and Multi-Attributes or Multi-Dimensions of Quality

Some COO researchers conceive of product quality as having several attributes or as having a set of dimensions from which quality is inferred rather than as being a summary construct at the abstract level. Such multi-attributes or the multi-dimensional aspect of quality have been reflected in the concept of country image. Some COO researchers examined the effect of COO in terms of the fit between countries and product categories (Nagashima, 1970, 1977; Roth & Romeo, 1992). These researchers

considered the country image as multi-dimensional. While some researchers used product specific attributes to examine the effect of COO (e.g., Erickson et al., 1984), others used quality dimensions, which were extracted from many product attributes using principle components factor analysis or confirmatory factor analysis (e.g., Roth & Romeo, 1992).

In this section, first, a discussion is provided of how country images using multiple dimensions were defined in previous studies. Then, the relationships between COO and country images in the previous studies of uninational and hybrid products is reviewed. The studies of COO and multi-attribute or multi-dimensional quality also are classified according to whether a single cue (the “made-in” label) was provided, or multiple cues, including the country cue, were provided.

COO and Multi-Attributes or Multi-Dimensions of Quality: Country-Image Dimensions and Quality Dimensions

COO researchers are interested in the dimensions of country image, since they believe the effect of COO could be specific to the quality dimension as well as to overall quality. Several studies discuss the dimensions of country image/quality². (See Table 2.)

²Since country image is viewed as the overall perception of quality for products made in a given country (Bilkey & Nes, 1982; Han, 1989; Roth & Romeo, 1992), dimensions of country image are considered to be the same constructs as the dimensions of quality.

Table 2. Quality Dimensions

Study	Product Categories	Dimensions Named	Comments
Nagashima ^a (1970, 1977)	General products	Price & value Service & engineering Advertising & reputation Design & style Consumer's profile	The original fifty bi-polar terms of Osgood (1952) were rephrased by using descriptive nouns and phrases recommended by Mindak (1961). Twenty items were identified from three pretests. No justification was made for these five dimensions.
Narayana ^a (1981)	General products	Quality (US/Japan) Recognition (US/Japan) Prestige (US/Japan) Production Form (US) Expensiveness (US) Popularity (Japan) Functionality (Japan)	Twenty items were used from Nagashima's (1970) study. Five factors derived from factor analysis, but factors obtained from US consumers differed from those obtained from Japanese consumers.
Cattin, Jolibert, & Lohnes ^a (1982)	General products	Pricing Reliability Workmanship Technicality Performance	Five dimensions (items) were selected out of the 20 used in Nagashima's (1970) study, which was found to be important factors in industrial purchasing decisions.
Jaffe & Nebenzahl ^a (1984)	General Products	Product – technology Marketing Price	Thirteen items were used from Nagashima's (1970) study. Using factor analysis, two factors (product technology and marketing characteristics) were obtained in the first phase of the study where respondents rated products from one country on all items. Two different factors (product technology and price) were obtained in the second phase of the study where respondents rated all countries on one attribute before proceeding to rate them on the next attribute.

^a The focus of the study was country image.

^b The focus of the study was product quality.

Table 2. Cont'd

Study	Product Categories	Dimensions Named	Comments
Johansson & Nebenzahl ^a (1986)	Automobiles	Economy Status	Thirteen items used from Nagashima's (1970) study. Two factors emerged from factor analysis.
Han & Terpstra ^a (1988)	Televisions Automobiles	Technicality Workmanship Prestige Serviceability Economy	Fourteen items selected from Nagashima's (1970; 1977) study. Four factors derived from factor analysis. Service dimension was added.
Roth & Romeo ^a (1992)	Beer Automobiles Leather shoes Crystal Bicycles Watches	Innovativeness Design Prestige Workmanship	Four dimensions derived from literature review. Single item measures of each dimension used. Only one dimension was obtained when data were analyzed using factor analysis.
Li & Dant ^b (1997)	Dress Shirts	Performance Serviceability Reliability Durability Aesthetics Conformance Features Image	Eight dimensions borrowed from Garvin's (1987) study. The authors devised thirty-three items for these eight dimensions. Confirmatory factor analysis indicated acceptable level of model fit. Authors also reported various validity checks.
Thakor and Katsanis ^b (1997)	N.A.	Search Experience Credence	Three dimensions proposed based on "quality" literature (Garvin, 1987; Brucks & Zeithaml, 1991). No empirical work has been done to test the validity of these dimensions.

^a The focus of the study was country image.

^b The focus of the study was product quality.

Most studies identified the dimensions of country image by using exploratory factor analysis with multiple quality items (Nagashima, 1970, 1977; Narayana, 1981; Cattin, Jolibert, & Lohnes, 1982; Jaffe & Nebenzahl, 1984; Johansson & Nebenzahl, 1986; Han & Terpstra, 1988). A few studies attempted to determine quality dimensions based on systematic or theoretical approaches (Roth & Romeo, 1992; Li & Dant, 1997; Thakor & Katsanis, 1997). Although these studies are discussed in the literature review section, critical reviews of these studies are included in the following pages to focus on defining quality dimensions and the validity of these dimensions.

Interestingly, as Table 2 indicates, all the studies performing factor analysis to identify quality dimensions used Nagashima's (1970) measures; some used all twenty items and others selected a subset. In spite of using the same twenty items, the studies indicated that the factors extracted from them differed according to the subjects employed and the products used. In particular, Narayana (1981) found five factors (quality, recognition, prestige, production form and expensiveness) for U.S. consumers³, but two of these five factors were different for Japanese consumers (popularity and functionality as opposed to production form and expensiveness). In the study of Jaffe and Nebenzahl (1984), different factors were obtained when different questionnaire formats were used with the same respondents, the same questions, and the same products. (See their literature review for a detailed description of this study.) Thus, we see that it is difficult to obtain a set of widely accepted general quality dimensions using exploratory factor analysis.

³Initially, Narayana (1981) found four factors for U.S. consumers and five factors for Japanese consumers using factor analysis, but he expanded the four factors to five factors for the U.S. group to obtain factor-labeling consistency between these two groups.

There have been a few **attempts** to identify quality dimensions *using a conceptual or theoretical basis*. Due to a **lack** of comparable data, Roth and **Romeo (1992)** used a **qualitative**, rather than a quantitative, approach to review eight *studies that assessed dimensions of country image*. That is, they used three criteria to *determine country-image dimensions*:

The dimensions (1) were consistently found in previous research, (2) were related to perceptions of a country's production and marketing strengths and weaknesses, and (3) were applicable to a broad range of product categories (p. 480).

These criteria yielded four dimensions of country image, including innovativeness, design, prestige, and workmanship. The definitions of these dimensions are as follows (p. 480):

Innovativeness:	Use of new technology and engineering advances
Design:	Appearance, style, colors, variety
Prestige:	Exclusivity, status, brand name reputation
Workmanship:	Reliability, durability, craftsmanship, manufacturing quality

Roth and Romeo (1992) mentioned that these dimensions were all production and marketing oriented and their use could be justified because consumers formed their *perceptions* by relating a product to what they knew about a country's ability to produce **goods** and services. Since the researchers used a single item for each dimension, they **could not** obtain discriminant validity among these four dimensions and suggested a **unidimensional** country-image construct. In addition, they **omitted** serviceability and **price/value** dimensions, which were frequently mentioned in **previous** studies, without any **justifications**. (See Table 2.)

Li and Dant (1997) borrowed dimensions of product **quality** from Garvin's (1984) **work**. Garvin identified eight dimensions (performance, **serviceability**, reliability,

durability, aesthetics, conformance, features, and image) based on **a synthesis of the five approaches** to viewing product **quality**, including 1) the **transcendent approach**, which **proposes** that quality can only be **recognized** through experience **and cannot be precisely defined or measured**; 2) the **product-based approach**, which takes the view that **the quality of a product** can be measured based on the quantity of some desirable attributes; 3) the **manufacturing-based approach**, which assesses product quality based on the level of **conformity to prespecified manufacturing standards**; 4) the **user-based approach**, which **determines product quality** based on consumers' perceptions; and 5) the **value-based approach**, which **defines quality** based on performance at an acceptable price. The **definitions of the eight quality dimensions** are as follows:

Performance: **Superiority** or excellence of primary **operating characteristics** of a product
Serviceability: The **extent** to which a product can be **easily and adequately repaired and/or maintained**
Reliability: **Probability** of the failure of a product within a **pre-determined period of time**
Durability: **Physical life** of a product
Aesthetics: **The look, feel, sound, taste, smell, style, or fashion** of a product
Conformance: The **extent** to which a product's design and **operating characteristics meet pre-determined standards**
Features: **Availability and excellence of "bells and whistles"** related to a product
Image:⁴ **The extent** to which a product conveys an **upscale or sophisticated image**
 (Li & Dant, 1997, pp. 99-100)

Garvin's (1984, 1987) eight quality dimensions, however, create some conceptual and operational problems. First, Garvin (1984) noted that in many cases it was difficult to distinguish performance (primary product characteristics) from features (secondary characteristics), since the distinction between the two depends on the user's perception of

⁴ Garvin (1984) originally named this dimension "perceived quality."

the degree of importance of the attribute in question. Second, the distinction between reliability and durability was not clear. None of the previous studies of COO identified these two dimensions as separate constructs, as indicated in Table 2. Roth and Romeo (1992) attempted to combine these two constructs in the dimension of workmanship, which included craftsmanship and manufacturing quality.

Third, the concept of aesthetics is confusing in that it contains the “look” and “feel” of the product. These attributes may overlap with image. For example, if the product’s “look” and “feel” are luxurious, it is hard to distinguish them from the “upscale” image. Finally, the dimension of conformance might not be appropriate for the consumers’ perception of quality, since it is managerially determined. It is difficult for the consumer to find the source of pre-determined standards for a product’s design and operating characteristics.

The conceptual ambiguity of Garvin’s eight dimensions leads to high correlations among these constructs in the empirical studies. Li and Dant (1997) devised multiple measures for each dimension for men’s dress shirts and examined validity criteria and their direct relevance to the COO research. Although they reported that Garvin’s taxonomy met key validity criteria, and these dimensions were useful in COO research, there was a problem with lack of discriminant validity. First, there was a high level of multicollinearity among the constructs. The construct correlations table indicated that the highest correlation (0.93) was between aesthetics and image, followed by reliability and performance (0.92), durability and reliability (.83), and durability and performance (0.77). Conformance was highly correlated with reliability (0.90), with performance (0.87), with aesthetics (0.87) and with durability (0.80). This lack of discrimination

among Garvin's (1984) dimensions was found in another study ^{done by Brucks and Zeithaml} (1991), who also examined the empirical estimation of the ^{consumer-perceived} quality dimension for automobiles. They reported that there was no practical way to discriminate between the reliability and durability dimensions of quality. Further, they found that aesthetics was within the prestige dimension, and that the conformance dimension **did** not belong with the others.

Finally, Thakor and Katsanis (1997) proposed quality dimensions by following the categorizing scheme suggested by Nelson (1970) and Darby and Karni (1973): search, experience, and credence. They also incorporated this scheme with the Garvin (1984, 1987) and Brucks and Zeithaml (1991) approaches. According to their statements, the search dimension includes perceptions of features and ease of use, which are formed based primarily on search, since these dimensions can easily be assessed at the point of purchase. The experience dimension consists of perceptions of reliability, serviceability and performance, which are likely to be formed based largely on experience, because consumers assess these aspects of quality only after the product has been purchased and used. The credence dimension⁵ includes aesthetics and prestige.

These dimensions, however, are confusing, since the authors do not provide precise definitions for them. For example, they identify features as a subdimension of search, and performance as a subdivision of experience. As noted above, however, it is difficult to distinguish performance from features, since the distinction between the two

⁵Darby and Karni (1973) defined the credence dimension as a quality perception that the consumer cannot verify even after use such as surgeries or car repairs. Thus, Thakor and Katsanis' (1997) credence dimension is quite different from Darby and Karni's (1973) original credence dimension. They, however, did not explain these differences.

depends on the user's perception of the importance of an attribute (Garvin, 1984). Thus, it is not clear how features can be included in the search dimension.

Further, they mention that products in the search dimension included clothing; the products in the experience dimension were pocket pagers, cameras, and VCRs; and Rolex and Chanel were examples of credence brands. Thus, their classifications within the quality dimension are also applicable to categorizing product types. They did not explain, however, how their categorization scheme could be used in both cases. Moreover, no empirical attempt has been made to examine the validity of this classification. Thus, Thakor and Katsanis' (1997) quality dimensions seem to be inadequate for use in COO research, although they provide insights that help to explain the relative importance of COO and brand image in the perception of product quality.

COO and Multi-Attributes or Multi-Dimensions of Quality of Uninational Products: Single-Cue Situations

Studies treating product-country image as a multi-dimensional construct are rooted in a study by Nagashima (1970), as previously discussed. He asked American and Japanese business executives to evaluate products from five different countries based on twenty items using semantic-differential scales. He then grouped his twenty items into five dimensions: 1) price and value, 2) service and engineering, 3) advertising and reputation, 4) design and style, and 5) consumer's profile. Although no justification was made for these groupings, these twenty items have been used, in some combination, as the basis of many product-country-image studies (Brodowsky, 1996). Nagashima found that the products made in Germany received the highest ratings from the two groups of respondents. Japanese respondents, however, perceived products made in France as

having higher prestige value than did American respondents. Products made in the U.S. were rated higher by American respondents than by Japanese respondents. These findings, however, were not statistically tested.

Later, Nagashima (1977) replicated the study using only Japanese subjects. The results indicated that the rating of products made in the U.S. had decreased for the reliability and workmanship dimensions. On the other hand, products made in Japan, that had been perceived as inexpensive and unreliable in the previous study, were now viewed as expensive as U.S. products and as reliable as German products. Although no statistical tests were performed, these results indicate that the product-country image may change over time.

Narayana (1981) examined the "made-in" image for U.S. and Japanese products as perceived by U.S. and Japanese consumers. Image data were obtained through twenty semantic-differential scales used in Nagashima's (1970) study. In order to be consistent in the factor labeling, five factors were obtained from each of the U.S. and the Japanese samples. These factors, however, differed between the two groups. (See Table 2.) The results indicated that U.S. consumers perceived American-made products to be generally of higher quality than Japanese-made products. In addition, U.S. consumers perceived U.S. products to be more expensive and more prestigious than Japanese products. On the other hand, the Japanese consumers perceived the Japanese products to be of higher quality than American-made products and Japanese products as slightly less prestigious, but more functional, than U.S. products.

Cattin et al. (1982) examined American and French purchasing managers' views about the effect of COO on the evaluation of industrial products made in France,

Germany, England, Japan, and the U.S.. The researchers employed the twenty semantic-differential scales used by Nagashima (1970, 1977). They selected five dimensions⁶ out of the twenty that previously were "found to be important factors in industrial purchasing decisions" (p.135), including pricing, reliability, workmanship, technicality, and performance. For American and French respondents, the mean scores for these five dimensions were obtained for each of five "made-in" countries, and then these mean scores were summed to indicate the degree of "favorableness" toward each "made-in" country. The results showed that "made in Germany" was evaluated most favorably by both American and French respondents. They further performed two-group (American versus French) discriminant analyses for each of the products made in five different countries using twenty items. The results indicated significant differences between the evaluations of American and French purchasing managers. Specifically, the discriminating powers (ω^2) between the American and French groups were statistically higher for products made in the U.S. (.638) and in France (.652) than for those made in Germany (.405), England (.370), or Japan (.353). Thus, the authors suggested that American and French respondents might have home-country biases based on national pride or patriotism.

Roth and Romeo (1992) examined the effect of COO in terms of the fit between countries and product categories. They proposed a framework of (un)favorable

⁶ These five dimensions are five items of Nagashima's (1970) twenty. These semantic differential items were reasonably priced/unreasonably priced, reliable/unreliable, careful and meticulous workmanship/not so careful and meticulous workmanship, technically advanced/technically backward, and more concerned with outward appearance/more concerned with performance. They performed principal components analysis, but found no major set of factors that explains the 20 items.

(mis)match between countries and product categories, which could *Provide strategies for* managing the products' COO. They posited that a favorable *product-country match* would occur when a country's perceived strength is an important *product feature* for the particular product category (for example, French shoe). In this case, promotion of COO is advised. Conversely, an unfavorable product-country match would occur when the important product features are not associated with the strength of the country (for example, Hungarian shoe). In this case, managers are advised to emphasize benefits other than COO and to seek joint-ventures with favorable match partners. On the other hand, a favorable *mismatch* would occur when a country has a positive image related to a certain product feature, but that feature is not important for the particular product category (for example, French beer). In this case, managers are advised to downplay the importance of product-category image dimensions and to promote COO as a secondary benefit if it involves a compensatory choice process. Finally, an unfavorable mismatch would occur when an image dimension is an unimportant product feature and negatively associated with the country (for example, Hungarian beer). In this case, the authors recommend that managers ignore COO.

Using a cross-cultural sample consisting of graduate students in Ireland, Mexico, and the U.S., Roth and Romeo (1992) measured country images for ten countries regarding four image dimensions (innovativeness, design, prestige, and workmanship) and also measured image importance for six products in relation to these dimensions. Each dimension had a single item. They performed principal-components analysis and confirmatory-factor analysis to ensure the multidimensionality of the country-image construct. The results, however, indicated that the country image was a unidimensional

construct⁷. The researchers suggested that this finding might be *due to the use of only* four items to capture the country image. They also found that *favorable product-country* matches on the image dimensions seemed to predict consumers' willingness to buy foreign products.

COO and Multi-Attributes or Multi-Dimensions of Quality of Uninational Products: Multiple-Cue Situations

Erickson, et al. (1984) examined the influence of an image variable, COO, on the formation of beliefs and attitudes in a multi-attribute model framework. Image was defined as "some aspect of the product that is distinct from its physical characteristics but that is nevertheless identified with the product" (p. 694). They modeled the possible bi-directional effects of beliefs about specific attributes on attitudes (overall evaluation), and the effects of attitudes on specific product beliefs (halo effects). They measured individuals' beliefs about specific attributes including reliability, durability, workmanship, mileage, and price for ten automobile models. These five attributes were reduced to two factors, quality and economy, and then these two factors were summed to yield a single score, which was used in the equations instead of the five attributes. Two equations were estimated. One had attitudes as a dependent variable, and its independent variables were beliefs about attributes, familiarity, COO (an image variable), and true value for each attribute obtained from *Consumer Reports* and *Car & Driver*. The other equation had beliefs about attributes as a dependent variable, and attitudes, COO (an

⁷ In the case of principal-components factor analysis, unidimensionality of the country-image construct was found for respondents from all three nations. In the case of confirmatory-factor analysis, U.S. and Mexican respondents showed unidimensionality of this construct, but Irish respondents indicated two factors, 1) innovativeness and design, and 2) prestige and workmanship. These two factors, however, were highly correlated (0.993). This indicates questionable discriminant validity of the two constructs. Thus, the authors decided to use the unidimensional solution.

image variable), and true value for each attribute as independent variables. The researchers found strong bidirectional effects of beliefs on attitudes and effects of attitudes on beliefs. Familiarity had a direct effect on attitudes. The image variable, COO, directly affected beliefs, but not attitudes.

In a study similar to that of Erickson et al. (1984), Johansson et al. (1985) examined the effect of COO on beliefs and attitudes in the multi-attribute model framework. In their study, however, thirteen attributes for automobiles were measured by Japanese and American students. These attributes were reduced to three factors: reliability, horsepower, and driving comfort. Three other attributes, gas mileage, handling, and styling, were included. Each of these was independent of the first three. Each of the five attributes⁸ was treated as a dependent variable or as an independent variable rather than summing these scores, as in the Erickson et al. study (1984). Car ownership and the demographic variables (age, gender, income, and nationality) were incorporated into the equations.

The results of the simultaneous-equations estimation indicate that each of these attributes had a significant impact on the overall rating (attitudes) for each car. In addition, a significant halo effect (a positive impact of the overall rating [attitudes] on the individual attribute ratings) was found. COO had no effect on attitudes, but it did have a modest impact on attribute ratings (that is, COO had significant effects for some cars on some attributes, but not for all cars on all attributes). This study did not find a positive bias among Japanese respondents towards Japanese cars or among American respondents toward American cars.

⁸ Styling was excluded in the equation, since it has no "true" scores from published sources.

Jaffe and Nebenzahl (1984) report an interesting experiment using Nagashima's (1970) framework. They used two formats; in the first, respondents rated products from one country on all thirteen items before rating products of other countries. In the second format, respondents rated all five countries on one attribute before evaluating the next attribute. The student sample was divided into two groups. One group received the first questionnaire format, and the other group received the second. Two weeks later, the students were asked to fill out the same information, but half the students had the same questionnaire format they received the first time and the other half were given the alternative format.

The researchers performed principal-components factor analyses for each questionnaire format. From the first format, they identified two factors -- product technology and marketing characteristics -- that explained 36 percent of the variance in the original thirteen items. Two different factors -- product technology and price -- were extracted from the second format, which explained 31 percent of the variance in the original items.

From these results, the researchers concluded that the dimensions suggested by Nagashima did not sufficiently explain product-country image. Furthermore, they suggested that the identification of the dimension might depend on the questionnaire format.

COO, Brand, and Multi-Attributes or Multi-Dimensions of Quality: Hybrid Products

Attempts were made to identify the dimensions of the quality construct based on multi-attributes in early hybrid-products literature. Johansson and Nebenzahl (1986)

examined how consumers' perception of the brand quality and *the image of passenger cars* could be changed by moving the location of manufacturing from one place to another. Respondents were asked to evaluate six different COO concepts as well as two Japanese brand names and two American brand names on the basis of thirteen attributes. Using principal components analysis on the scores for each brand and each "made-in" concept based on the thirteen original rating items, they found that two factors, "economy" and "status" represented 58.1 percent of the variation in the original data.

Respondents were also asked to rate twenty-four combinations of brands and "made-in" labels based on the original thirteen attributes. That is, respondents rated a hypothetical Honda made in Japan, a Honda made in the U.S., and Hondas made in four other countries: Germany, Mexico, South Korea, and the Philippines. The authors mapped the average scores for each of the twenty-four cars on the two dimensional spaces (status and economy).

From this mapping, they found that manufacturing cars in a developed country contributed to a more favorable brand image than manufacturing cars in an underdeveloped or newly industrialized country. That is, West Germany was rated as the best country in which to manufacture a car, and the images of all brands in this study were improved by moving production to West Germany. On the other hand, moving production to a low-image country would result in deterioration of brand image.

The authors further quantified the potential benefit or losses from moving production to a different country by measuring dollar preference effects. That is, respondents were asked how much they would pay for a Honda if it was manufactured in Japan, or how much they would pay for a Honda manufactured in the U.S. The

regression analysis indicated that 17 percent of dollar preference effects could be attributed to changes in the dimensions of status and economy resulting from moving production to another country.

Han and Terpstra (1988) examined the effects of COO and brand name cues on U.S. consumers' evaluations of uninationa and binational products. Respondents were asked to rate ten automobiles and ten televisions on six dimensions: technical advancement, prestige, workmanship, serviceability, economy and overall quality. These ten automobiles and ten televisions represented different brand and COM combinations: 1) foreign made and foreign branded (e.g., Honda Accord made in Japan); 2) foreign made and domestically branded (e.g., Ford Tracer made in Mexico); 3) domestically made and foreign branded (e.g., Honda Accord made in the U.S.); and 4) domestically made and domestically branded (e.g., Ford Mustang made in the U.S.).

The researchers found that source country (COM) and brand name had significant main effects on the evaluations of five dependent variables (technical advancement, serviceability, etc.) for most TVs and automobiles. In addition, interaction between source country and brand name was found to exist in most cases.

The effect of source country was found to be stronger than that of brand name for the U.S.-Japanese and the U.S.-German designs of both cars and TVs. In the case of the U.S.-Korean designs in both product categories, however, the brand-name effect was stronger than the source-country effect. In addition, the relative magnitude of brand-name effect and source-country effect varied across product dimensions. Such dimensions as serviceability and workmanship were found to be more sensitive to source country than to brand name.

Tse and Gorn (1993) examined the effectiveness of COO *and* global brand name in American consumers' evaluations of stereo systems at the *attribute level* and at the overall product level. The attribute evaluations included *workmanship, performance, sound quality, likelihood of breaking down after warranty expires, and size of whole system*. The overall product evaluations included *proud to give as a gift, liking, product quality and product worth*. The COO and global brand name were manipulated in a 2 COO (a developed country [Japan] versus a developing country [Indonesia]) x 2 brand (well-known/unknown) design in which subjects' evaluations were obtained both before and after they tried a *product*. The results of this study indicated significant main effects of the COO and brand name at all the attribute levels, except that there was no brand effect on the size of the stereo system. Significant main effects of the COO and brand were also found for the overall evaluation levels, except that there were no brand and country effects on product worth. The interaction between COO and brand name was not significant at either attribute or overall evaluation levels. In addition, the COO effect and brand effect declined after experience, but experience did not seem to remove the COO effect. Therefore, the authors concluded that COO was still a salient factor in consumer product evaluation, and it appeared to be a more enduring cue than the global brand name.

Tse and Lee (1993) decomposed country image into component and assembly origins. They examined the effects of country of component (COC) (Japan versus South Korea) and country of assembly (COA) (Japan versus South Korea) as well as the effects of global branding (Sony versus Gold Star) and product experience on product evaluation by American consumers. Product evaluation consisted of six measures, including

performance attributes (performance and sound quality), *long-term attributes* (deterioration of sound quality and likelihood of breaking down *after warranty expires*), social attributes (proud to give as a gift and proud to show *friends*), purchase value (good/bad buy) overall evaluations (liking, product quality, and workmanship), and confidence in the above evaluations.

In their first study, the effects of COC and COA on product evaluations were examined using stereo systems as the stimulus. They found that COC was significant in both *long-term attributes* and overall evaluations and that COA had a significant effect on *long-term attributes* and only a marginally significant effect on overall evaluations. Thus, the authors suggested that when the COO was decomposed into component and assembly origins, its effects were less than those found in earlier COO studies.

In their second study, the brand effect as well as the effects of COC and COA on product evaluations were examined. Unlike Ahmed and d'Astous (1996), they found that brand name effect was much stronger than component and assembly origins. In fact, while brand name had a significant effect on all types of evaluations, component origin had a significant main effect only on the performance attributes and overall evaluations, and assembly origin had no significant main effect across all measures. The significant interaction between brand name and component origin suggests that well-known brand names seem to overcome any negative effects due to component origin. Finally, if American consumers had experience with the product, product evaluation of a well-known global brand was not affected by changing assembly origins, but a less-known brand assembled in South Korea was found to have a higher product evaluation than the one assembled in Japan.

Chao (1993) also partitioned COO into COD and COA. *This study consisted of an experimental design of 2 price (low and high) x 3 COD (US, Japan, and Taiwan) x 3 COA (Taiwan, Thailand and Mexico). The price and design location were specified as between-subjects factors and the assembly location was specified as a within-subjects factor. For American consumers quality evaluations were measured at two levels including design quality and product quality. Design quality items were imitative-innovative, common-exclusive, and conventional-stylish. Product quality items included workmanship, reliability, durability, and product quality. His study, using televisions, found significant price and COD main effects on design-quality perception, but no significant COA main effects or any interaction effects between COD and COA. On the other hand, all three of these factors (COA, COD, and price) had significant main effects on the product quality perception. No significant interaction between COA and COD was found. That is, a low evaluation of a product assembled in a country associated with negatively perceived quality could not be compensated for by having the product designed in a country with a positive design stereotype. Although the authors provided multiple-attribute information about the stimulus to respondents, brand name was not included, even though another study found that it had a stronger effect than COO (Tse and Lee, 1993). Thus, the results of this study are questionable.*

Later, Chao (1998) decomposed COO into three components, country of parts (COP), COD, and COA, and examined the impact of these COO dimensions on product quality and design quality perceptions. American respondents were provided a picture of the product (a stereo television) as well as a list of product features. Each of the assembly, design, and parts locations were manipulated using two country levels (U.S.

and Mexico) while the brand name and price information were controlled. The study found that the COA and COP have a significant impact on product quality perception, but COD has no impact, nor do any of the interaction effects. That is, a negatively perceived product quality associated with a negatively perceived COO-assembly-location stereotype could not be compensated for by a positive COO-design-location stereotype or a positive COO-part-location stereotype. On the other hand, the COD had a significant effect on design quality perception, but COA and COP had no effect. The significant three-way interaction (COA, COD, and COP) implied that whereas a strong COD stereotype reinforced by using parts from the United States could not be used to overcome a weak COA stereotype, U.S. parts could be used to improve a negative COD stereotype when the product was shown to be assembled in Mexico.

Finally, Li and Dant (1997) selected a number of Garvin's (1984) quality dimensions that could be used across product categories and tested them empirically. They developed questionnaires concerning office white dress shirts for men based on Garvin's definitions of eight quality dimensions: performance, serviceability, reliability, durability, aesthetics, conformance, features, and image. Using a 4 COO (U.S., Italy, Hong Kong, and Indonesia) x 2 brand (name brand [Van Huesen] versus fictitious brand [Winslow]) between-subject factorial design, they distributed questionnaires to a convenience sample of white-collar professionals (men and women) in the metropolitan area of a major Northeastern U.S. city.

The data were analyzed to examine key validity criteria (unidimensionality, reliability, convergent validity, discriminant validity, and nomological validity).

Confirmatory factor analysis showed that the revised model had an acceptable fit to the

data, and this indicates the unidimensionality of quality. The composite reliability coefficients indicated acceptable reliability for the revised dimensions scales.

To evaluate convergent validity of the revised model, each indicator's factor loading on its assigned construct was examined. All λ s were positive and significant. Thus, convergent validity was achieved for each of the eight quality scales. Discriminant validity was examined using χ^2 difference test procedures. (See Anderson and Gerbing 1988 for complete procedures.) The results indicated acceptable discriminant validity. However, the high correlation between image and aesthetics and between performance and reliability requires further investigation of the discriminant validity of these dimensions.

To examine nomological validity, the researchers ran MANOVA and ANOVA analyses with the eight quality dimensions as dependent variables, and brand and COO as two independent variables. The individual items were averaged under corresponding latent constructs. The results show significant effects of COO on seven of the eight quality dimensions. (Serviceability was the exception.) On the other hand, significant main effects of brand were found only for performance, reliability, durability, and conformance. Significant interaction effects between COO and brand were found for reliability, aesthetics, features, and perceived quality.

COO and Purchase Intention

The effect of COO on purchase intention has been examined less frequently than its effect on quality perception. As indicated in Table 1, very few studies of hybrid products have examined the effect of COO on willingness to purchase. Thus, in this section, the focus will be on the studies of uninational products.

Schooler and Wildt (1968) were the first to employ *purchase intention* as a dependent variable in the COO literature. The results of the study indicated that in the multicue situation, American respondents were less likely to buy *products made* in Japan, but the unfavorable image of foreign products could be overcome by lowering their prices.

Ettenson, Wagner, and Gaeth (1988) examined the effect of COO on *willingness to purchase apparel* before and after the airing of a “made in the USA” TV campaign. American students were asked to rate their purchase intention for women’s blouses and men’s dress shirts based on the information about style (trendy or classic for blouses and full or tapered cut for shirts), quality (average or above average), fiber content (100% cotton or cotton-polyester blend), country of origin (made in U.S. or made in China), and brand name (designer or private label). They were asked to fill out the questionnaire before the first airing of the “made in the USA” campaign (pretest) and three months later, during which time the campaign ran on television (posttest). Using *conjoint tasks*, the authors found that fiber and price had the greatest effects. The COO main effect explained 4 percent of the variance in the female respondents’ purchase intention and 3 percent in the variation of the males’ purchase decisions in the pretest. In the posttest, the COO effect explained 6 percent of variance for the entire sample. Thus, the authors mentioned that respondents used other extrinsic cues more heavily than COO and that the “made in the USA” campaign had no effect.

Wall, Liefeld, and Heslop (1991) used multicues also to examine the effect of COO, as well as quality, risk and value perceptions, on the likelihood of purchase. For three products (shirts, telephones, and wallets), Canadian respondents were provided

information about price (high or low), country (Canada for ~~a~~ll three products, a developed country [the U.S. for the shirt and telephone, and Italy ~~f~~or the wallet], and a less developed country [South Korea for the shirt, Taiwan for the *wallet*, and Hong Kong for the telephone]), and brand (well-known or unknown). The authors employed an analysis-of-covariance model using age, gender, education, and perceptions of ability to judge products⁹ as covariates. The results showed that COO had a significant effect on the quality perception for all three products, but it had a significant effect on the likelihood of purchase only for shirts. Brand had less impact than COO did. It had a significant effect on the likelihood of purchase only for shirts and its significant effect on quality was found only for telephones. Although the analysis-of-covariance models were significant for all three products, the R^2 values indicated that the models explained only 17.3 percent of the variance in likelihood of purchase for shirts, and 5.8 percent of the variance in likelihood of purchase for wallets and telephones.

Product Familiarity

Some COO researchers found that COO effects are strongest for consumers with little or no product familiarity resulting from brand familiarity (Cordell, 1992; Han & Qualls, 1985; Samiee, 1994). That is, if brand familiarity is low or nonexistent, COM will have a greater effect in evaluating products. On the other hand, if brand familiarity is high, brand image will be more important in the purchasing decision than COM. For example, Han and Qualls (1985) found that consumer perceptions of product quality for

⁹This variable was measured by the item indicating the consumer's perception of how good a judge he/she felt he/she was for each of the three products.

Grundig televisions (an unfamiliar brand) were favorably influenced by their COM when they were made in Germany. Conversely, they found that COM had less impact on consumer perceptions for Honda (a familiar brand). Similarly, Cordell (1992) found that preference for Timex (a familiar brand name) decreased only slightly when the product was made in Pakistan as opposed to West Germany. In the case of a watch with an unfamiliar name, Tempomax, preference declined sharply when the product was manufactured in Pakistan rather than in West Germany.

Some COO researchers have suggested, however, that consumers are more likely to use "made-in" labels when they were more familiar with COO. Johansson et al. (1985) found that familiarity with automobile models with different national origins (that is, familiarity with Japanese and American cars) had variable influence on product evaluation, reflecting more positive or more negative perceptions of different attributes. Johansson and Nebenzahl (1986) also found that self-assessed "knowledge about product class" was positively correlated with the "importance of country of origin."

Heimbach, Johansson, and MacLachlan (1988) examined the relationship between familiarity and country-cue usage based on a cue-utilization framework. This framework suggests that the usage of a cue (such as COO) depends on its predictive value and its confidence value. The predictive value of a cue is the extent to which a consumer associates a cue with product quality. The confidence value of the cue is the extent to which a consumer has confidence in her/his ability to use that cue (Olson & Jacoby, 1972). The authors suggest that the predictive value of the "made-in" label increases with the degree of perceived differences in the quality of the goods each country produces. That is, if a consumer perceives that there are differences between the qualities

of goods produced in different countries, then he/she will use the *COO label* in judging quality since the country cue has predictive value for quality.

In addition, they mention that the predictive tendency of the country cue depends on the consistency of product quality among brands produced in the same country. That is, if a consumer perceives that all brands from the same country have invariable quality, the predictive value of the “made-in” cue will be high and this cue will serve as a good summary construct. In terms of confidence value, the authors explain that consumers having more familiarity with the product category are more likely to be aware of the quality differences between countries and between brands within a country, and that they tend to be more capable of evaluating the quality of alternative products using the country cue.

The researchers hypothesized that the extent of COO cue utilization in attitude judgement about brands is positively correlated with the cue’s predictive value and with a person’s familiarity with the product class, that is, the cue’s confidence value. They also proposed that the extent of COO cue utilization is a function of the interaction between the cue’s predictive value and its confidence value. The results of their experiment confirmed these hypotheses.

Iyer and Kalita (1997) hypothesized that use of all available information on price, brand name origin, and COM will increase with increasing levels of prior knowledge. In their study, prior knowledge was operationalized as the number of brands of each product identified from free recall by each respondent. Then they determined three levels of prior knowledge based on these responses. The results showed that while COM cues were important in evaluating quality at all knowledge levels for all products (stereos, watches,

sneakers, and jeans), COB cues were used at all knowledge levels ~~S~~ *Only for stereos and watches.* Only jeans indicated increasing cue utilization with *increasing* levels of knowledge. Price was found to ~~be~~ seldom used for most products.

The findings reviewed above indicate that the effects of product familiarity on COO are mixed. This might be due, in part, to the fact that in some studies, product familiarity is defined as brand familiarity (Iyer & Kalita, 1997; Cordell, 1992; Han & Qualls, 1985), while in other studies it is defined as country familiarities (Johansson *et al.*, 1985; Heimbach, *et al.*, 1988; Roth & Romeo, 1992). Thus, product familiarity should be redefined in terms of brand familiarity and COM familiarity. Such an attempt will be especially critical in explaining the differential effect of brand image and COM on consumer purchasing behavior for hybrid products, where the COB and the COM are different.

CHAPTER III

CONCEPTUAL FRAMEWORK

First, this chapter will propose a new framework of quality dimensions that can be used across product categories based on Nelson's (1970, 1974) quality dimensions and a critical review of the existing country image studies provided in Chapter II. Using the quality dimensions identified, several models are proposed for Korean consumers to examine the unresolved issues in the area of country of origin (COO) for well-known branded products: 1) to identify the quality dimensions of product evaluation; 2) to examine the effects of country of manufacture (COM) and brand image on product evaluation (cognitive component), product-specific purchase attitudes (affective component), and purchase intention for hybrid products; and 3) the effects of brand and COM familiarity on the relationships among COM, brand image, and product evaluation of hybrid products.

The models in the current study are based on the Theory of Reasoned Action¹⁰ (Fishbein & Ajzen, 1975) since this theory explains consumers' purchasing behavior through the cognitive component (belief-evaluation composite), the affective component (attitudes toward an action), and behavioral intention. In the proposed models, the

¹⁰ Although Fishbein & Ajzen (1975) originally included normative components (normative belief, motivation to comply, and subjective norm) in the consumers' decision-making process, the current study excludes these constructs. Normative components in COO studies are often found in the context of a domestic versus a foreign product purchase situation (Han, 1989; Ettenson et al., 1988; Heslop et al., 1987; Kim & Pysarchik, 2001; Wall, Liefeld, & Heslop, 1989). These studies employ ethnocentrism or nationalism as correlates of country effects and attempt to explain the effect of buy-domestic-products campaigns on consumers' purchasing behavior. On the other hand, the context of the current study is the situation of hybrid product purchasing, where the effects of normative components stimulated by ethnocentrism or nationalism are expected to be minimal.

behavior of interest is a consumer's intention to buy hybrid products including TVs, cameras, and sweaters. Discussion is organized according to the major constructs in the models. After reviewing selected quality dimensions for COO and brand image effect, the current study proposes a series of theory-based hypotheses regarding the causal relationships within the models.

Proposed Quality Dimensions across Product Categories

As discussed in Chapter II, the quality dimensions proposed in previous studies were found to be highly correlated (Roth and Romeo, 1992; Li & Dant, 1997). The current study proposes that the multicollinearity among the quality dimensions is due to the fact that the same evaluation mechanism (for example, search or experience) is used to assess related quality dimensions. For example, high correlations between reliability and performance, and durability and performance as observed by Li and Dant (1997) might be due to the fact that consumers perceive and assess these quality dimensions through the same evaluation mechanism (experience with products).

Thus, first, quality dimensions relevant to the COO literature review are reviewed. Then, these quality dimensions are categorized based on the quality evaluation mechanisms associated with the products' functional and symbolic aspects. These will be discussed in greater detail below.

Quality Dimensions

The quality dimensions were identified in the COO literature based on the criteria below, which were adapted from Roth and Romeo (1992, p. 480). The dimensions

(1) were consistently found in previous research;

- (2) related to perceptions of a country's production and marketing strengths and weaknesses;
- (3) were conceptually and operationally distinctive; and
- (4) were applicable to a broad range of product categories.

Based on the above criteria, the current study proposes six dimensions of quality, including ease of use, design, performance, serviceability, brand prestige, and technical prestige. The definitions of these dimensions and equivalent dimensions in COO studies are indicated in Table 3.

Table 3. Definitions of the Quality Dimensions and Equivalent Dimensions in COO Studies

Quality Dimensions	Definitions	Equivalent Dimensions in COO Studies
Ease of Use	Ease of use and operation	Ease of Use ^a
Design	Style, fashion, colors, or varieties of a product	Design ^b
Performance	Excellence and dependability of the operating features of a product	Workmanship or Performance ^c ; Reliability or Durability ^d
Serviceability	Accessibility of service center and rapidity, courtesy, and competence of repair/maintenance service	Serviceability ^e
Brand Prestige	Prestigious image stimulated by brand name	Reputation ^f ; Prestige ^g Status ^h ; Image ⁱ
Technical Prestige	Prestigious image stimulated by use of advanced/high-technology	Innovativeness or Technicality ^j

^a Thakor & Katsanis, 1997

^b Nagashima, 1970, 1977; Roth & Rome, 1992

^c Cattin et al., 1982; Han & Terpstra, 1988; Roth & Romeo, 1992; Li & Dant, 1997

^d Cattin et al., 1982; Li & Dant, 1997

^e Han & Terpstra, 1988

^f Nagashima, 1970, 1977

^g Han & Terpstra, 1988; Roth & Romeo, 1992

^h Johansson & Nebenzahl, 1986

ⁱ Li & Dant, 1997

^j Cattin et al., 1982; Jaffe & Nebenzahl, 1984; Han & Terpstra, 1988; Roth & Romeo, 1992

There are several **points** that should be noted. *First, the dimension of serviceability has a different meaning depending upon the product type. That is, serviceability for electronics refers to the accessibility and competence of a service center (Han and Terpstra, 1988), whereas it means the ease of management/care for apparel goods (Li and Dant, 1997).*

Second, previous studies of **product innovation** or **technicality** did not analyze the **symbolic (prestigious) image** associated with **advanced/high-technology** (Cattin et al., 1982; Jaffe & Nebenzahl, 1984; Han & Terpstra, 1988; Roth & Romeo, 1992). The current study proposes that the **previously used innovation or technicality** needs to be interpreted as **technical prestige** since the use of **advanced/high-technology** improves the performance of the product, and accordingly, **innovation or technicality** is highly related to performance.

It should be also noted that although **COO researchers** consistently identify the dimension of **price (economy or expensiveness) or value**, as one of the **quality dimensions** (Nagashima, 1970, 1977; Narayana, 1981; Cattin et al., 1982; Johansson & Nebenzahl, 1986; Han & Terpstra, 1988), this dimension is not included in the current study. Li and Dant (1997) are critical of the above studies, because they do not clearly distinguish quality from value and price, although these are three different constructs. That is, **price** is what an individual has to sacrifice to obtain a product (Ahtola, 1984), **perceived value** is a consumer's belief in the utility gained relative to what he/she has given up (Zeithaml, 1988), and **quality** is an individual's judgment of the excellence of a product (Garvin, 1984). Therefore, price and value are hardly subdimensions of quality

according to these definitions. Thus, this paper excludes price or value as a quality dimension.

Finally, the relative importance of each quality dimension differs based upon the type of product. For example, the design dimension may be less important for electronics than fashion products, since there is less variation in designs for electronics than for apparel. The ease of use dimension may be less important for products such as cameras having similar operating features or TVs having standardized operating functions.

Classification of Quality Dimensions Based on Quality Evaluation Mechanisms

Consumers may select a product based upon its symbolic (prestige) or functional aspects (Mittal, 1990; Sirgy, 1982). Accordingly, quality dimensions can be dichotomized on the basis of their symbolic and functional aspects. As indicated in Table 3, COO researchers frequently identify these two types of quality dimensions, although they do not explicitly distinguish between them. Thus, the present paper proposes that consumers perceive and evaluate the quality of a product in two ways, functionally and symbolically.

As indicated in Table 4, the functional aspects of quality are evaluated through the search and experience mechanisms based on the logic of whether the attribute in question can be evaluated prior to purchasing the product or after purchasing and using it (Nelson 1970, 1974). In the search mechanism, consumers evaluate quality dimensions that can

Table 4. Definitions of the Quality Evaluation Mechanisms and Corresponding Quality Dimensions

Quality Evaluation Mechanisms		Definitions	Quality Dimensions
Functional Mechanisms	Search	Consumers' quality evaluation process activated prior to purchase.	Ease of Use Design
	Experience	Consumers' quality evaluation process activated only after purchase and use.	Performance Serviceability
Symbolic Mechanisms	Image	Consumers' quality evaluation process activated to assess the prestige of the image stimulated by brand name or use of advanced/high technology.	Brand Prestige Technical Prestige

be evaluated through information seeking and processing, without purchasing or using the item (Nelson, 1970, 1974). The quality dimension assessed through this mechanism is design, since style, fashion, colors, or variety of a product can be examined prior to purchase. In addition to design, ease of use is also judged through the search mechanism, as Thakor and Katsanis (1997) propose, although COO studies have not examined this.

In the experience mechanism, consumers evaluate quality dimensions that cannot be evaluated unless they purchase and use the item (Nelson, 1970, 1974). That is, through the experience mechanism, consumers make inferences about quality based on intrinsic and extrinsic cues at the time they purchase a product, whereas in the search mechanism they can make evaluations at the point of purchase. The quality dimensions evaluated through the experience mechanism are product performance and serviceability, since the excellence and dependability of a product's operating features, as well as the

accessibility and competence of a service center or the ease of product care can only be evaluated after experiencing the product or service.

Finally, the symbolic aspects of quality are evaluated through the image mechanism. Consumers attach symbolic meaning to products, since product consumption is social behavior. Such symbolic meaning is often referred to as “product image” or “brand image” (Assael, 1992; Mowen, 1990). Many COO researchers have focused on the prestigious or upscale image of the product, which is stimulated by the brand name and further enhances the reputation of the product (Nagashima, 1970, 1977; Han & Terpstra, 1988; Roth & Romeo, 1992; Johansson & Nebenzahl, 1986; Li & Dant, 1997). Further, as mentioned above, the current study proposes that the prestigious image of a product is also stimulated by using advanced/high-technology. Thus, the quality dimensions evaluated through the image mechanism are brand prestige and technical prestige. In the following section, a comprehensive model of the differential effects of brand and COM on consumers’ purchasing behavior will be discussed, based on the quality dimensions identified above.

Comprehensive Model of the Differential Effects of Brand Image and COM on Consumer Purchasing Behavior

Comprehensive models based on the Theory of Reasoned Action (Fishbein & Ajzen, 1975) are proposed to explain the relative importance of COM and brand image on consumers’ perceptions of quality, purchase attitudes, and intention to buy three products, a TV, a camera, and a sweater. (See Figure 1.) As described below, Fishbein

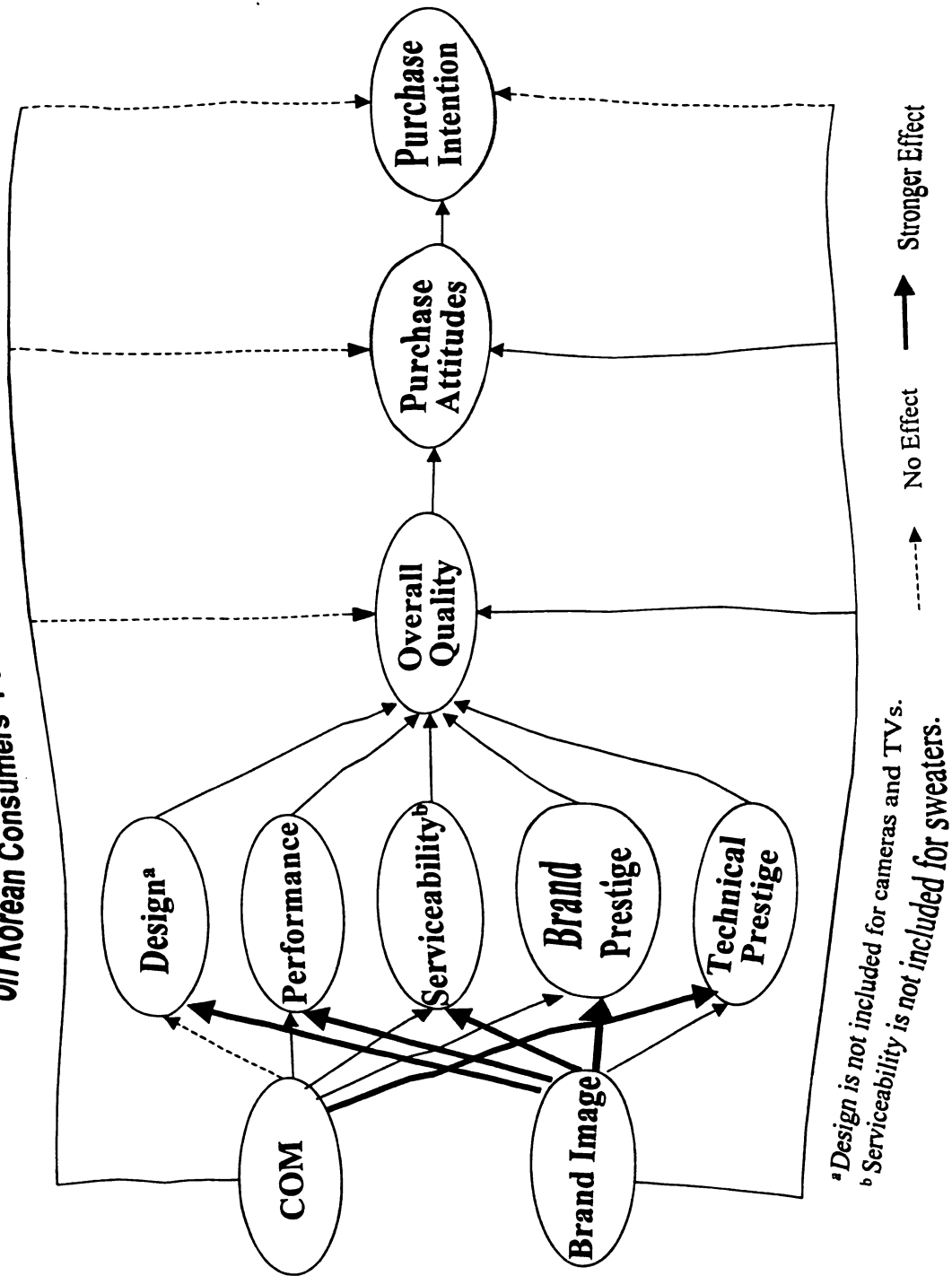
and Ajzen (1975)¹¹ propose **that** behavioral intention leads to **behavior**, and that behavioral intention is determined by the consumer's attitudes (in favor of or against) toward purchasing or using a brand.

The attitudes toward purchasing or using a brand are, in turn, a function of the cognitive belief structure ($\sum_{i=1}^n B_i E_i$). The cognitive belief structure is a belief-evaluation composite where B_i is the belief that performance of the behavior will lead to a specific outcome, i , and E_i is the evaluation of each consequence, and n is the number of salient outcomes.

The cognitive component in the model of Fishbein and Ajzen (1975) gives information about consumers' overall quality perceptions since it is the total set of their salient beliefs and the evaluations associated with those beliefs. As previously mentioned, COO researchers have found that the effects of COM and brand are quality-dimension specific (Han & Terpstra, 1988; Li & Dant, 1997; Thakor & Katsanis, 1997). Therefore, the cognitive component in the Fishbein and Ajzen (1975) model is decomposed into two constructs: quality dimensions and overall quality. (See Figure 1.)

¹¹ As previously mentioned, this study excludes the normative value or subjective norm. Fishbein and Ajzen (1975) propose that the subjective norm is a function of a normative structure ($\sum_{j=1}^k NB_j MC_j$), where NB_j is the perceived expectation that referent j thinks the individual should or should not perform the behavior, MC_j is the consumer's motivation to comply with referent j , and k is the number of salient referents. Subjective norm is an antecedent of behavioral intention along with attitude toward the act.

**Figure 1. A Comprehensive Model of the Differential Effects of Brand and COM
On Korean Consumers' Purchasing Intention for Hybrid Products**



In this model, the quality evaluation mechanisms (search, experience, and image) are used as explanatory variables due to a statistical limitation of structural equation modeling (SEM)¹². In the following section, each relationship in the proposed models is discussed.

The Relationships among COM, Brand Image, and Quality Dimensions

COM, Brand Image and Search Dimensions (Design and Ease of Use)

Perceptions of product design or ease of use are formed through information seeking and processing and can be easily assessed at the point of purchase. If consumers can assess quality first-hand, then they will rely less on other extrinsic cues, especially brand name, COO or COM (Thakor & Katsanis, 1997). Therefore, COM would not be expected to impact the perception of the design dimension since consumers can assess style, fashion, or colors visually or manually or try on the product. For example, consumers can assess the style, fashion, or colors of Ralph Lauren sweaters manufactured in developing countries like Mexico by examining these qualities before purchasing and wearing them.

Brand image, however, is expected to have some influence on consumers' quality perception (Thakor & Katsanis, 1997). The logic is based on the fact that through strict quality control, packaging and advertising, a company intensively develops its brand

¹² In SEM, the quality evaluation mechanisms are second-order factors, since multicollinearity among the quality dimensions suggests the existence of other latent variables, which are the three quality evaluation mechanisms in the present study (Bollen, 1989). The proposed models in this paper, however, are constructed in a way that these higher-order factors are hard to empirically test using SEM. That is, in order to be identified in the SEM, the six quality dimensions should be influenced only by the second-order factors (evaluation mechanisms). However, the models are designed in a way that the quality dimensions are influenced by COM and brand image as well as the second order factors. Thus, these models cannot be identified in the SEM.

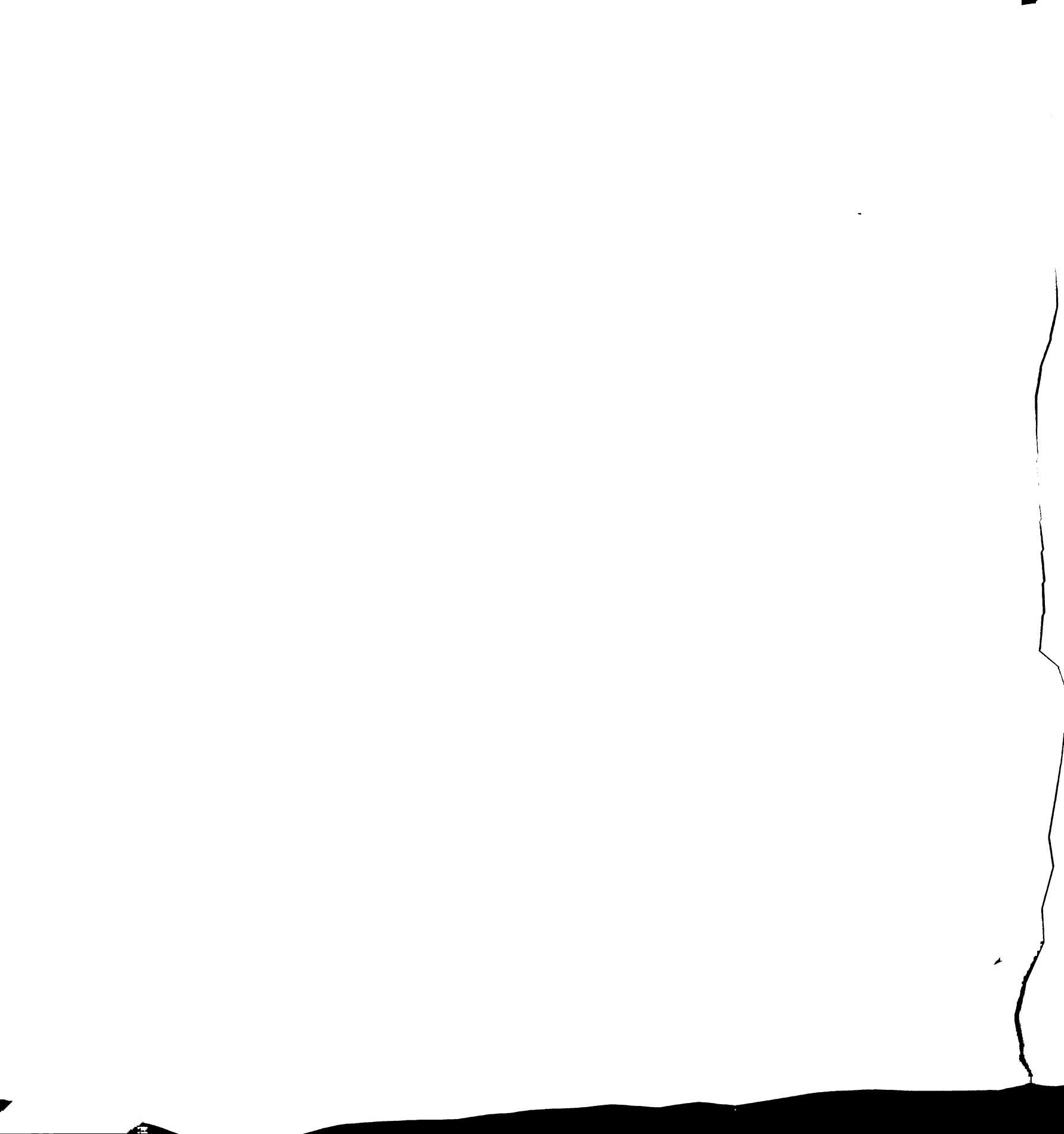


image (Negley, 1999) and thus, brand names become a signal of unobservable product quality (Rao, Qu, & Ruekert, 1999). Therefore, even though consumers can directly search some product dimensions, the brand image may influence their judgments of these dimensions.

As previously mentioned, the ease of use dimension may be more important for products having sophisticated features. The current study employs cameras with an automatic focus, TVs having a standardized operating system, and cotton sweaters with no operating system. Therefore, the ease of use dimension is less important when evaluating product quality since there is little variation in the way they operate across the brands within the product category. Thus, the ease of use dimension is excluded in the present study. Further, the design dimension is examined only in the case of sweaters, since this dimension is assumed to be less important in the quality evaluation than other dimensions for TVs and cameras. Focus group respondents did not mention it when they were asked to identify what the salient attributes were when they purchased TVs and cameras.

Based on the above arguments, the following hypotheses are proposed for sweaters:

- H1a: There will be no difference between the design evaluation of a product manufactured in a developed country and that in a developing country.
- H1b: Brand image and design evaluation will be positively related.

COM, Brand Image and Experience Dimensions (Performance and Serviceability)

Since the evaluations of experience dimensions, including performance and serviceability, are formed after the product has been purchased and used (Nelson, 1970; 1974; Thakor & Katsanis, 1997), consumers may infer the qualities of these dimensions

based on extrinsic cues rather than intrinsic cues at the point of purchase. Thus, the effect of extrinsic cues such as COM and brand image may become more important in consumers' perceptions of the experience dimensions rather than the search dimensions.

Many previous COO studies have found that a product manufactured in a developed country is rated higher in quality than one made in a developing country. (See Liefeld, 1993; Samiee, 1994; Verlegh & Steenkamp, 1999 for a comprehensive review.) It is also well known that brand image and product quality are positively related (Assael, 1992). The current study, however, further proposes that brand image has a stronger effect on the functional dimension than does COM. As mentioned above, this logic is based on the fact that a company invests in improving brand name recognition and in establishing favorable brand image rather than in boosting the image of the country where the product is manufactured (Tse & Gorn, 1993). Country images associated with COM are formed in the consumers' mind through personal experience (for example, study and travel); knowledge of the country's political status and economic developments, and such; or experience with a product from the country in question (Samiee, 1994). Thus, brand name provides a customer with more readily recognizable information about a product than does COM (Ahmed & d'Astous, 1996). The following hypotheses are proposed for the experience dimensions.

For TVs, cameras, and sweaters:

- H2a: The performance evaluation of a product manufactured in a developed country will be higher than that in a developing country.
- H2b: Brand image and performance evaluation will be positively related.
- H2c: Brand image will have a stronger effect on performance evaluation than will COM.
- H3a: The serviceability evaluation of a product manufactured in a developed country will be higher than that in a developing country.
- H3b: Brand image and serviceability evaluation will be positively related.

H3c: Brand image will have a stronger effect on serviceability evaluation than will COM.

COM, Brand Image, and Image Dimensions (Brand Prestige and Technical Prestige)

Consumers buy many products because of their prestigious image symbols (Eastman, Goldsmith, & Flynn, 1999; Kirmani, Sood & Bridges, 1999). The image dimensions represent the symbolic quality of the product, that is, the prestigious image of the product resulting from the brand name or the use of advanced/high technology in manufacturing the product.

Regarding the brand prestige dimension, if a consumer has a positive impression of a brand name, the product is assumed to have a prestigious brand image, since this image may deliver the promise of prestige as well as quality and value to consumers (Anonymous, 1998). Thus, it is proposed that a product's prestigious brand image is positively related to its overall brand image.

On the other hand, the effect of COM on brand prestige is also proposed to be significant, as Ahmed and d'Astous (1996) found that a brand's quality image decreases if it is assembled in a less prestigious country. The current study, however, proposes that the effect of brand image on the brand-prestige dimension is greater than that of COM on brand prestige since brand name contributes more to the prestige of the brand than does COM.

The present paper also proposes that COM will have a significant influence on the perception of the technical prestige. That is, if a product is manufactured in an

advanced/high-tech country¹³, it is assumed that this product has a prestigious image stimulated by using advanced/high technology. Johansson and Nebenzahl (1986) found that a product's status image (associated with pride of ownership and style) for passenger cars (Buick, Chevy, Honda, and Mazda) was diminished by moving production to low-wage countries (S. Korea, Mexico or the Philippines). Thus, it can be inferred that developed countries will be perceived as having more advanced/high tech products than developing countries, and products manufactured in developed countries will have more prestigious images than those made in developing countries.

Further, brand image is proposed to have a positive influence on a consumer's perception of technical prestige. This proposition is inferred from findings of studies (Ulgado & Lee, 1993; Tse & Lee, 1993) that uncovered a significant interaction between brand and COM. That is, if a product has a favorable image boosted by a well-known brand name, the unfavorable technical images associated with less prestigious countries (such as developing countries) could be overcome. The current study, however, proposes that the effect of COM on the technical-prestige dimension is greater than that of the brand image effect since technical prestige is determined by the use of advanced/high-technology.

Based on the above arguments, the following hypotheses are proposed.

For TVs, cameras, and sweaters:

H4a: The brand-prestige evaluation of a product manufactured in a developed country will be higher than that in a developing country.

H4b: Brand image and brand-prestige evaluation will be positively related.

¹³The current study limits the scope of the prestige dimension to that associated with an advanced/high tech country, since most previous COO studies' main interest is in nonfood products. If a product is food (either produced or processed), the prestigious image of the product will be associated with the place famous for good food products (for example, the champagne produced in France will have a prestigious image).

- H4c: Brand image will have a **stronger** effect on brand prestige than **will** COM.
- H5a: The technical prestige **e**valuation of a product manufact**u**red in a developed country will be higher than that in a developing country.
- H5b: Brand image and technical prestige evaluation will be **positively** related.
- H5c: COM will have a stronger effect on technical prestige than **will** brand image.

The Relationships among COM, Brand Image, Quality Dimensions, and Overall Quality Perceptions

Quality Dimensions and Overall Quality Perception

The relationships between each quality dimension and overall quality are **proposed** to be positive since consumers use multiple quality attributes when evaluating overall **quality** (Fishbein & Ajzen, 1975; Steenkamp, 1990). Although there is no empirical research examining these relationships, several COO researchers (Han & Terpstra, 1988; Li & Dant, 1997; Roth & Romeo, 1992; Thakor & Katsanis, 1997) consider overall quality to be composed of the subdimensions of quality. (See Table 3.) Therefore, a direct relationship between each quality dimension¹⁴ and overall quality is proposed as follows:

- H6a: Design evaluation and overall quality will be positively related.
- H6b: Performance evaluation and overall quality will be positively related.
- H6c: Serviceability evaluation and overall quality will be positively related.
- H6d: Brand-prestige evaluation and overall quality will be positively related.
- H6e: Technical prestige evaluation and overall quality will be positively **re**lated.

COM, Brand Image, and Overall Quality Perception

Many COO researchers have reported a significant impact of **COM** on overall quality. (See Samiee [1994] and Verlegh & Steenkamp [1999] for a **comprehensive** review.) **E**specially in the context of hybrid products, both COM and **brand** have been

reported to have influence on ~~the~~ overall quality perception when ~~only~~ brand name and country cues are provided (Han & Terpstra, 1988; Tse & Gorn , 1993). That is, products from developed countries are perceived to have higher quality than those from developing countries, and products with well-known brand names are perceived to have higher quality than those with unknown brands. The effect of COM, however, was found to have no impact on the overall quality perception when other intrinsic information was provided, while the effect of brand remained strong (Ulgado & Lee, 1993). Similarly, using tangible products, Nes and Bilkey (1993) found that while both COM and brand significantly affected product quality perceptions, brand had a stronger effect. Thus, it is clear that when intrinsic information is provided in addition to brand name and COM cues, the effect of COM lessens, while that of brand image remains influential. Therefore, when consumers are provided with intrinsic information about the product, the following hypotheses are proposed:

H7a: COM will have no relationship to overall quality.

H7b: Brand image and overall quality perception will be positively related.

The Relationships among COM, Brand Image, Overall Quality Perception and Purchase Attitudes

Overall Quality Perception and Purchase Attitudes

Personal attitudes toward the behavior (affective process) refers to whether the person is in favor of or against performing the behavior in question (Fishbein & Ajzen, 1975). Thus, attitude formation is the affective process in consumers' decision making.

¹⁴As previously mentioned, for TVs, cameras with automatic focus, and cotton sweaters, there is little variation in the way they operate across the brands within the product category. Thus, the ease of use dimension is excluded in the present study.

The Theory of Reasoned Action (Fishbein & Ajzen, 1975) suggests that attitudes toward an action are distinct from attitudes toward an object. That is, the focus is on measuring the attitudes a consumer has toward buying a product and not her/his attitudes toward the product itself. Shimp and Sharma (1987) emphasize that the attitudes measured must directly match the action being considered.

Various studies examining the efficacy of this theory have confirmed the positive relationship between cognitive belief structure and attitudes (Knox & Chernatony, 1989; Lee & Green, 1991; Mitchell & Olson, 1981; Netemeyer & Bearden, 1992; Sheppard, Hartwick, & Warshaw, 1988). Lee and Green (1991) also found that cognitive structure was a significant predictor of attitudes for both the US and Korean samples. Therefore, this study proposes that the higher an individual's overall quality perception of a product, the more favorable his/her attitudes will be toward the act of purchasing.

H8a: Overall quality perception and purchase attitudes will be positively related.

COM, Brand Image, and Purchase Attitudes

Obermiller and Spangenberg (1989) propose that COO is not likely to trigger an affective process, that is, attitudes toward the behavior, although some studies found that such an emotional reaction occurs when COO is the only cue provided (COO stereotypes in the studies of Bannister & Saunders [1978], and Reiersen [1967]). In fact, in the situation where multiple cues are provided, two studies, Erickson et al. (1984) and Johansson et al. (1985) report no effect of COO (where the brand and manufacturing country were the same) on attitudes, although they found a significant effect of COO on belief (quality perception). In both studies, attitudes were significantly related to belief.

Since these researchers studied **only** uninational products, COO **was** *equivalent to COM* in these studies. Thus, the COM of hybrid products seems to *have no impact* on consumers' attitudes.

Brand image is a total perception of the brand that is obtained by processing information from various sources over time (Assael, 1992). Thus, it is expected that if a consumer has a favorable brand image, then he/she will have a positive attitude toward buying the brand, while if s/he has an unfavorable brand image, a negative attitude toward buying the brand will be formed. Therefore, the following hypotheses are proposed:

H8b: COM will have no relationship to purchase attitudes.

H8c: Brand image will have a positive relationship to purchase attitudes.

The Relationships among COM, Brand Image, Purchase Attitudes, and Intention to Buy

Purchase Attitudes and Intention to Buy

A consumer's intention to buy is the ultimate dependent variable in the current study. Fishbein and Ajzen (1975) define intention as "a special case of beliefs in which the object is always the person himself and the attribute is always a behavior" (p. 12). A consumer's intention is formed by her/his evaluating the behavior and allocating subjective probability that he/she will perform that behavior. Fishbein and Ajzen (1975) propose that consumers' intention to purchase serves as a link between their attitudes toward buying products and their actual purchase or use of the products. Intention to buy has been frequently used as an alternative measure to purchasing behavior in previous studies (Wilson, Mathews, & Harvey, 1975).

Fishbein and Ajzen (1975) posit that attitudes toward an action directly determine purchase intention. That is, the more favorably the consumer views engaging in a certain action, the more likely he/she is to have an intention to engage in that action. Several researchers have confirmed the positive association between attitudes and intention in the Theory of Reasoned Action (Knox & Chernatony, 1989; Lee & Green, 1991; Mitchell & Olson, 1981; Netemeyer & Bearden, 1992; Sheppard et al., 1988). This relationship was also found to be significant among Korean consumers in a cross-cultural study of the Theory of Reasoned Action (Lee & Green, 1991). Therefore, a positive relationship between attitudes toward buying a product and intention to buy the product is proposed.

H9a: Attitudes toward purchasing a product will be positively related to the intention to buy the product.

COM, Brand Image, and Intention to Buy

The effects of COO and brand on purchase intention have been examined less frequently than their impact on quality perception. Especially, few studies have examined the effect of COM on purchase intention in the context of hybrid products, as indicated in Table 1. Past studies indicate that the effect of COO on purchase intention is limited (Ettenson, et al., 1988; Schooler & Wildt, 1968). In the study of Wall et al. (1991), the effects of COO and brand on intention to buy are also found to be weaker than their effects on quality perception. Further, the effects of COO and brand on purchase intention are product specific. Both COO and brand had significant effects on purchase intention for shirts, but no influence was found for telephones and wallets. These studies, however, did not include attitudes as another antecedent of purchase intention as Proposed by Fishbein and Ajzen (1975). Thus, the finding of a significant

effect of COO and brand image on purchase intention is doubtful. Moreover, willingness to buy is found to be closely related to the value of the product. That is, the trade-off between perceived quality and the monetary sacrifice may be another important factor in determining purchase intention (Dodds, Monroe & Grewal, 1991; Monroe & Krishnan, 1985; Szybillo & Jacoby, 1974; Iyer & Kalita, 1997). Therefore, the following hypotheses are proposed:

H9b: COM will have no relationship to intention to buy.

H9c: Brand image will have no relationship to intention to buy.

Models of the Differential Effects of COM and Brand Image on Quality Perceptions of Hybrid Products Using Brand and COM Familiarities as Moderating Variables

COO studies found product familiarity to be one of the customer-related influences that may have impact on consumers' use of COO as a purchasing cue (Heimbach et al., 1988; Johansson et al., 1985; Johansson, 1989; Samiee, 1994). Thus, the current study proposes that product familiarity, later defined as brand familiarity and COM familiarity, is a moderating variable that identifies the differential effects of brand image and COM on quality perception for hybrid products. In the following sections, brand and COM familiarities are defined, and then the causal relationships among these variables are discussed.

Definitions of Brand Familiarity and COM Familiarity

In previous studies, product familiarity is defined as the "number of product-related experiences that have been accumulated by the consumer" (Alba & Hutchinson,

1987, p. 411) and is measured using items such as “previous ownership” (Bettman & Park, 1980; Johnson & Russo, 1984). This approach emphasizes actual experience with the product. Knowledge of the product, however, could be obtained without direct experience, through information search, word-of-mouth from people close to the consumer, or media advertising exposure (Johansson, 1989).

Product familiarity is also viewed as “the individual’s prior knowledge level with respect to the brands in a product class” (p. 50) and is measured by using self-reported rating scales (Johansson, 1989) or by items such as number of brands he/she recalls in a product class (Iyer & Kalita, 1997). This approach implies that product familiarity is determined by brand familiarity. Such an approach, however, is insufficient to explain the effect of product familiarity on COO usage for hybrid products. For uninational products, brand familiarity implies COO familiarity, since brand name is strongly associated with COO. For example, if a consumer knows SONY well, he/she knows that it is a Japanese brand. On the other hand, for hybrid products, COM is not the same as country of brand (COB), where the company’s headquarters are located. Thus, brand familiarity does not necessarily mean familiarity with the country where the product is manufactured.

The current study, therefore, will specify conventional product familiarity as “brand familiarity” and “COM familiarity.” Brand familiarity is defined as the consumer’s prior knowledge of the brand in a product class. Thus, brand familiarity is specific to a particular product. On the other hand, COM familiarity is defined as the individual’s prior knowledge of products made in a particular country.

Based on brand familiarity and COM familiarity, this study proposes four segments of consumers: high brand familiarity/high COM familiarity, high brand familiarity/low COM familiarity, low brand familiarity/high COM familiarity, low brand familiarity/low COM familiarity. The differential effects of brand image and COM on quality perception are proposed for each of the four segments. Quality perception is decomposed into two levels, including quality dimensions (design, performance, serviceability, brand prestige, and technical prestige) and overall quality perception. Quality dimensions (See Table 3) are employed to examine the effect of brand image and COM on these four consumer segments. Discussion of the causal relationships between each quality dimension and overall quality perception is not included in this section, since this has already been examined in the previous section.

Moderating Effects of Brand Familiarity and COM Familiarity on the Relationships among Brand Image, COM, Quality Dimensions and Overall Quality Perception

Johansson (1989) proposes that if a consumer has knowledge of a country's products, he/she will use the COO to evaluate products and brands. He explains the relationship between product knowledge and use of COO as similar to that of product knowledge and use of brand name. That is, when someone buys a product on the basis of brand name alone, it seems reasonable to assume that he/she thinks he/she knows something about the brand and is familiar with it. Similarly, a consumer can obtain knowledge of a country's products in various ways, such as product experience (trial), information search, word-of-mouth from people with whom he/she has close relationships, or media advertising exposure. If knowledge of a country's products (for

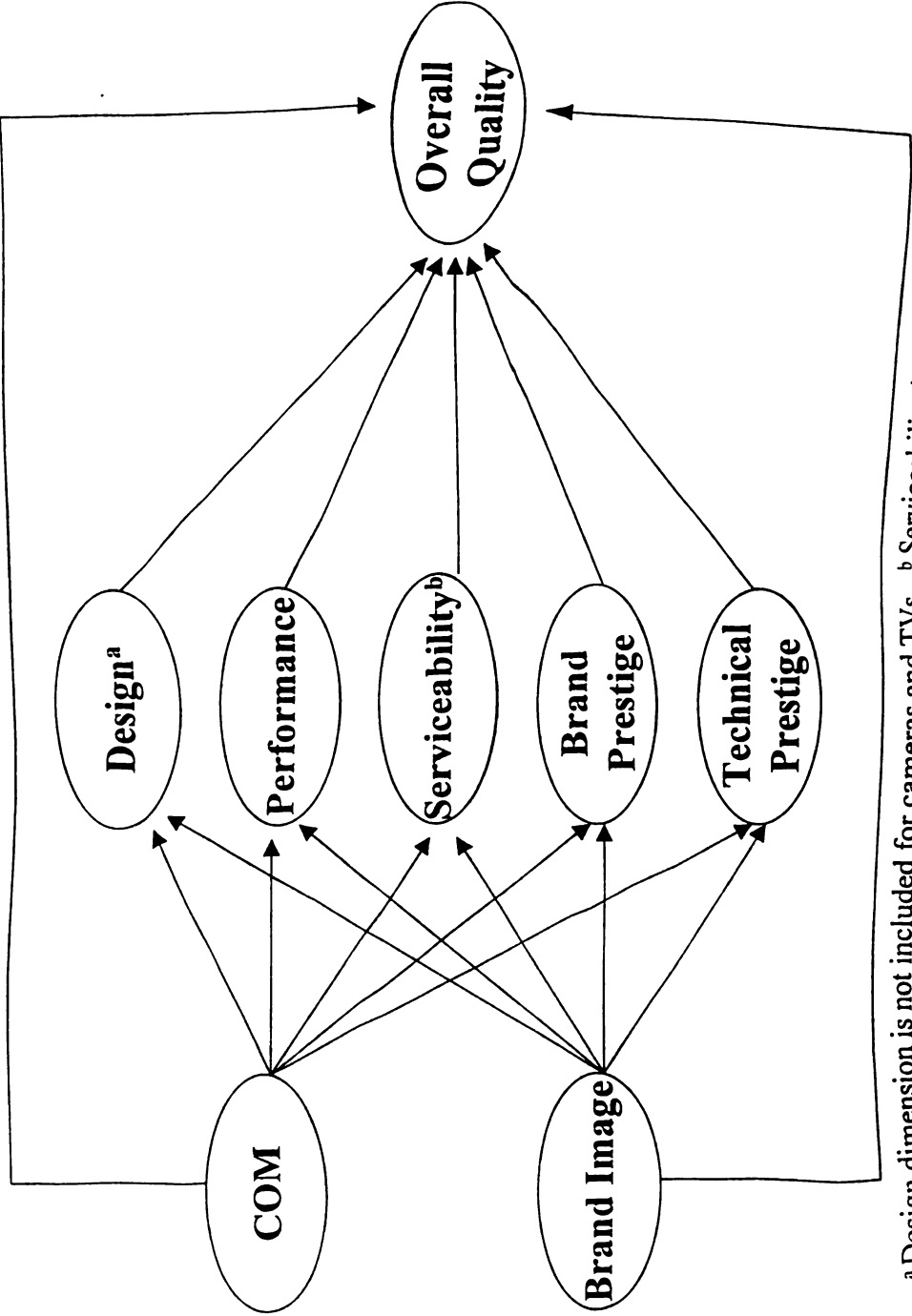
example, whether or not the country is a high-quality manufacturer of a specific product) is relevant to the task at hand, he/she will use the information to purchase the product. Thus, it is logical to assume that the more a consumer knows about the country's products, the more likely he/she will be to use the COO cue to evaluate a product. Likewise, it is expected that the more a consumer knows about a brand, the more likely he/she will be to use the brand name when purchasing a product.

Johansson's (1989) proposition is consistent with the confidence value proposed by Heimbach, et al. (1988). That is, if consumers are aware of the quality differences between countries and between brands within a country, they are more capable of evaluating the quality of alternative products using the country cue.

Therefore, for consumers with high brand familiarity and high COM familiarity, brand image and COM will be used to make judgments on the five dimensions of quality (design, performance, serviceability, technical prestige, and brand prestige) and the overall quality perception. For consumers with high brand familiarity and low COM familiarity, only brand image will have a significant impact on the evaluation of the quality dimensions and overall quality. Conversely, for consumers with low brand familiarity and high COM familiarity, only COM will have a significant impact on the evaluation of the quality dimensions and overall quality. Finally, for consumers with low brand familiarity and low COM familiarity, brand image and COM will have no impact on the evaluation of the quality dimensions and overall quality. For these consumers, other intrinsic or extrinsic cues, such as price, will be more important. Based on the above arguments, the following hypotheses are proposed: (See Figure 2-a to 2-d for each segment.)

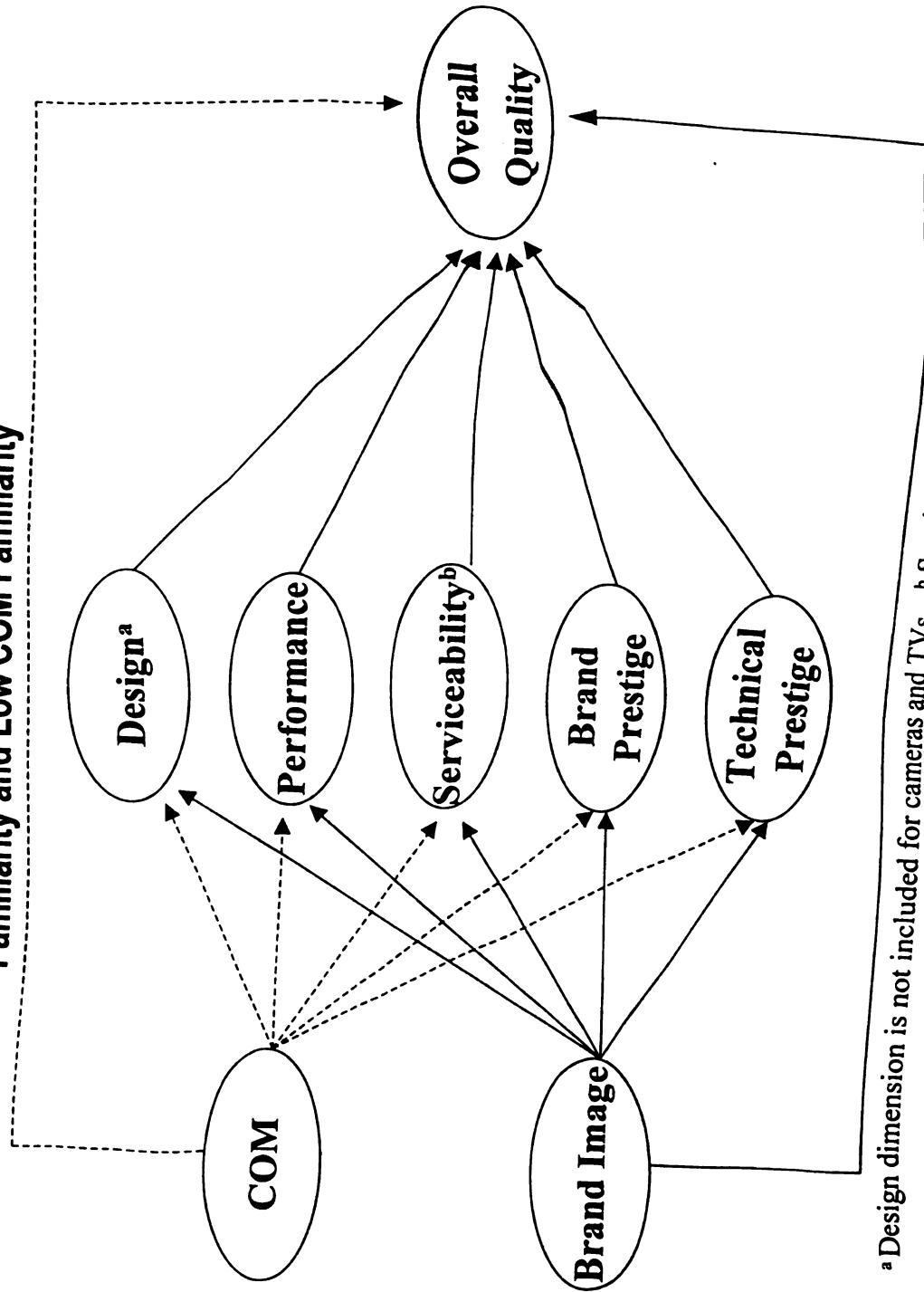
- H10a: For consumers with high brand familiarity and high COM familiarity, brand image and COM will have a significant impact on the evaluation of the quality dimensions.
- H10b: For consumers with high brand familiarity and low COM familiarity, only brand image will have a significant impact on the evaluation of the quality dimensions.
- H10c: For consumers with low brand familiarity and high COM familiarity, only COM will have a significant impact on the evaluation of the quality dimensions.
- H10d: For consumers with low brand familiarity and low COM familiarity, brand image and COM will have no significant impact on the evaluation of the quality dimensions.
- H11a: For consumers with high brand familiarity and high COM familiarity, brand image and COM will have a significant impact on the overall evaluation of quality.
- H11b: For consumers with high brand familiarity and low COM familiarity, only brand image will have a significant impact on the overall evaluation of quality.
- H11c: For consumers with low brand familiarity and high COM familiarity, only COM will have a significant impact on the overall evaluation of quality.
- H11d: For consumers with low brand familiarity and low COM familiarity, brand image and COM will have no significant impact on the overall evaluation of quality.

Figure 2-a. A Model of the Differential Effects of Brand and COM on Product Evaluations for Consumers with High Brand Familiarity and High COM Familiarity



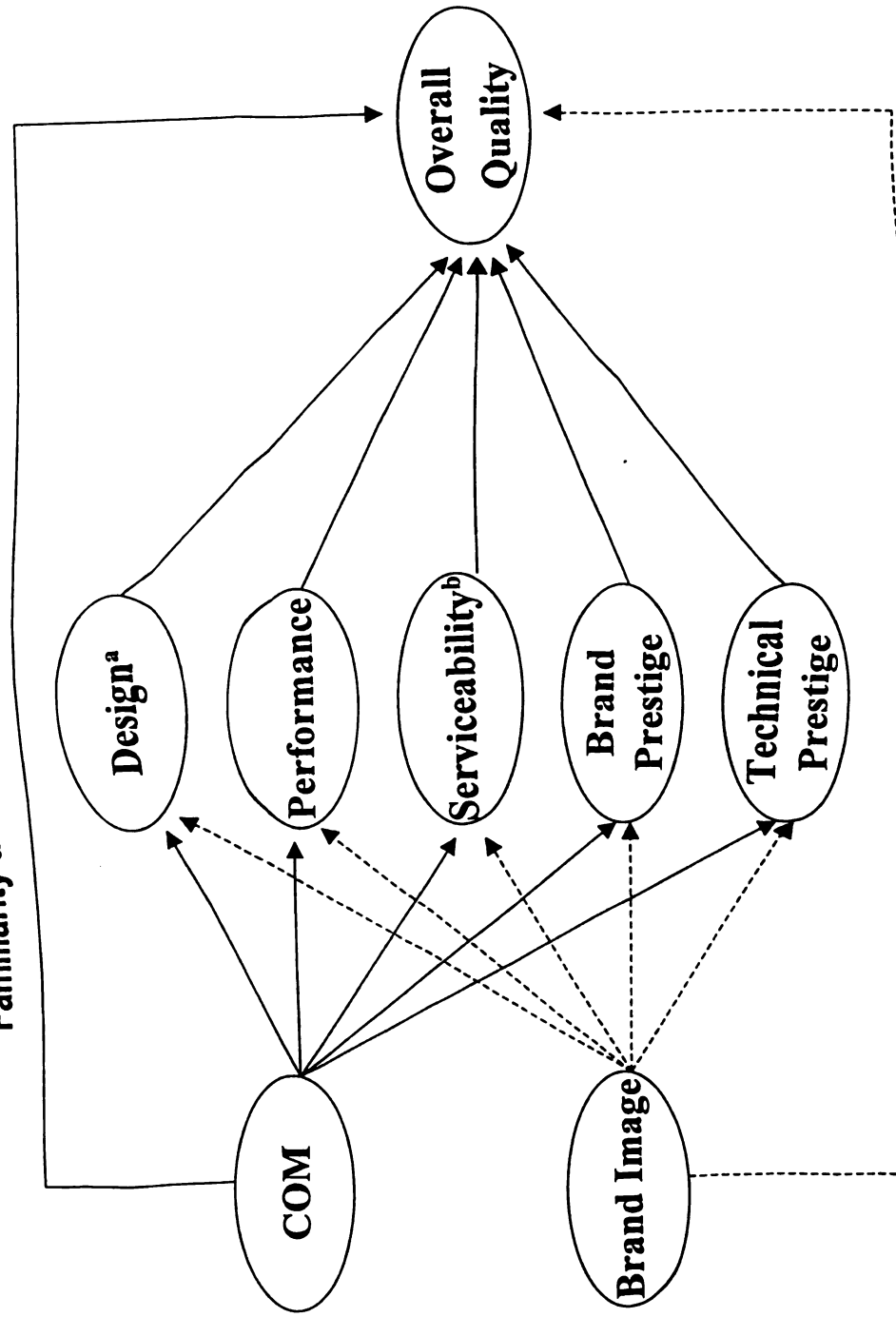
^a Design dimension is not included for cameras and TVs. ^b Serviceability is not included for sweaters.

Figure 2-b. A Model of the Differential Effects of Brand and COM on Product Evaluations for Consumers with High Brand Familiarity and Low COM Familiarity



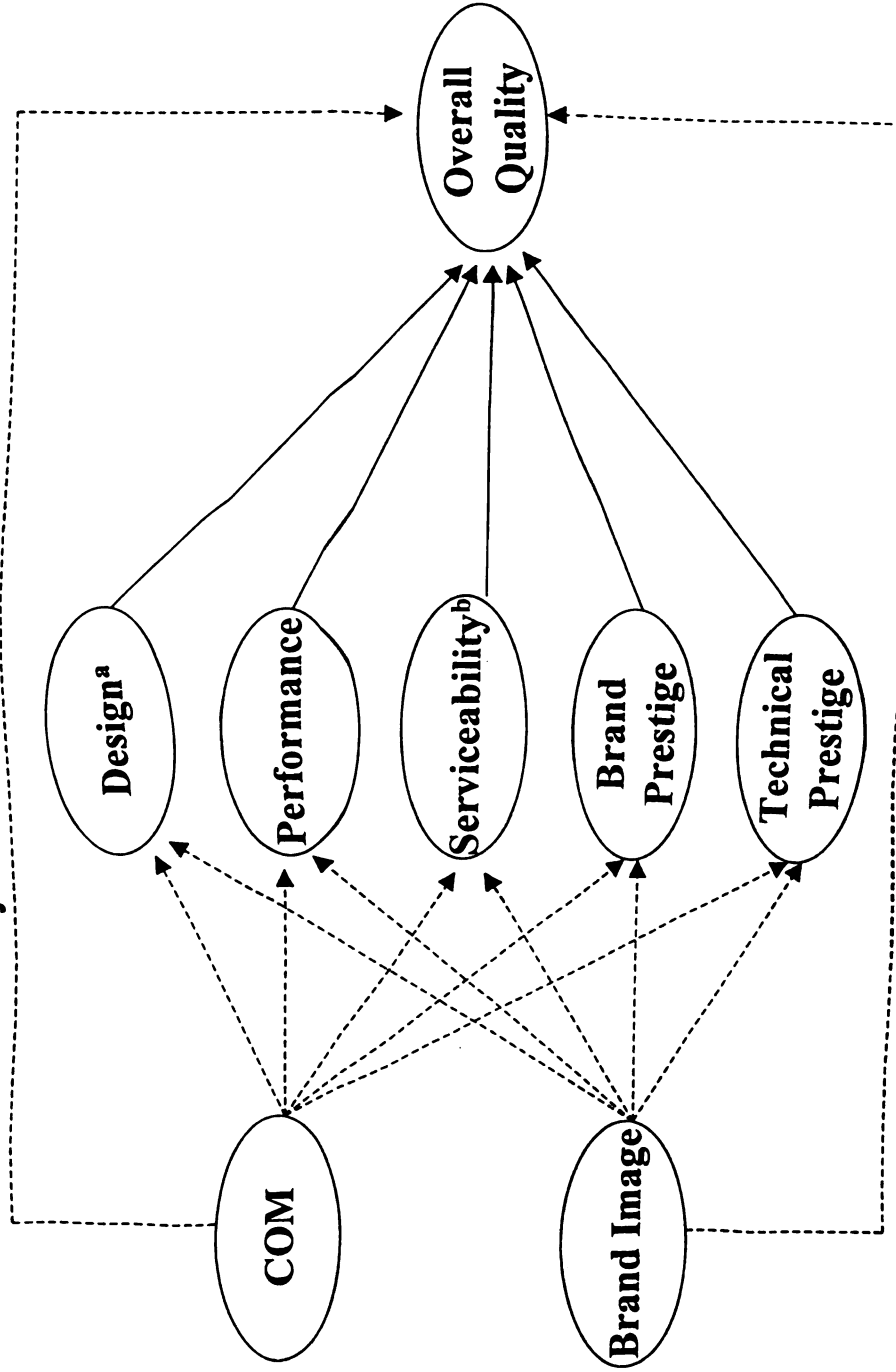
^a Design dimension is not included for cameras and TVs. ^b Serviceability is not included for sweaters.

Figure 2-c. A Model of the Differential Effects of Brand and COM on Product Evaluations for Consumers with Low Brand Familiarity and High COM Familiarity



^a Design dimension is not included for cameras and TVs. ^b Serviceability is not included for sweaters.

Figure 2-d. A Model of the Differential Effects of Brand and COM on Product Evaluations for Consumers with Low Brand Familiarity and Low COM Familiarity



^a Design is not included for cameras and TVs.

^b Serviceability is not included for sweaters.

CHAPTER IV

RESEARCH METHODS

The models described in the previous section have been proposed 1) to identify the quality dimensions of product evaluation; 2) to examine the effects of country of manufacture (COM) and brand image on product evaluation (cognitive component), product-specific purchase attitudes (affective component), and purchase intention for hybrid products (behavioral component); and 3) the effects of brand and COM familiarity on the relationships among COM, brand image, and product evaluation of hybrid products.

In this section, a discussion of research design is presented, followed by a discussion of sample selection and data collection. Then, the questionnaire items that measure each of the major constructs in the proposed models are discussed. Finally, techniques of data analysis to estimate the proposed models are provided.

Research Design

There were two phases to the study, the qualitative phase and the quantitative phase. In the qualitative phase, focus group interviews were conducted with Korean students in the U.S. and others in Korea to explore the conceptual meaning and cultural context of the target concepts of the study (Confucian values; ethnocentrism; and product beliefs, evaluations, purchase attitudes, and purchase intention). Salient product

features, brand names, and COMs¹⁵ were also identified in this stage. Information gathered from the qualitative phase was incorporated into the development of the quantitative survey instrument. The resulting quantitative study was a cross-sectional study using a between-subject-experimental design. The design used a self-report survey instrument to collect consumer behavior data from native Koreans. A cover letter explained the purpose of the study and directions for completion of the survey. Procedures of the quantitative study are explored in the following section.

Sample Selection and Data Collection: Empirical Study

Korean consumers living in Seoul, Korea and several satellite cities constituted the sample in this study. To assure the inclusion of a broad spectrum of geographic and socioeconomic groups, potential survey areas were thoroughly reviewed and finally selected. Greater Seoul could be subdivided into six different areas based on the socioeconomic status of the residents and described as: southeastern Seoul, which is mostly upper socioeconomic status; northern, eastern, central, and southwestern Seoul, each of which is mostly lower to middle socioeconomic status; and the western areas, which are mostly lower socioeconomic status.

The satellite cities outside of Seoul included in this study are: Bun Dang, a middle to upper socioeconomic status city; Kwa Cheon, a middle socioeconomic status

¹⁵According to country-of-origin labeling regulations, indication of COM for imported products and the names of manufacturers and importers are mandatory (The Office of Customs Administration, 1991). Thus, in the Korean market, only COM information is available to Korean consumers, although the various COOs mentioned above are available in the United States. Therefore, the effects of brand image and COM on Korean consumers' purchasing behavior in regard to global products will be the foci of this study.

city; Il San, a lower to middle socioeconomic status city; and two other mostly lower socioeconomic cities, An San and Kang Maung. Within each area, apartment complexes ranging from twenty to one thousand units were chosen to be included in the sample.

Seven research assistants were selected from a major Korean university to collect data. Following extensive training to ensure consistency of administration and breadth of distribution of the questionnaires, each interviewer was assigned to a specific survey area. Once apartment complexes in each area were identified, the research assistant visited each unit and made contact with residents. Where necessary, the research assistant obtained permission from the apartment maintenance or security office to enter the complex. This procedure was required primarily in the upper socioeconomic areas, such as Kang Nam gu.

Every third unit was approached to participate in the study. When a resident answered the door, the research assistant introduced him/herself and briefly explained the purpose of the survey while showing the resident the cover letter that explained the purpose of the research (see Appendix I). If the resident agreed to participate, the interviewer left the questionnaire along with a token gift of an oven mitt. Before leaving the unit, the assistant secured the participant's phone number and address, and arranged to phone for a return visit within three to seven days to retrieve the completed survey.

The assistants collected data over a five-week period during June and July 1997, prior to Korea's economic crisis. Research assistants distributed seventy to eighty questionnaires each via this method. A total of 550 questionnaires was distributed with 456 returned, yielding an 82 percent response rate.

Instrument

As previously indicated, three target products and corresponding brand names were selected based upon the outcome of focus group interviews. Korean undergraduate and graduate students studying in the U.S. and Koreans living in Korea were involved in separate focus groups and in-depth interviews. From these discussions, the product categories of clothing and personal consumer electronics were identified and further narrowed down to three specific products: a camera, a TV, and a cotton sweater. These products met the criteria established by prior research suggesting that items should be 1) *bi-national*, and 2) *familiar to the average consumer* (Han & Terpstra, 1988). In the focus group interviews, discussion also ensued about brand names, country of origin (COO) and country of manufacture (COM). Participants cautioned that the brand names, COOs and COMs used in the study must be recognizable and realistic to Korean consumers. Thus, the following three products and corresponding brand names were selected: a Canon camera (imported brand), LG (Gold Star) TV (domestic brand), and Ralph Lauren Polo sweater (imported brand).

The three target products were integrated into a hypothetical point-of-purchase shopping scenario format within the self-report written survey instrument. The Korean consumers were asked to imagine that they were visiting different stores in Korea to compare various brands, features and prices for each of three products (cameras, TVs, and sweaters). Thus, subjects were presented with information about each of the products in a realistic manner, similar to a point-of purchase sign next to a product in a store. No specific attention was drawn to COM, brand, and such. This information was

randomly presented to avoid bias. The subjects were then asked to respond to questions about each product.

Once developed in English, the instrument was translated into Korean by Koreans not affiliated with the project using a double-blind translation procedure to achieve construct equivalence. The Korean version of the instrument was pretested on groups of undergraduate and graduate students in the U.S. and in Korea. In addition, researchers at two major Korea universities again reviewed the Korean version of the instrument and revisions were made to improve question clarity, comprehension and readability.

Original questionnaires included all three products. Pretest respondents, however, indicated that the instrument was too long and recommended that only two products be included in each questionnaire. As a result, four parallel survey instruments (A1, A2, B1, and B2) were developed so that each subject only responded to questions about two products. As indicated in Table 5, A1 and A2 included questions about a camera and a TV, and B1 and B2 included questions about a camera and a sweater. A1 and A2 contained identical hypothetical Korean market scenarios about the products specified, except the COM information was manipulated. That is, A1 examined a Canon camera manufactured in China (binational match) and a LG TV manufactured in Korea (uninational match), while A2 examined a Canon camera manufactured in Japan (uninational match) and a LG TV manufactured in Malaysia (binational match). Similarly, B1 examined a Canon camera manufactured in China (binational match) and a Ralph Lauren Polo sweater manufactured in the U.S. (uninational match), and B2 examined a Canon camera manufactured in Japan (uninational match) and a Ralph

Lauren Polo sweater manufactured in Mexico (binational match). Thus, in this experimental design, COM was the only cue manipulated.

Table 5. Descriptions of Questionnaire Formats

Instrument A1	Canon camera (Japanese brand) manufactured in China LG (Korean brand) TV manufactured in Korea
Instrument A2	Canon camera (Japanese brand) manufactured in Japan LG (Korean brand) TV manufactured in Malaysia
Instrument B1	Canon camera (Japanese brand) manufactured in China Ralph Lauren Polo sweater (American brand) manufactured in the U.S.
Instrument B2	Canon camera (Japanese brand) manufactured in Japan Ralph Lauren Polo sweater (American brand) manufactured in Mexico

All of the measures used in this study, including the measures of beliefs, evaluations, purchase attitudes, and behavioral intention (Fishbein & Ajzen, 1975), were previously established. The measures of familiarity with brand and COM were adapted from previous studies (Han & Terpstra, 1988). These constructs were measured using seven-point Likert-type scales. When responding to Likert-type surveys, Asian populations are thought to have central tendency, which refers to a predisposition to answer survey questions using the midpoint or midsection of a response scale (Si & Cullen, 1998). Thus, Korean researchers recommended that, for Korean respondents, a seven-point scale might provide finer gradations of responses than a five-point scale (Lee, 1997 – personal interview; Hwang, 1997 – personal interview)

Evaluations (E): Prior to exposure to the hypothetical buying scenarios, subjects' evaluations of product attributes were measured by asking respondents about the

goodness/badness of the selected attributes when they shopped for each of the target products. Subjects were asked: “When purchasing any product X (camera/TV/sweater), how good or bad is it that the camera has each of the following features...” The attributes for each product are provided in Table 6. The question was measured on a seven-point Likert-type scale (“1 = extremely bad to 7 = extremely good”).

Brand Image: The brand image was measured by the item, “what is your general impression of the brand X product X (Canon camera/LG TV/Ralph Lauren Polo sweater)?” on a seven-point Likert-type scale (“1 = extremely bad to 7 = extremely good”).

Beliefs (B)--The respondents were asked to rate the likelihood that each of the products (camera, TV or sweater) would have the salient attributes described in Table 6. Subjects answered the following question: “How likely is it that the brand X product X (Canon camera/LG TV/Ralph Lauren Polo sweater) described above would have the following characteristics...”, measured on a seven-point Likert-type scale (“1 = extremely unlikely to 7 = extremely likely”).

Attitudes toward the act (A_{act}): Respondents were asked to rate four separate items on a seven-point Likert-type scale (“1 = disagree extremely to 7 = agree extremely”). The statement used for these measures was “When you need a new product X (camera/TV/ sweater), do you think that buying the brand X product X (Canon camera/LG TV/Ralph Lauren Polo sweater) described above would be: 1) beneficial, 2) worthwhile, 3) wise, and 4) good?”

Table 6. Salient Attributes and Relevant Quality Dimensions for Each Product

Product	Dimensions	Attributes
Canon Camera	Performance Serviceability Brand Prestige Technical Prestige	It takes a sharp (clear) picture. There are easily accessible authorized service centers. It has a prestigious/famous brand name. It is manufactured in an advanced/hi-tech country.
LG TV	Performance Performance Serviceability Brand Prestige Technical Prestige	It has a high-clear picture. It has a quality hi-fi stereo sound system. There are easily accessible authorized service centers. It has a prestigious/famous brand name. It is manufactured in an advanced/hi-tech country.
Ralph Lauren Polo Sweater	Design Design Performance Performance Performance Brand Prestige Technical Prestige	It has a fashionable design. There are a variety of colors. It is easy to manage/care for. It is comfortable. It has a good fiber content ^a . It has a prestigious/famous brand name. It is manufactured in an advanced/hi-tech country.

^a This item was deleted due to significant cross-loadings with other constructs.

Behavioral Intention (BI): Behavioral intention was measured by asking respondents to answer three questions: “I would consider buying the brand X product X described above. I would recommend the brand X product X described above to people who are close to me. Next time I intend to buy the brand X product X described above.” These items were also measured on a seven-point Likert-type scale (“1 = disagree extremely to 7 = agree extremely”).

Familiarity with Brand: Familiarity with the brand was measured as product specific. The item was “How familiar are you with brand X product X (Canon camera/ LG TV/Ralph Lauren Polo sweater)?” It was also measured on a seven-point Likert-type scale (“1 = extremely unfamiliar to 7 = extremely familiar”).

Familiarity with COM: Familiarity with COM was measured by the item, “How familiar are you with products made in country X?” on a seven-point Likert-type scale (“1 = extremely unfamiliar to 7 = extremely familiar”).

Data Analysis

For each product, COM was a dummy variable, coded as 1=Japan, 2=China for the camera; 1=Korea, 2=Malaysia for the TV; 1=U.S., 2=Mexico for the sweater. For each quality dimension, the belief (B_i) that performance of the behavior will lead to a specific outcome, i , was employed as an indicator of the latent constructs, that is, the five quality dimensions¹⁶ (design, performance, serviceability, brand prestige, and technical prestige). Further, the overall quality perception was calculated based on the mean of $\sum_{i=1}^n B_i E_i$, where B_i is the belief that performance of the behavior will lead to a specific outcome, i , E_i is the evaluation of each consequence, and n is the number of salient outcomes. The proposed structural relations were tested using EQS 5.1 (Bentler, 1993).

In order to examine the moderating effects of brand and COM familiarities, the respondents were divided into four groups according to the level of brand and COM familiarities for a camera and a sweater. A TV was excluded in this analysis, since the brand used in this study was a well-known domestic one (LG TVs). A high brand familiarity group was identified as those respondents whose familiarity scores with Canon brand cameras or Ralph Lauren Polo brand sweaters were greater than median (5.0 on a seven point Likert-type scale for each product). A low brand familiarity group was specified as those whose scores were lower than median. The cases having median

¹⁶As previously mentioned, the ease of use dimension was excluded in this study.

scores were excluded. Likewise, a group with high country familiarity was classified, when their country familiarity scores were greater than the median (4.0 on a seven point Likert-type scale for each product), and a group with low brand familiarity was identified, when its scores were lower than the median. The cases having median scores for country familiarity also were excluded.

CHAPTER V

RESULTS AND DISCUSSION

The purpose of this chapter is to report the results of statistical analysis and hypothesis testing, and to discuss these findings. The demographic characteristics of the sample are described and the results of reliability tests and confirmatory factor analysis are reported. This chapter concludes with a discussion of the current study's findings.

Demographic Characteristics of Sample

Respondents were asked about the following demographic characteristics: age, gender, marital status, education, and income. As previously mentioned, these data were collected using the four parallel survey questionnaires (A1, A2, B1 and B2). ANOVA was performed to examine whether or not these four samples have differences in age and income. The results showed these groups were homogeneous in terms of age and income. In addition, chi-square tests were performed to see group differences for categorical variables such as gender, marital status, and education. The results indicated that none of these tests was significant. Thus, these four samples were combined to examine demographic characteristics and the profile of the sample is shown in Table 7. The ages in the sample ranged from 18 to 65, with an average age of 36. Females constituted 90 percent of the sample and males 10 percent. Most respondents (85 percent) were married, but 15 percent were single. Most respondents (75 percent) received at least a university education. According to the Korea Statistical Yearbook (2000), 20% of the total Korean adult population (whose age is above 20) held a college education. Thus,

the study sample is more **highly** educated than the general Korean population. The levels of family income were reasonably balanced.

Table 7. Sample Profile (N=456)

Age	%	Gender	%	Marital	%
18-20	2	Male	10	Single	15
21-30	28	Female	90	Married	85
31-40	45				
41-50	20				
51-60	3				
61-65	2				
Education	%	Monthly Family Income ^a (\$)			
					%
High school degree or below	20	Less than \$1,000			5
College degree	5	\$1,000 but less than \$2,000			25
University degree	55	\$2,000 but less than \$3,000			31
Master's degree or higher	20	\$3,000 but less than \$4,000			20
		\$4,000 but less than \$5,000			11
		\$5,000 or more			8

^a Average currency exchange rate in 1997: \$1 = 1,000 Won

Reliability Tests and Confirmatory Factor Analysis

As presented in Table 8, the results of reliability tests indicated that most constructs with multiple items achieved good reliability. Cronbach's alpha coefficients for most constructs were greater than .7, except in two cases. The alpha coefficients of design and performance constructs for sweaters were .65 and .67, respectively.

Table 8. Results of Reliability Tests

Products (# of items, coefficient <i>alpha</i>)		
Camera	TV	Sweater
<u>Attitudes^a</u> (4, $\alpha = .93$)	<u>Attitudes^a</u> (4, $\alpha = .95$)	<u>Attitudes^a</u> (4, $\alpha = .94$)
Beneficial	Beneficial	Beneficial
Worthwhile	Worthwhile	Worthwhile
Wise	Wise	Wise
Good	Good	Good
<u>Intention^b</u> (3, $\alpha = .77$)	<u>Intention^b</u> (3, $\alpha = .81$)	<u>Intention^b</u> (3, $\alpha = .87$)
Consider	Consider	Consider
Recommend	Recommend	Recommend
Intend	Intend	Intend
	<u>Performance</u> (2, $\alpha = .85$)	<u>Design</u> (2, $\alpha = .65$)
	High-clear picture	Fashionable design
	Stereo sound system	Variety of colors
		<u>Performance</u> (2, $\alpha = .67$)
		Manage/care
		Comfortable
		Fiber content ^c

^a Attitudes = Purchase Attitudes ; ^b Intention = Purchase Intention

^c This item was deleted due to cross loading.

Confirmatory factor analyses (CFA) were performed for the constructs with multiple indicators for each product using EQS 5.1. Covariance matrices for these analyses are presented in Appendix II. In the case of sweaters, results of Multivariate Lagrange Multiplier (LM) tests indicated that one of the attributes (fiber) for the performance dimension was cross-loaded with other constructs. Thus, this attribute was excluded in this analysis. The results showed a good fit of the model to the data for each product (for cameras, $\chi^2=45.358$, $df=13$, $p < .001$; CFI=0.98, RMSEA = 0.07; for TVs, $\chi^2=34.513$, $df=24$, $p > 0.05$, CFI = 0.99, RMSEA = 0.04; for sweaters, $\chi^2=74.074$, $df=38$, $p < 0.001$, CFI = 0.98, RMSEA = 0.06). The largest standardized residuals ranged from .002 to .091 for cameras, from -.013 to -.087 for TVs, and from -.012 to .037 for

Table 9. Parameter Estimates for Confirmatory Factor Analysis

Camera					
Parameters	ML Estimates^a	T-Values	Parameters	ML Estimates^a	T-Values
V1F1	.865	22.770	E1E1	.502	11.457
V2F1	.896	24.118	E2E2	.444	10.103
V3F1	.850	22.140	E3E3	.527	11.924
V4F1	.859	22.495	E4E4	.513	11.672
V5F2	.639	13.777	E5E5	.770	12.646
V6F2	.781	17.561	E6E6	.624	9.265
V7F2	.785	17.672	E7E7	.619	9.120

TV					
Parameters	ML Estimates^a	T-Values	Parameters	ML Estimates^a	T-Values
V1F1	.875	14.166	E1E1	.484	3.751
V2F1	.821	13.178	E2E2	.570	5.443
V3F2	.910	17.762	E3E3	.414	8.124
V4F2	.916	17.973	E4E4	.400	7.902
V5F2	.912	17.811	E5E5	.411	8.075
V6F2	.904	17.570	E6E6	.427	8.304
V7F3	.531	8.292	E7E7	.848	10.268
V8F3	.854	15.245	E8E8	.520	6.620
V9F3	.935	17.412	E9E9	.356	3.184

Sweaters					
Parameters	ML Estimates^a	T-Values	Parameters	ML Estimates^a	T-Values
V1F1	.619	8.158	E1E1	.786	7.543
V2F1	.756	9.451	E2E2	.654	4.495
V3F2	.672	8.883	E3E3	.741	6.646
V4F2	.756	9.706	E4E4	.655	4.712
V5F3	.897	17.203	E5E5	.441	8.064
V6F3	.899	17.269	E6E6	.437	8.002
V7F3	.909	17.577	E7E7	.418	7.682
V8F3	.878	16.602	E8E8	.478	8.542
V9F4	.765	13.259	E9E9	.644	9.297
V10F4	.905	17.092	E10E10	.425	5.983
V11F4	.904	17.051	E11E11	.428	6.046

^a The estimates are standardized.

Camera: V1–V4= purchase attitudes 1 to 4; V5–V7= intention to buy 1 to 3; F1= purchase attitudes; F2= intention to buy

TV: V1= picture; V2= sound; V3–V6= purchase attitudes 1 to 4; V7–V9= intention to buy 1 to 3; F1=performance; F2= purchase attitudes; F3= intention to buy

Sweater: V1= color; V2= design; V3= care; V4= comfort; V5–V8= purchase attitudes 1 to 4; V9–V11= intention to buy V1 to 3; F1=design; F2=performance; F3=purchase attitudes; F4=intention to buy

sweaters. As indicated in **Table 9**, all the factor loadings were significant at 0.05 level for all three products. Thus, convergent validity was achieved. LM tests represented no serious cross-loadings of factor loadings (lambdas). Further, a series of nested confirmatory factor models were analyzed in which all of the covariances between latent constructs (phi matrix) were initially constrained at 1.0. When these constraints were removed one by one, the model fit (chi-square) was improved significantly for all three products. Therefore, discriminant validity was also achieved.

Testing the Comprehensive Models of the Differential Effects of Brand Image and COM on Consumer Purchasing Behavior

Covariance matrices for SEM models are provided in Appendix III. Since the quality evaluation mechanisms (search, experience and image mechanisms) cannot be included as second-order factors in SEM, the structural errors were correlated in the SEM programs. That is, for a TV and a camera, the structural errors (disturbances in EQS) of performance and serviceability, and brand prestige and technical prestige were correlated in the analyses. For sweaters, the correlated structural errors were imposed for brand prestige and technical prestige. The EQS input models for each product are included in Appendix IV.

Overall Model Fit

The results of SEM analyses using Maximum Likelihood estimation indicated that the proposed model had an acceptable fit to the data for all three products (for a camera, $\chi^2=218.849$, $df=62$, $p<0.001$, CFI = 0.95, RMSEA = 0.07; for a TV, $\chi^2=181.442$, $df=74$, $p<0.001$, CFI = 0.96, RMSEA = 0.08; for a sweater, $\chi^2=193.295$, $df=88$, $p<0.001$, CFI =

0.95, RMSEA = 0.07). The largest standardized residuals ranged from .104 to .240 for cameras, from .122 to .314 for TVs, and from .140 to .327 for sweaters.

Chi-Square Difference Tests

Further, the hypotheses of the current study include a comparison of the effects between COM (F1) and brand image (F2). Thus, imposing four equality constraints hypotheses H2c, H3c, H4c, and H5c chi-square difference tests were performed to examine the relative importance between COM and brand image. Initially, models with these four constraints were analyzed and then, based on the results of LM tests, these constraints were released one by one. These procedures and results of chi-square difference tests are summarized in Table 10 for each product. The results of each chi-square difference tests are discussed in the following section.

Table 10. Chi-square Difference Tests for Cameras, TVs, and Sweaters

Product	Model	
	Equality Released	$\Delta\chi^2$ (df=1)
Camera	1 st (F3,F1) = (F3,F2)	64.47**
	2 nd (F6,F1) = (F6,F2)	12.63**
	3 rd (F5,F1) = (F5,F2)	10.23**
	4 th (F4,F1) = (F4,F2)	1.29
TV	1 st (F3,F1) = (F3,F2)	23.18**
	2 nd (F6,F1) = (F6,F2)	20.29**
	3 rd (F5,F1) = (F5,F2)	14.76**
	4 th (F4,F1) = (F4,F2)	4.42*
Sweater	1 st (F6,F1) = (F6,F2)	55.95**
	2 nd (F5,F1) = (F5,F2)	12.46**
	3 rd (F3, F1) = (F3,F2)	6.75**
	4 th (F4,F1) = (F4,F2)	3.67 ^a

^a p = 0.055, *p<.05; **p<.01

Cameras & TVs: F1=COM; F2=Brand Image; F3=Performance; F4=Serviceability; F5= Brand Prestige; F6=Technical Prestige

Sweaters: F1=COM; F2=Brand Image; F3=Design; F4=Performance; F5= Brand Prestige; F6= Technical Prestige.

Hypotheses Tests

Results of measurement and structural model tests are *reported in Tables 11-a to 11-c* for each product. Hypotheses are tested based on the *results of structural model* testing using t-tests and chi-square difference tests. Two-tail tests were used for H1a, H7a, H8b, H9b, and H9c and one-tail tests were used for the rest hypotheses.

Design Dimension

H1a: There will be **no** difference between the design evaluation of a product manufactured in a developed country and that in a developing country.

H1b: Brand image and design evaluation will be positively related.

As previously mentioned, the design dimension (F3) in the search mechanism was tested only for sweaters. The results of t-tests indicated that there was no difference between the design evaluation of sweaters manufactured in the U.S. and that in Mexico (F1) ($F_{3F1} = -.133$, not significant [n.s.]). (See Table 11-c.) A positive effect of brand image (F2) on design was found, as expected ($F_{3F2} = .308$, $p < .01$). Therefore, hypothesis H1a was not rejected, but H1b was confirmed.

Performance Dimension

H2a: The performance evaluation of a product manufactured in a developed country will be higher than that in a developing country.

H2b: Brand image and performance evaluation will be positively related.

The results of t-tests indicated that the performance evaluation of cameras and TVs manufactured in developed countries (Japan and Korea, respectively) was higher than that in developing countries (China and Malaysia, respectively), while for sweaters, there was no difference between them (for cameras, $F_{3F1} = -.213$, $p < .01$; for TVs,

Table 11-a. Results of SEM for Cameras

Measurement Model			Structural Model		
Parameters	ML Estimates (Standardized)	T-Values	Parameters	ML Estimates (Standardized)	T-Values
V1F1 ^b	1.000	a	F3F1	-.213	-4.943
V2F2 ^b	1.000	a	F3F2	.328	7.612
V3F3 ^b	1.000	a	F4F1	-.028	-.608
V4F4 ^b	1.000	a	F4F2	.062	1.318
V5F5 ^b	1.000	a	F5F1	-.234	-5.534
V6F6 ^b	1.000	a	F5F2	.364	8.603
V7F7 ^b	1.000	a	F6F1	-.483	-11.932
V8F8	.864	a	F6F2	.139	3.429
V9F8	.895	25.775	F7F3	.320	9.232
V10F8	.849	23.484	F7F4	.323	10.083
V11F8	.858	23.927	F7F5	.285	8.250
V12F9	.640	a	F7F6	.278	7.713
V13F9	.779	12.329	F7F1	.005	.139
V14F9	.786	12.363	F7F2	.059	1.548
Error Variances			F8F7	.316	6.543
E8E8	.504	11.562	F8F1	-.184	-4.067
E9E9	.446	10.235	F8F2	.183	3.977
E10E10	.529	11.999	F9F8	.611	9.524
E11E11	.514	11.739	F9F1	-.034	-.732
E12E12	.769	12.634	F9F2	.049	1.051
E13E13	.627	9.367	Disturbance Variances		
E14E14	.619	9.129	D1D1	.920	15.083
			D2D2	.998	15.083
			D3D3	.902	15.083
			D4D4	.864	15.083
			D5D5	.601	15.083
			D6D6	.874	11.183
			D7D7	.771	6.493

^a Constrained to fixed value (1.0). No t-value calculated.

^b Error variances for these paths (E1E1 to E6E6) were set to zero.

F1=COM; F2=Brand image; F3=Performance; F4=Serviceability; F5=Brand prestige; F6=Technical Prestige; F7= Overall quality; F8= Purchase Attitudes; F9=Intention to buy; V1=COM; V2=Brand image; V3=Picture; V4=Serviceability; V5=Brand prestige; V6=Technical prestige; V7=Overall quality; V8 to V11=Purchase Attitudes 1 to 4; V12 to V14 = Intention to buy 1 to 3; E1 to E13=Errors for V1 to V13; D1 to D7=Disturbances for F3 to F9.

Table 11-b. Results of SEM for TVs

Measurement Model			Structural Model		
Parameters	ML Estimates (Standardized)	T-Values	Parameters	ML Estimates (Standardized)	T-Values
V1F1 ^b	1.000	a	F3F1	-.150	-2.386
V2F2 ^b	1.000	a	F3F2	.524	7.984
V3F3	.841	a	F4F1	-.009	-.142
V4F3	.855	14.437	F4F2	.296	4.681
V5F4 ^b	1.000	a	F5F1	-.119	-2.045
V6F5 ^b	1.000	a	F5F2	.468	8.068
V7F6 ^b	1.000	a	F6F1	-.372	-6.273
V8F7 ^b	1.000	a	F6F2	.244	4.105
V9F8	.907	a	F7F3	.598	9.793
V10F8	.915	22.605	F7F4	.299	7.118
V11F8	.910	22.295	F7F5	.226	4.906
V12F8	.902	21.751	F7F6	.181	4.011
V13F9	.530	a	F7F1	.050	1.310
V14F9	.857	8.354	F7F2	-.077	-1.640
V15F9	.929	8.460	F8F7	.416	7.040
Error Variances			F8F1	-.225	-4.375
E3E3	.541	6.946	F8F2	.316	5.441
E4E4	.519	6.475	F9F8	.686	6.639
E9E9	.420	8.191	F9F1	-.050	-.882
E10E10	.403	7.920	F9F2	.006	.087
E11E11	.414	8.088	Disturbance Variances		
E12E12	.432	8.351	D1D1	.838	7.051
E13E13	.848	10.252	D2D2	.955	10.677
E14E14	.516	6.450	D3D3	.876	10.677
E15E15	.369	3.379	D4D4	.896	10.677
			D5D5	.450	7.697
			D6D6	.726	8.539
			D7D7	.710	4.038

^a Constrained to fixed value (1.0). No t-value calculated.

^b Error variances for these paths (E1E1, E2E2, E5E5, E6E6) were set to zero.

F1=COM; F2=Brand image; F3=Performance; F4=Serviceability; F5=Brand prestige; F6=Technical Prestige; F7=Overall quality; F8=Purchase Attitudes; F9=Intention to buy; V1=COM; V2=Brand image; V3=Picture; V4=Sound; V5=Serviceability; V6=Brand prestige; V7=Technical prestige; V8=Overall quality; V9 to V12=Purchase Attitudes 1 to 4; V13 to V15 = Intention to buy 1 to 3; E1 to E15=Errors for V1 to V15; D1 to D7=Disturbances for F3 to F9.

Table 11-c. Results of SEM for Sweaters

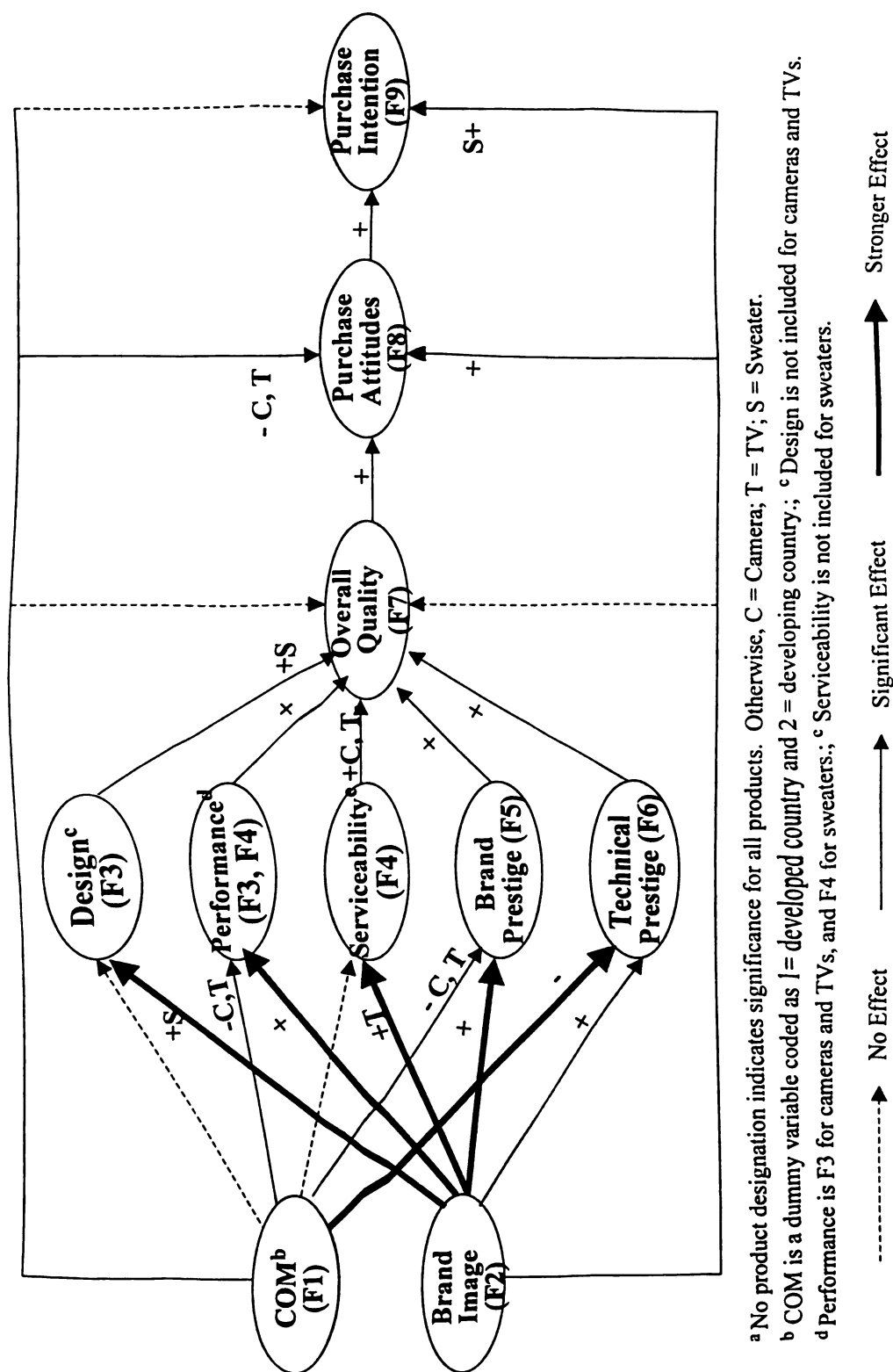
Measurement Model			Structural Model		
Parameters	ML Estimates (Standardized)	T-Values	Parameters	ML Estimates (Standardized)	T-Values
V1F1 ^b	1.000	a	F3F1	-.133	-1.653
V2F2 ^b	1.000	a	F3F2	.308	3.736
V3F3	.697	a	F4F1	-.056	-.751
V4F3	.671	7.624	F4F2	.268	3.318
V5F4	.607	a	F5F1	-.052	-.855
V6F4	.837	7.051	F5F2	.402	6.618
V7F5 ^b	1.000	a	F6F1	-.485	-8.690
V8F6 ^b	1.000	a	F6F2	.245	4.391
V9F7 ^b	1.000	a	F7F3	.550	6.950
V10F8	.895	a	F7F4	.478	7.100
V11F8	.898	20.404	F7F5	.219	4.619
V12F8	.907	20.898	F7F6	.229	4.437
V13F8	.878	19.401	F7F1	.062	1.233
V14F9	.770	a	F7F2	.012	.213
V15F9	.892	14.332	F8F7	.271	3.837
V16F9	.896	14.381	F8F1	-.047	-.752
Error Variances			F8F2	.252	3.618
E3E3	.717	7.016	F9F8	.709	10.229
E4E4	.741	7.569	F9F1	-.013	-.274
E5E5	.795	8.584	F9F2	.173	3.289
E6E6	.548	3.439	Variances		
E10E10	.447	8.102	D1D1	.942	4.803
E11E11	.441	8.009	D2D2	.962	4.339
E12E12	.421	7.697	D3D3	.914	10.630
E13E13	.479	8.517	D4D4	.839	10.630
E14E14	.638	9.154	D5D5	.421	3.805
E15E15	.451	6.412	D6D6	.892	8.463
E16E16	.445	6.272	D7D7	.611	5.951

^a Constrained to fixed value (1.0). No t-value calculated.

^b Error variances for these paths (E1E1, E2E2, E5E5, E6E6) were set to zero.

F1=COM; F2=Brand image; F3=Design; F4= Performance; F5=Brand prestige; F6=Technical Prestige; F7=Overall quality; F8=Purchase Attitudes; F9=Intention to buy; V1=COM; V2=Brand image; V3=Color; V4=Design; V5=Care; V6=Comfort; V7=Brand prestige; V8=Technical prestige; V9=Overall quality; V10 to V13=Purchase Attitudes 1 to 4; V14 to V16= Intention to buy 1 to 3; E1 to E16=Errors for V1 to V16; D1 to D7=Disturbances for F3 to F9.

Figure 3. Summary of Significant Relationships by Product^a



^a No product designation indicates significance for all products. Otherwise, C = Camera; T = TV; S = Sweater.

^b COM is a dummy variable coded as 1 = developed country and 2 = developing country.; ^c Design is not included for cameras and TVs.

^d Performance is F3 for cameras and TVs, and F4 for sweaters.; ^e Serviceability is not included for sweaters.

F3F1 = -.150, $p < .05$; for sweaters, F4F1 = -.056, n.s.). (See Tables 11 a-c.) Thus, H2a was accepted for cameras and TVs, but not for sweaters. H2b proposed a positive effect of brand image on performance, and all three products supported this hypothesis (for cameras, F3F2 = .328, $p < .01$; for TVs, F3F2 = .542, $p < .01$; for sweaters, F4F2 = .268, $p < .01$). Therefore, H2b was confirmed.

H2c: Brand image will have a stronger effect on performance evaluation than will COM.

The results of chi-square difference tests in Table 10 indicated that chi-square was improved significantly at $p < .01$ when the equality constraint was released between F3F1 and F3F2 for cameras and TVs. In the case of sweaters, chi-square change improved significantly to $p = .055$ when the equality constraint between F4F1 and F4F2 was removed. Thus, all three products had a stronger effect of brand image on performance than of COM, as expected (for cameras, $\Delta\chi^2 = 64.47$, $df = 1$, $p < .01$; for TVs, $\Delta\chi^2 = 23.18$, $df = 1$, $p < .01$; for sweaters, $\Delta\chi^2 = 3.67$, $df = 1$, $p = .055$). Thus, H2c was supported for all three products.

Serviceability Dimension

H3a: The serviceability evaluation of a product manufactured in a developed country will be higher than that in a developing country.

H3b: Brand image and serviceability evaluation will be positively related.

As mentioned earlier, serviceability was examined only for cameras and TVs. Results of t-tests indicated that the serviceability evaluation of cameras and TVs manufactured in developed countries was not higher than that in developing countries

(for cameras, $F4F1 = -.028$, n.s.; for TVs, $F4F1 = -.009$, n.s.). (See Tables 11 a-b.) Thus, H3a was not supported. Regarding H3b, only TVs had a positive effect of brand image on serviceability (for cameras, $F4F2 = .062$, n.s.; for TVs, $F4F2 = .296$, $p < .01$). Therefore, H3b was confirmed for TVs, but not for cameras.

H3c: Brand image will have a stronger effect on serviceability evaluation than will COM.

H3c was tested only for cameras and TVs, as previously discussed. The results of chi-square difference tests showed that chi-square change improved significantly when the equality constraint was released between $F4F1$ and $F4F2$ only for TVs. (See Table 10.) Thus, brand image had a stronger effect on serviceability than COM did for TVs, but not for cameras (for cameras, $\Delta\chi^2 = 1.29$, $df = 1$, n.s.; for TVs, $\Delta\chi^2 = 4.42$, $df = 1$, $p < .05$). Accordingly, H3c was confirmed for TVs, but not for cameras.

Brand Prestige Dimension

H4a: The brand-prestige evaluation of a product manufactured in a developed country will be higher than that in a developing country.

H4b: Brand image and brand-prestige evaluation will be positively related.

Regarding brand prestige, H4a proposes that the brand-prestige evaluation of a product manufactured in a developed country will be higher than that in a developing country. The results for cameras and TVs supported this hypothesis, but not for sweaters (for cameras, $F5F1 = -.234$, $p < .01$; for TVs, $F5F1 = -.119$, $p < .05$; for sweaters, $F5F1 = -.052$, n.s.). (See Tables 11 a-c.) Therefore, H4a was supported for cameras and TVs, but not for sweaters. On the other hand, all three products indicated a positive effect of brand

image on brand prestige (for cameras, $F5F2 = .364$, $p < .01$; for TVs, $F5F2 = .468$, $p < .01$; for sweaters, $F5F2 = .402$, $p < .01$). Therefore, H4b was confirmed for all three products.

H4c: Brand image will have a stronger effect on brand prestige than will COM.

The results of chi-square difference tests showed that chi-square change improved significantly when releasing the equality constraint between $F5F1$ and $F5F2$ for all three products. (See Table 10.) That is, brand image had a stronger effect on brand prestige than did COM (for cameras, $\Delta\chi^2 = 10.23$, $df = 1$, $p < .01$; for TVs, $\Delta\chi^2 = 14.76$, $df = 1$, $p < .01$; for sweaters, $\Delta\chi^2 = 12.46$, $df = 1$, $p < .01$). Thus, H4c was confirmed for all three products.

Technical Prestige Dimension

H5a: The technical prestige evaluation of a product manufactured in a developed country will be higher than that in a developing country.

H5b: Brand image and technical prestige evaluation will be positively related.

Regarding technical prestige, H5a proposes the technical prestige evaluation of a product manufactured in a developed country will be higher than that in a developing country. The results for all three products supported this hypothesis (for cameras, $F6F1 = -.483$, $p < .01$; for TVs, $F6F1 = -.372$, $p < .01$; for sweaters, $F6F1 = -.485$, $p < .01$). (See Tables 11 a-c.) Therefore, H5a was supported. In addition, all three products indicated a positive effect of brand image on technical prestige (for cameras, $F6F2 = .139$, $p < .01$; for TVs, $F6F2 = .244$, $p < .01$; for sweaters, $F6F2 = .245$, $p < .01$). Therefore, H5b was confirmed.

H5c: COM will have a stronger effect on technical prestige than will brand image.

The results of chi-square difference tests showed that chi-square change improved significantly when the equality constraint was released between F6F1 and F6F2 for all three products. (See Table 10.) That is, COM had a stronger effect on technical prestige than brand image did (for cameras, $\Delta\chi^2=12.63$, $df=1$, $p<.01$; for TVs, $\Delta\chi^2=20.29$, $df=1$, $p<.01$; for sweaters, $\Delta\chi^2=55.95$, $df=1$, $p<.01$). Thus, H5c was confirmed.

Overall Quality

H6a: Design evaluation and overall quality will be positively related.

H6b: Performance evaluation and overall quality will be positively related.

H6c: Serviceability evaluation and overall quality will be positively related.

H6d: Brand-prestige evaluation and overall quality will be positively related.

H6e: Technical prestige evaluation and overall quality will be positively related.

Note that the design dimension is not examined for cameras and TVs and the serviceability is not proposed for sweaters. As represented in Tables 11 a-c, results of t-tests indicate that overall quality (F7) was positively related to performance (F3 for cameras and TVs, and F4 for sweaters), brand prestige (F5), and technical prestige (F6) for all three products. Overall quality also was positively related to design (F3) for sweaters, and serviceability (F4) for cameras and TVs. (For cameras, $F7F3=.320$, $p<.01$; $F7F4=.323$, $p<.01$; $F7F5=.285$, $p<.01$; $F7F6=.278$, $p<.01$; For TVs, $F7F3=.598$, $p<.01$; $F7F4=.299$, $p<.01$; $F7F5=.226$, $p<.05$; $F7F6=.181$, $p<.05$; For sweaters, $F7F3=.550$, $p<.01$; $F7F4=.478$, $p<.01$; $F7F5=.219$, $p<.05$; $F7F6=.229$, $p<.05$) Therefore, H6a to H6e were all confirmed.

H7a: COM will have no relationship to overall quality.

H7b: Brand image and overall quality perception will be positively related.

H7a proposes no effect of COM (F1) on the perception of overall quality (F7) and all three products indicated that COM was not related to overall quality (for cameras, $F7F1 = .005$, n.s.; for TVs, $F7F1 = .050$, n.s.; for sweaters, $F7F1 = .062$, n.s.). (See Tables 11 a-c.) In addition, brand image (F2) had no influence on the perception of overall quality (for cameras, $F7F2 = .059$, n.s.; for TVs, $F7F2 = -.077$, n.s.; for sweaters, $F7F2 = .012$, n.s.). Therefore, H7a was supported, but H7b was not supported.

Purchase Attitudes

H8a: Overall quality perception and purchase attitudes will be positively related.

As Fishbein and Ajzen (1975) proposed, the consumers' perception of overall quality (F7) had a positive effect on consumers' attitudes toward buying the product (F8) for all three products (for cameras, $F8F7 = .316$, $p < .01$; for TVs, $F8F7 = .416$, $p < .01$; for sweaters, $F8F7 = .271$, $p < .01$). (See Tables 11 a-c.) Therefore, H8a was confirmed.

H8b: COM has no relationship to purchase attitudes.

H8c: Brand image has a positive relationship to purchase attitudes.

H8b proposes no effect of COM (F1) on consumers' attitudes toward purchasing a product (F8), but only sweaters supported this hypothesis ($F8F1 = -.047$, n.s.). (See Tables 11 a-c.) Surprisingly, cameras and TVs indicated a negative effect of COM on consumers' attitudes toward purchasing these products (for cameras, $F8F1 = -.184$, $p < .01$; for TVs, $F8F1 = -.225$, $p < .01$). That is, Korean consumers had more positive attitudes toward purchasing these products manufactured in developed countries than those in

developing countries. Thus, **H8b** was rejected for cameras and TVs, but not for sweaters. On the other hand, a positive effect of brand image on purchase attitudes was found for all three products (for cameras, $F_{8F2} = .183$, $p < .01$; for TVs, $F_{8F2} = .316$, $p < .01$; for sweaters, $F_{8F2} = .252$, $p < .01$). Thus, **H8c** was confirmed.

Intention to Buy

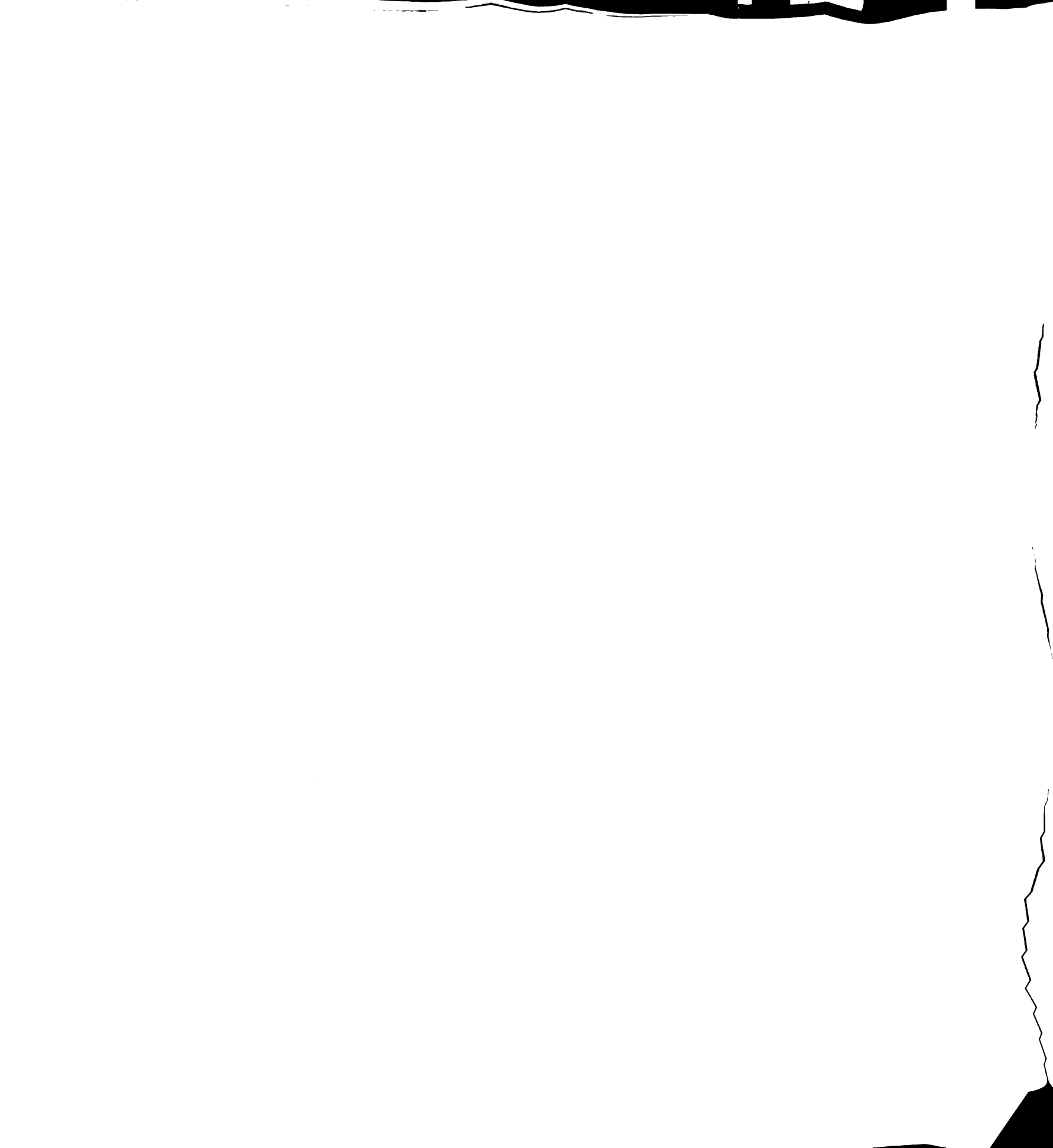
H9a: Attitudes toward purchasing a product are positively related to the intention to buy the product.

As Fishbein and Ajzen (1975) proposed, consumers' attitudes toward purchasing a product (F8) had a positive effect on their intention to buy the product (F9) for all three products (for cameras, $F_{9F8} = .611$, $p < .01$; for TVs, $F_{9F8} = .686$, $p < .01$; for sweaters, $F_{9F8} = .709$, $p < .01$). (See Tables 11 a-c.) Therefore, **H9a** was supported.

H9b: COM will have no relationship to intention to buy.

H9c: Brand image will have no relationship to intention to buy.

Regarding **H9b**, no effect of COM (F1) on the intention to buy the product (F9) was found for the three products as expected (for cameras, $F_{9F1} = -.034$, n.s.; for TVs, $F_{9F1} = -.050$, n.s.; for sweaters, $F_{9F1} = -.013$, n.s.). (See Tables 11 a-c.) Therefore, **H9b** was not rejected. On the other hand, although no effect of brand image (F2) on the intention to buy (F9) was found for cameras and TVs, a positive effect of brand image on intention to buy was found for sweaters (for cameras, $F_{9F2} = .049$, n.s.; for TVs, $F_{9F2} = .006$, n.s.; for sweaters, $F_{9F2} = .173$, $p < .01$). Therefore, **H9c** was rejected for sweaters, but not for cameras and TVs.

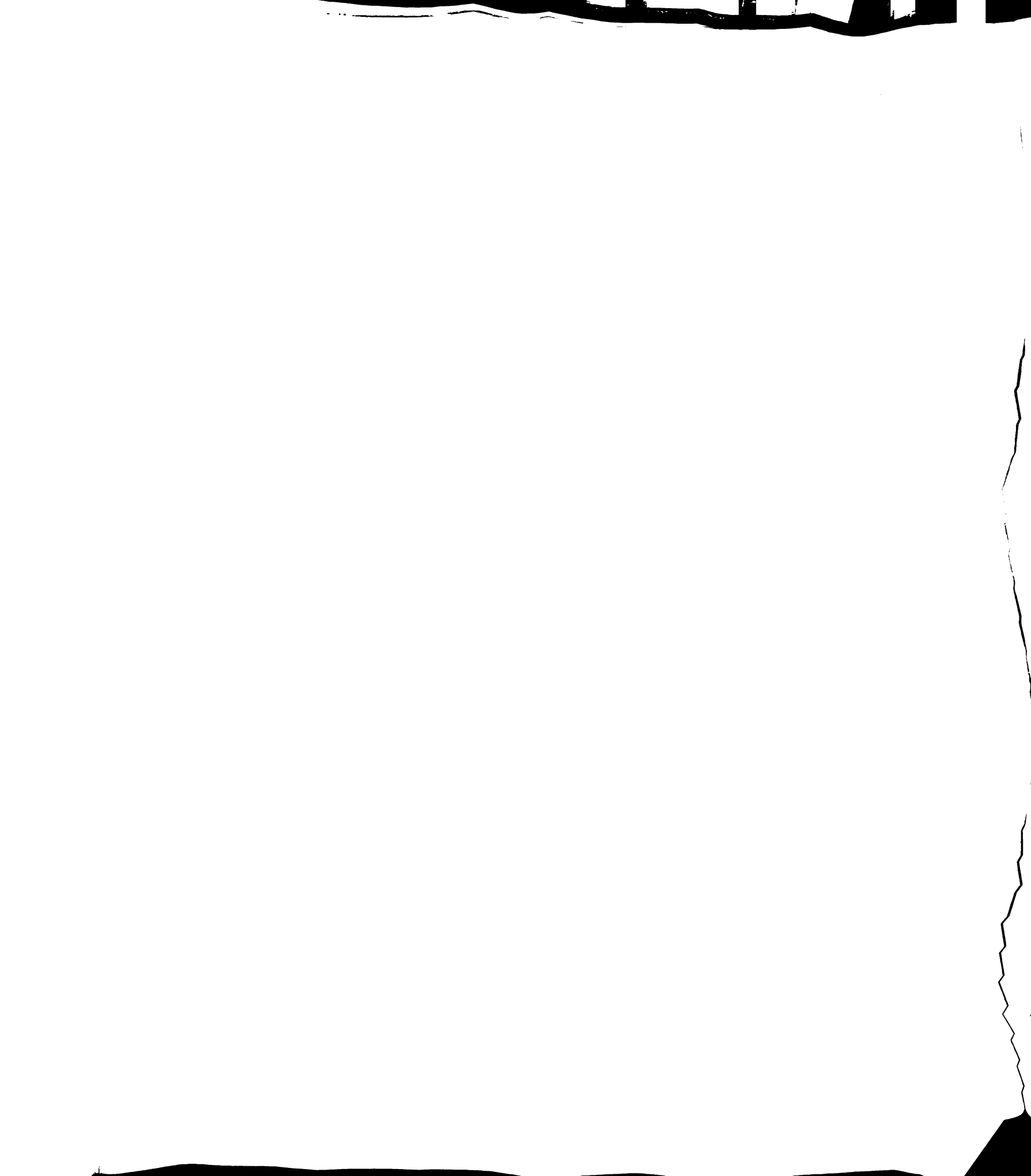


Testing the Moderating Effects of Brand and COM Familiarities on the Relationships among COM, Brand Image, and Quality Perception of Hybrid Products

Classification of Four Groups based on Brand and COM Familiarities

In order to examine the moderating effects of brand and COM familiarities on the relationships among COM, brand image, and quality perceptions of hybrid products, the respondents were divided into four groups according to the level of brand and COM familiarities for a camera and a sweater. A TV was excluded in this analysis, since the brand used in this study was a well-known domestic (Korean) one (LG TV). The high brand familiarity group was identified as those respondents whose familiarity scores with Canon brand cameras or Ralph Lauren Polo brand sweaters were greater than median (5.0 on a seven point Likert-type scale for each product). The low brand familiarity group was specified as those whose scores were lower than the median. The cases having median scores were excluded. Likewise, a group with high country familiarity was classified, when their country familiarity scores were greater than the median (4.0 on a seven point Likert-type scale for each product), and a group with low brand familiarity was identified, when its scores were lower than the median. The cases having median scores for country familiarity also were excluded.

Based on these classifications, four groups were identified including high brand familiarity/high country familiarity, high brand familiarity/low country familiarity, low brand familiarity/high country familiarity, and low brand familiarity/low country familiarity. As indicated in Table 12, due to the need to delete cases with median scores, 203 cases were excluded for the camera and 73 cases were eliminated for the sweater. This table also indicated that each segment did not have a large enough sample size to run



SEM analysis. For the camera, almost half of the total respondents were classified into the high brand/high country familiarity group. Therefore, the data in this study may not be useful for examining the moderating effect of brand and country familiarities in the relationships among COM, brand image and quality perceptions of hybrid products. No further analyses were performed.

Table 12. Frequencies of Four Groups Based on Brand and Country Familiarities

Group	Camera		Sweater	
	Frequency	Percent	Frequency	Percent
HB/HC	123	48.6	43	27.9
HB/LC	46	18.2	30	19.5
LB/HC	37	14.6	26	16.9
LB/LC	47	18.6	55	35.7
Total	253	100	154	100
Missing	203	-	73	-

HB/HC = high brand/high country familiarity; HB/LC = high brand/low country familiarity;
 LB/HC = low brand/high country familiarity; LB/LC = low brand/low country familiarity.

DISCUSSION

The proposed quality dimensions were found to be useful in explaining the relative importance of COM and brand image on Korean consumers' quality perception, and these five dimensions were not independent of each other. That is, the performance and serviceability dimensions in the experience mechanism were correlated and the brand prestige and technical prestige dimensions in the image mechanism were correlated.

Overall, the differential effects of COM and brand image on the five quality dimensions were well explained based on the logic of the evaluation mechanisms. (See Figure 3.) In the case of the search dimension (i.e., design for sweaters), COM had no impact, but brand image had a positive influence, as expected. Regarding the image evaluation mechanism, the brand and technical prestige evaluations of cameras, TVs, and sweaters manufactured in developed countries were higher than those in developing countries as expected, except in the case of sweaters, where COM had no effect on brand prestige. These results may reflect the fact that manufacturing locations are more important in a consumer's perception of electronics' brand prestige than in those of fashion goods. Brand image also positively influenced these evaluations for the three products, as expected. For all three products, brand image had a stronger effect on brand prestige than COM did, while COM had a stronger effect on technical prestige than brand image did, as proposed.

Experience dimensions (performance and serviceability), on the other hand, had somewhat mixed results. (See Figure 3.) The performance evaluations for cameras and TVs manufactured in developed countries were higher than those in developing countries, but not in the case of sweaters. Brand image influenced performance significantly and

exerted a greater influence on performance than COM did for all three products as expected. Therefore, these results indicate that consumers rely more on brand image than on COM when evaluating products' performance, and they are more sensitive to manufacturing locations for cameras and TVs than for sweaters. On the other hand, COM had no effect on serviceability for either cameras or TVs, and even brand image had no influence on serviceability for cameras. This may reflect the fact that because cameras are portable and consumers can bring them anywhere to be fixed, Korean consumers may perceive that there is no difference in providing easily accessible authorized service centers among branded cameras.

One of the intriguing results of this study is the relationship between brand image and overall quality perception. In the studies of Ulgado & Lee (1993) and Nes and Bilkey (1993), brand is found to have a more enduring influence on overall quality than COM, when other intrinsic information is provided. The present study, however, found that both COM and brand image have no influence on the perception of overall quality. (See Figure 3.) This finding may be due to the fact that the previous studies failed to exclude the confounding effects of individual quality dimensions on overall quality when they examined the effects of COM and brand. Due to the power of SEM, the present study can examine the effects of the quality dimensions (design, performance, serviceability, brand prestige, and technical prestige) on overall quality, as well as those of COM and brand image. Thus, this study found that COM and brand image have direct effects on the quality dimensions and they have effects on overall quality perception indirectly through some quality dimensions. Indirect effects of COM (F1) and brand image (F2) on overall quality (F7) were additionally tested and the results indicated that

COM and brand image had significant indirect effects on overall quality for all three products (for cameras, $F7F1 = -.279, p < .01$; $F7F2 = .268, p < .01$; for TVs, $F7F1 = -.186, p < .01$, $F7F2 = .551, p < .01$; for sweaters, $F7F1 = -.196, p < .01$, $F7F2 = .376, p < .01$).

Another intriguing result of this study is the finding of a significant effect of COM on purchase attitudes toward electronics (camera and TV), even in the presence of multiple cues. (See Figure 3.) That is, Korean consumers had more positive attitudes toward purchasing electronic products manufactured in developed countries than those in developing countries. Previous studies (Erickson et al., 1984; Johansson et al., 1985) found no effect of COO on purchase attitudes, when multiple cues were provided. Such a different result could be due to different samples. That is, due to their limited experience with other COMs, Korean consumers could be more sensitive to COM than American or Japanese consumers when they form attitudes about purchasing electronics, as in the studies of Erickson et al. (1984) and Johansson et al. (1985). Unfortunately, no studies examined the effect of COM on purchase attitudes of Korean consumers. However, Ulgado and Lee (1998) reported that Korean consumers consider COM to be more important in evaluating product quality than the American sample does. Thus, further study is required to verify this finding.

This study also found the "product effect" in the relationships among COM, brand image, purchase attitudes, and intention to buy. (See Figure 3.) That is, COM had no effect on the purchase attitudes for sweaters, while it had a significant impact for cameras and TVs, as previously mentioned. COM also had a greater influence on the brand prestige of cameras and TVs than of sweaters. That is, the brand prestige evaluations of cameras and TVs produced in developed countries were higher than those in developing

countries, but there was no difference between them in the case of sweaters. In addition, for sweaters, the brand image had a significant positive effect on intention to buy, while for cameras and TVs, it had no impact. Thus, brand image is more important for sweaters than for TVs and cameras in purchase attitude formation and purchase intention, while COM exerts more influence on the purchase attitude formation for TVs and cameras than for sweaters. Using meta-analysis of effect sizes, Liefeld (1993) reported that the magnitude of COO effects is related to product type. That is, COO effects were larger for technically complex and expensive products than for inexpensive products low in technical complexity. Cameras and TVs are considered more technically complex and expensive than sweaters. Thus, the current study's findings are consistent with those of Liefeld (1993).

In sum, this study reveals the interesting fact that regarding electronics (TVs and cameras), Korean consumers are somewhat sensitive to COM for their performance evaluations, image evaluations (brand and technical prestige), and affective evaluations (purchase attitudes). Brand image is more important than COM in most consumer decision-making. In the case of fashion goods (sweaters), Korean consumers show less sensitivity to COM than with electronic products. Brand image exerts great influence on every decision-making process, and even on purchase intention.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this chapter is to summarize the research study that was discussed *in detail* in Chapters I through V. The objectives of the study, past literature, conceptual model, research methods, and empirical results are summarized in the next section. Managerial implications of our findings are addressed in the following section. It concludes with a discussion of the study's limitations and directions for future research.

Summary of Research Objectives and Past Literature

Marketing researchers have identified studies of products' country of origin (COO) as "the most researched" domain of international buyer behavior (Tan & Farley 1987; Heslop, Papadopoulos, & Bourk 1998). In spite of its quantitative achievement, existing COO research still has several unresolved issues. This paper focuses on three problems. First, COO research has been criticized as being atheoretical. This is partially due to a lack of well-defined quality dimensions. A determination of quality dimensions that could be used across product classes is necessary in order to construct a theory, but previous studies lacked a set of widely accepted general quality dimensions because these were not well defined. Second, COO researchers have failed to provide a comprehensive view of the effect of COO on consumer decision making. That is, most studies have examined the effect of COO on product evaluations, which is the cognitive part of consumer decision making. The effect of COO on affective or behavioral components such as attitudes or behavioral intention is rarely studied. Third, country-of-origin

designations have proliferated due to firms' expanded global sourcing. Research on the hybrid product phenomenon, however, is lacking. The relative importance of brand image and the various components of COO in consumers' decision making is still in question.

Finally, previous literature suggested that product familiarity is an important influence on the relationship between COO and product evaluation. The definitions of product familiarity in these studies, however, are too vague to differentiate product familiarity from brand familiarity. Especially in the case of hybrid products, COM is not the same as country of brand (COB), where the company's headquarters are located. Thus, brand familiarity does not necessarily mean familiarity with the country where the product is manufactured. Therefore, the concept of product familiarity should be redefined and reexamined in the context of hybrid products.

The objectives of this study are to examine Korean consumers' behavior regarding 1) the quality dimensions of product evaluation; 2) the effects of country of manufacture (COM) and brand image on product evaluation, purchase attitudes, and purchase intention for hybrid products; and 3) the effects of brand and COM familiarity on the relationships among COM, brand image, and product evaluation of hybrid products.

Summary of Conceptual Model

The current study identifies six quality dimensions including ease of use, design, performance, serviceability, brand prestige, and technical prestige. These quality dimensions are dichotomized on the basis of their symbolic and functional aspects. The functional aspects of quality are evaluated through search and experience mechanisms. In the search mechanism, consumers assess quality dimensions that can be evaluated

through information seeking and processing, without purchasing or using the item. The quality dimensions assessed through this mechanism are design and ease of use. The experience mechanism is a consumers' quality evaluation process that is activated only after purchase and use. Thus, consumers make inferences about this type of quality based on intrinsic and extrinsic cues at the time they purchase a product. The quality dimensions evaluated through the experience mechanism are product performance and serviceability. Finally, the symbolic aspects of quality are evaluated through the image mechanism, in which consumers attach images to the product. The quality dimensions evaluated through the image mechanism are brand prestige and technical prestige.

Based on the Theory of Reasoned Action (Fishbein & Ajzen 1975), a comprehensive model is proposed to explain the relative importance of COM and brand image on consumers' purchasing behaviors for hybrid products. The cognitive component in Fishbein & Ajzen's model (1975) is dichotomized into two components including quality dimensions and overall quality. Regarding the search mechanism, COM is hypothesized to have no impact on the perception of the design dimension, because perceptions of the design or ease of use are formed at the point of purchase, and will, therefore, rely less on extrinsic cues. Brand image, however, is expected to have some influence on consumers' quality perceptions because a company intensively develops its brand image through various marketing tools.

Since the evaluations of the experience dimensions (performance and serviceability) are formed after the product has been purchased and used, COM and brand image are hypothesized to have an influence on the qualities of these dimensions. The

current study further proposes that brand image has a stronger effect on the perception of the experience dimensions than does COM.

Regarding the evaluations of image dimension (brand prestige and technical prestige), both COM and brand image are hypothesized to affect the qualities of these dimensions. The current study further proposes that the effect of brand image on the brand-prestige dimension is greater than that of the effect of COM on brand prestige, while the effect of COM on the technical-prestige dimension is greater than that of the effect of brand image.

The relationships between each quality dimension and overall quality are proposed to be positive since consumers use multiple quality attributes that are integrated into an overall quality perception. Previous studies found no effect of COM when other intrinsic information was provided, while the effect of brand remained strong. Thus, in the provision of intrinsic cues, no effect of COM, but a significant effect of brand image on overall quality are proposed.

The COM of hybrid products is hypothesized to have no impact on consumers' purchase attitudes, while brand image is expected to have an influence on it since brand image is a total perception of the brand that is obtained by processing information from various sources over time. Regarding consumers' intention to buy hybrid products, both COM and brand image are hypothesized to have no impact.

The current study also proposes models of the differential effects of COM and brand image on the quality perception of hybrid products using brand and COM familiarities as moderating variables. Conventional product familiarity is specified as "brand familiarity" and "COM familiarity." Brand familiarity is defined as the



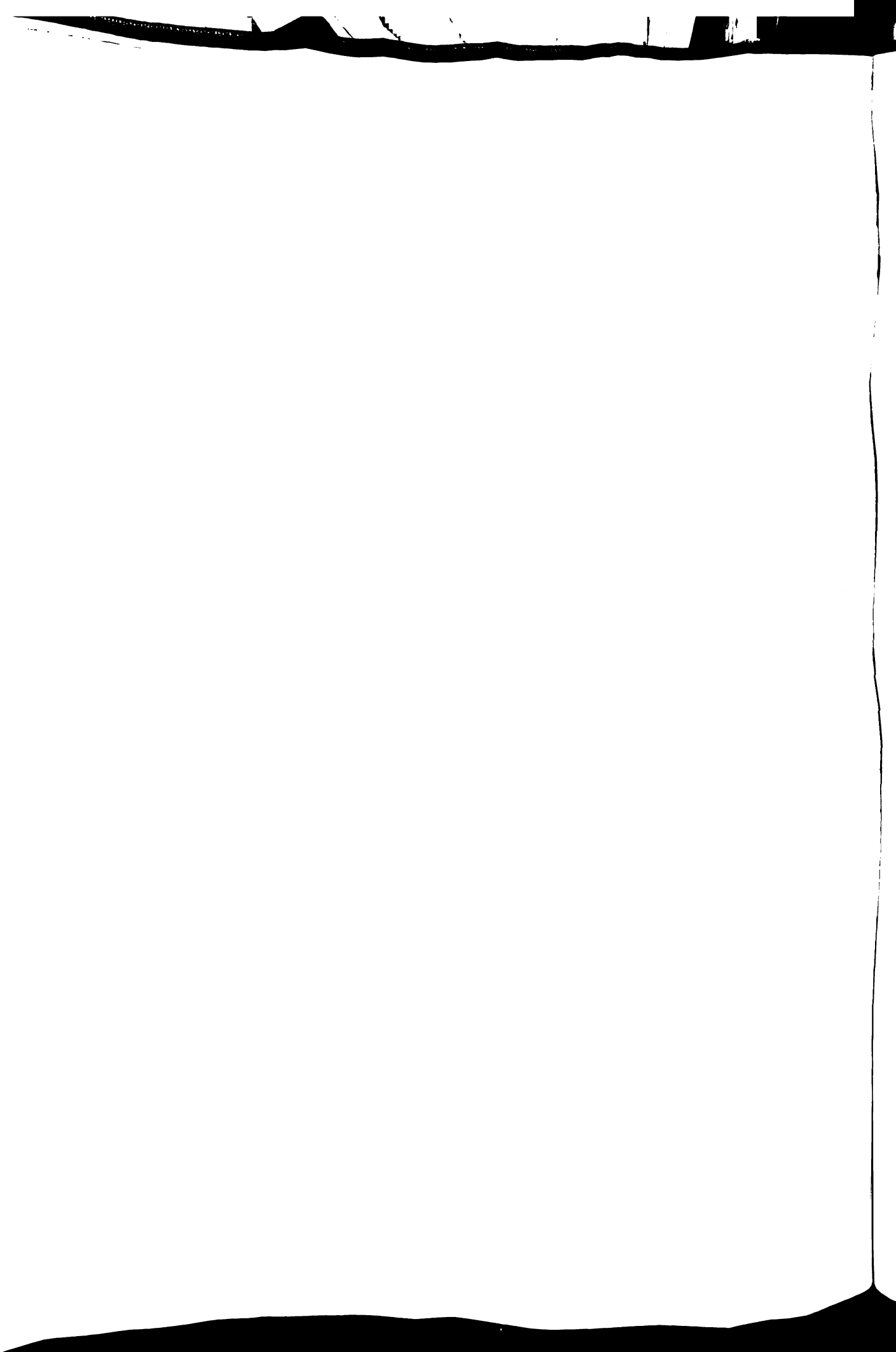
consumer's prior knowledge regarding the brand in a product class. On the other hand, COM familiarity is defined as the individual's prior knowledge regarding products made in a particular country.

Based on brand familiarity and COM familiarity, this study proposes four segments of consumers: high brand familiarity/high COM familiarity, high brand familiarity/low COM familiarity, low brand familiarity/high COM familiarity, low brand familiarity/low COM familiarity. The differential effects of brand image and COM on quality perception are proposed for each of the four segments. The logic is that the more a consumer knows about the country's product, the more likely he/she will be to use the COO cue to evaluate the product. Likewise, it is expected that the more a consumer knows about the brand, the more likely he/she will be to use the brand name to evaluate the product.

Summary of Research Methods

There were two phases to the study: the qualitative phase and the quantitative phase. In the qualitative phase, focus group interviews were conducted with Korean students in the U.S. and others in Korea to explore the conceptual meaning and cultural context of the target concepts, salient product features, brand names, and COMs. Information gathered from the qualitative phase was incorporated into the development of the quantitative survey instrument. The resulting quantitative study was cross-sectional. The design used a self-report survey instrument to collect consumer behavior data from native Koreans.

Based upon the outcome of the focus group interviews, the following target products and corresponding brand names were selected: Canon cameras, LG TVs, and



Polo sweaters. Once developed in English, the instrument ~~was~~ translated into Korean by Koreans not affiliated with the project using a double-blind translation procedure to achieve construct equivalence. All of the measures used in the study were previously established and seven-point Likert-type scales were used.

Korean consumers living in Seoul, Korea and several satellite cities constituted the sample in the study. To assure the inclusion of a broad spectrum of geographic and socioeconomic groups, potential survey areas were thoroughly reviewed and selected. Seven research assistants were selected from a major Korean university to collect data. The assistants collected data over a five-week period during June and July 1997, prior to the economic crisis. Of the 550 questionnaires that were distributed, 456 were returned, yielding an 82 percent response rate.

For each product, COM was coded as a dummy variable to differentiate the developing and developed countries. For each quality dimension, the belief (B_i) that the target product will have a specific attribute (i) was employed as an indicator of the five quality dimensions (design, performance, serviceability, brand prestige, and technical prestige). Further, the overall quality perception is calculated based on the mean of the formula indicated in a Fishbein and Ajzen (1975) study. The proposed structural relations were tested using EQS 5.1 (Bentler, 1993).

Summary of Empirical Results

A confirmatory factor analysis was performed for the constructs with multiple indicators for each product. Results showed a good fit of the model to the data for each product and achievements of convergent validity and discriminant validity. Since the quality evaluation mechanisms cannot be included as second-order factors, the structural

errors were correlated in SEM programs. That is, for TVs and cameras, structural errors of performance and serviceability, and brand prestige and technical prestige were correlated, and for sweaters, those of brand prestige and technical prestige were correlated.

The results of each hypothesis test are summarized in Table 13 based on the results of t-tests and chi-square difference tests. Some hypotheses of the current study include a comparison of the relationship between COM and brand image. Thus, chi-square difference tests were performed by imposing four equality constraints for TVs, cameras and sweaters. For all three products, releasing most equality constraints improved the model fit significantly, which indicates that the effects of COM and brand image are different in each proposed relationship, except in one case. For cameras, both COM and brand image had no influence on serviceability.

The proposed model has an acceptable fit to the data for all three products. For the search dimension (design), no effect of COM, but a positive effect of brand image were found for sweaters, as expected. For the experience dimensions (performance and serviceability), COM had a significant effect on the performance dimension for cameras and TVs, but not for sweaters. It had no effect on serviceability for either cameras or TVs. Brand image had a stronger effect on these dimensions than did COM, except in the case of cameras where no effects of COM and brand image on serviceability were found.

Regarding the image dimensions (brand prestige and technical prestige), COM and brand image had significant effects on these dimensions as expected, except in the case of the effect of COM on brand prestige for sweaters.



Table 13. Results of Hypotheses Tests

Hypotheses	Standardized Coefficients	Results of Hypothesis Tests ^a
H1a: No effect of COM on design	S: -.133	Supported
H1b: Positive effect of BI on design	S: .308**	Supported
H2a: Negative effect of COM on performance	C: -.213** T: -.150* S: -.056	Supported Supported Not Supported
H2b: Positive effect of BI on performance	C: .328** T: .542** S: .268**	Supported Supported Supported
H2c: Stronger effect of BI on performance than COM	C: $\Delta\chi^2=64.47^{**}$ T: $\Delta\chi^2=23.18^{**}$ S: $\Delta\chi^2=3.67^b$	Supported Supported Supported
H3a: Negative effect of COM on serviceability	C: -.028 T: -.009	Not Supported Not Supported
H3b: Positive effect of BI on serviceability	C: .062 T: .296**	Not Supported Supported
H3c: Stronger effect of BI on serviceability than COM	C: $\Delta\chi^2=1.29$ T: $\Delta\chi^2=4.42^*$	Not Supported Supported
H4a: Negative effect of COM on brand prestige	C: -.234** T: -.119* S: -.052	Supported Supported Not Supported
H4b: Positive effect of BI on brand prestige	C: .364** T: .468** S: .402**	Supported Supported Supported
H4c: Stronger effect of BI on brand prestige than COM	C: $\Delta\chi^2=10.23^{**}$ T: $\Delta\chi^2=14.76^{**}$ S: $\Delta\chi^2=12.46^*$	Supported Supported Supported
H5a: Negative effect of COM on technical prestige	C: -.483** T: -.372** S: -.485**	Supported Supported Supported
H5b: Positive effect of BI on technical prestige	C: .139** T: .244** S: .245**	Supported Supported Supported
H5c: Stronger effect of COM on technical prestige than BI	C: $\Delta\chi^2=12.63^{**}$ T: $\Delta\chi^2=20.29^{**}$ S: $\Delta\chi^2=55.95^{**}$	Supported Supported Supported

^a Two-tail tests for H1a, H7a, H8b, H9b, and H9c and one-tail tests for the rest hypotheses

^b Significant at $p = .055$; * $p < .05$; ** $p < .01$

BI = Brand Image

COM = Country-of-Manufacture (Dummy Variable coded as 1=Japan, 2=China for cameras; 1=Korea, 2=Malaysia for TVs; 1=U.S., 2=Mexico for sweaters)

C = Camera; T = TV; S = Sweater

Table 13. Cont'd

Hypotheses	Standardized Coefficients	Results of Hypothesis Tests
H6a: Positive effect of design on overall quality	S: .550**	Supported
H6b: Positive effect of performance on overall quality	C: .320** T: .598** S: .478**	Supported Supported Supported
H6c: Positive effect of serviceability on overall quality	C: .323** T: .299**	Supported Supported
H6d: Positive effect of brand prestige on overall quality	C: .285** T: .226** S: .219**	Supported Supported Supported
H6e: Positive effect of technical prestige on overall quality	C: .278** T: .181** S: .229**	Supported Supported Supported
H7a: No effect of COM on overall quality	C: .005 T: .050 S: .062	Supported Supported Supported
H7b: Positive effect of BI on overall quality	C: .059 T: -.077 S: .012	Not Supported Not Supported Not Supported
H8a: Positive Effect of overall quality on purchase attitudes	C: .316** T: .416** S: .271**	Supported Supported Supported
H8b: No effect of COM on purchase attitudes	C: -.184** T: -.225** S: -.047	Not Supported Not Supported Supported
H8c: Positive effect of BI on purchase attitudes	C: .183** T: .316** S: .252**	Supported Supported Supported
H9a: Positive effect of purchase attitudes on intention to buy	C: .611** T: .686** S: .709**	Supported Supported Supported
H9b: No effect of COM on intention to buy	C: -.034 T: -.050 S: -.013	Supported Supported Supported
H9c: No effect of BI on intention to buy	C: .049 T: .006 S: .173**	Supported Supported Not Supported

^a Two-tail tests for H1a, H7a, H8b, H9b, and H9c and one-tail tests for the rest hypotheses

* $p < .05$; ** $p < .01$

BI = Brand Image

COM = Country-of-Manufacture (Dummy Variable coded as 1=Japan, 2=China for cameras; 1=Korea, 2=Malaysia for TVs; 1=U.S., 2=Mexico for sweaters)

C = Camera; T = TV; S = Sweater

No effect of COM on overall quality was found for *all three products*. Brand image also had no effect on overall quality. For the purchase attitudes, COM was proposed to have no effect, *but* only the sweater supported this hypothesis. A significant effect of COM on purchase attitudes was found for cameras and TVs. On the other hand, brand image had a significant effect on purchase attitudes for all three products.

No effect of COM on intention to buy was found for the three products, as expected. Regarding cameras and TVs, no effect of brand image on intention to buy was found, but for sweaters, a positive effect of brand image on intention to buy was found.

The current study failed to test the models of the differential effects of COM and brand image on quality perceptions of hybrid products using brand and COM familiarities as moderating variables. Because the brands employed in this study were well-known to Korean consumers, we were unable to identify a group of low brand familiarity.

Managerial Implications

The findings of the current study provide strategic implications for multinational electronics and apparel companies that are targeting Korean consumers. International marketing managers in these companies should first acknowledge that establishing a strong and favorable brand image is important in Korean consumers' product evaluations in terms of performance, brand prestige, technical prestige, and purchase attitude formation. The findings of this study, however, indicate that moving production facilities to developing countries can damage prestigious brand and technical images and that this may negatively affect Korean consumers' attitudes toward purchasing the product. Thus, electronics marketing managers who decide to manufacture their products in developing countries should emphasize the excellence of product performance in their

advertisements. Prestigious brand and technical images *should be highlighted to* compensate for the negative images associated with certain COMs.

International apparel managers, on the other hand, should acknowledge that the establishment of a strong and favorable brand image is critical in Korean consumers' decision-making processes, while the effect of COM is limited. This study found that brand image strongly influences consumers' product evaluations of design, performance, brand and technical prestige, purchase attitudes, and behavioral intention. On the other hand, these consumers did not consider the COM of the hybrid sweaters when they evaluated design, performance, and brand prestige of the products. Accordingly, country-sourcing considerations become less significant for apparel with strong and favorable brands.

Limitations and Recommendations

Managerial implications of the present study, however, should be considered in light of research limitations. This study employed only three products from two product categories: electronics and apparel goods. Although they were selected because they were bi-national and well known to the subject population, future research should examine the generalizability of the current findings to other products with different characteristics. Especially, this study revealed that the relative importance of COM and brand image is different based on the product categories. Korean consumers are less sensitive to COM and more to brand image in their purchase decisions for apparel products than for electronics. Electronics are considered to be more technically complex and expensive products than apparels. Thus, the moderating effects of price and level of technology on the consumers' views of COM versus brand should be examined.

This study employed the mean of product beliefs and evaluation composites for the construct of overall quality, as proposed by Fishbein and Ajzen (1975), and used product beliefs for the constructs of quality dimensions. Accordingly, the relationships between quality dimensions and overall quality could be too strong to detect the influence of COM and brand image on consumer evaluations of overall quality, although indirect effects of COM and brand image on overall quality were significant. Therefore, future study should include a measure of overall quality to verify the findings of the current study.

The current study also proposed brand and COM familiarities as moderating variables to explain the differential effect of COM and brand image on the quality perceptions of hybrid products. However, since the brands employed in this study were well known to Korean consumers, we failed to test the model because we were unable to identify a low brand familiarity group. Therefore, further study should examine the moderating effects of brand and COM familiarities among different products.

APPENDICES

APPENDIX I

QUESTIONNAIRE

Greetings!

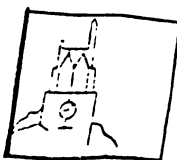
The Life Science Institution at Sung Kyun Kwan University is a research institution contributing to community development through the research of consumer problems. At this time, this institution is conducting a comparative study of Korean and American consumers' purchasing behaviors.

Because this survey is being conducted anonymously and will be analyzed by computer, your individual responses will be confidential. We just want to know your perceptions, and there are no right or wrong answers. Your responses will be used only for an academic purpose. This survey will take about 15 minutes to complete. Because your participation in this study is voluntary, you can stop answering the questions at any time, if you want. Your cooperation with this survey is greatly appreciated.

1997.6.

Life Science Institution at
Sung Kyun Kwan University
Professor Sun Jin Hwang

Michigan State University
Professor Pysarchik Ph.D.



MICHIGAN STATE UNIVERSITY

_____ A'K

This questionnaire will take approximately 15 minutes to complete. You indicate your voluntary agreement to participate by completing and returning this questionnaire. You may discontinue participation at any time.

Please picture yourself in the following situation: you would like to buy two different products 1) a camera and 2) a TV set. You visit different stores to compare the various brands, features and prices for each of these products. Please answer each question with the response that best describes your view by checking the number (1-7).

Section I. In this section we are asking how much do you like or how good/bad are the following features when you buy a product, regardless of the specific brand.

1. When purchasing any camera, how good or bad is it that the camera has each of the following features:

	Extremely Bad	Quite Bad	Slightly Bad	Neither Bad nor Good	Slightly Good	Quite Good	Extremely Good
> it has automatic focus	1	2	3	4	5	6	7
> it takes a sharp (clear) picture	1	2	3	4	5	6	7
> it is easy to load	1	2	3	4	5	6	7
> it has a prestigious brand name	1	2	3	4	5	6	7
> its price is expensive	1	2	3	4	5	6	7
> it has a warranty	1	2	3	4	5	6	7
> there are easily accessible authorized service centers	1	2	3	4	5	6	7
> its product quality is good	1	2	3	4	5	6	7
> it is manufactured in an advanced/hi-tech country	1	2	3	4	5	6	7

2. When purchasing any TV, how good or bad is it that the TV has each of the following features:

	Extremely Bad	Quite Bad	Slightly Bad	Neither Bad nor Good	Slightly Good	Quite Good	Extremely Good
> it has a high-clear picture	1	2	3	4	5	6	7
> there is a hi-fi stereo sound system	1	2	3	4	5	6	7
> it has remote control	1	2	3	4	5	6	7
> it has a prestigious brand name	1	2	3	4	5	6	7
> its price is expensive	1	2	3	4	5	6	7
> it has a warranty	1	2	3	4	5	6	7

> there are easily accessible authorized service centers	1	2	3	4	5	6	7
> its product quality is good	1	2	3	4	5	6	7
> it is manufactured in an advanced/hi-tech country	1	2	3	4	5	6	7

3. How important is it that you do what the following people think you should do with respect to buying a camera?

	Extremely Unimportant	Quite Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Quite Important	Extremely Important
> Friends	1	2	3	4	5	6	7
> Family/relatives	1	2	3	4	5	6	7
> Neighbors	1	2	3	4	5	6	7
> Salesperson	1	2	3	4	5	6	7

4. How important is it that you do what the following people think you should do with respect to buying a TV?

	Extremely Unimportant	Quite Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Quite Important	Extremely Important
> Friends	1	2	3	4	5	6	7
> Family/relatives	1	2	3	4	5	6	7
> Neighbors	1	2	3	4	5	6	7
> Salesperson	1	2	3	4	5	6	7

5. How familiar are you with:

	Extremely Unfamiliar	Quite Unfamiliar	Somewhat Unfamiliar	Neither Familiar nor Unfamiliar	Somewhat Familiar	Quite Familiar	Extremely Familiar
> Canon brand products	1	2	3	4	5	6	7
> Canon brand cameras	1	2	3	4	5	6	7
> LG (Gold Star) brand products	1	2	3	4	5	6	7
> LG (Gold Star) brand TV sets	1	2	3	4	5	6	7

6. What is your general impression of the following products:	Extremely Bad	Quite Bad	Somewhat Bad	Neither Bad nor Good	Somewhat Good	Quite Good	Extremely Good
> Canon brand cameras	1	2	3	4	5	6	7
> LG (Gold Star) brand TV sets	1	2	3	4	5	6	7

Suppose that during your visits to the stores, you come across the two products identified in sections II-III.

Section II. In a department store you find a camera. Next to the camera is a sign that describes it with the features listed below. Please read the description carefully because we are going to ask you in questions 7-11 to evaluate the camera described in the box below.

Canon One-touch Personal Compact Camera	
☐ One-year warranty	☐ Manufactured in China
☐ Automatic focus	☐ Zoom lens
☐ Easy to load	☐ Easily accessible authorized service centers
☐ Date on picture	☐ Takes sharp (clear) pictures

7. How likely is it that the Canon brand camera described above would have the following characteristics:	Extremely Unlikely	Quite Unlikely	Somewhat Unlikely	Neither Likely nor Unlikely	Somewhat Likely	Quite Likely	Extremely Likely
> it takes a sharp (clear) picture	1	2	3	4	5	6	7
> it is easy to use and operate	1	2	3	4	5	6	7
> it has a prestigious/famous brand name	1	2	3	4	5	6	7
> its price is expensive	1	2	3	4	5	6	7
> there are easily accessible authorized service centers	1	2	3	4	5	6	7
> it is manufactured in an advanced/ hi-tech country	1	2	3	4	5	6	7

	Extremely Bad	Quite Bad	Somewhat Bad	Neither Bad nor Good	Somewhat Good	Quite Good	Extremely Good
	1	2	3	4	5	6	7
8. How good do you think the quality of the Canon brand camera manufactured in China would be?	1	2	3	4	5	6	7

9. How likely is it that the following people would think that you should buy a Canon camera when you need a camera:

	Extremely Unlikely	Quite Unlikely	Somewhat Unlikely	Neither Likely Unlikely	Somewhat Likely	Quite Likely	Extremely Likely
> your friends	1	2	3	4	5	6	7
> your family/relatives	1	2	3	4	5	6	7
> your neighbors	1	2	3	4	5	6	7
> the salesperson	1	2	3	4	5	6	7

10. When you need a new camera, do you think that buying the Canon brand camera described above would be:

	Extremely Negative	Quite Negative	Somewhat Negative	Neither	Somewhat Positive	Quite Positive	Extremely Positive
> beneficial	1	2	3	4	5	6	7
> worthwhile	1	2	3	4	5	6	7
> wise	1	2	3	4	5	6	7
> good	1	2	3	4	5	6	7

The following questions are related to the next time you would purchase a camera. Please indicate your level of agreement with the following statements:

	Disagree Extremely	Disagree Quite	Disagree Some- what	Neither Agree nor Disagree	Agree Some- what	Agree Quite	Agree Extre- mely
> My decision to buy the Canon camera described above would be influenced by whether owning it would hurt my reputation.	1	2	3	4	5	6	7
> My decision to buy the Canon camera described above would be influenced by whether I feel ashamed when people who are important to me see me using this product.	1	2	3	4	5	6	7
> My decision to buy the Canon brand camera would be affected by whether I think the brand and the price would improve my reputation.	1	2	3	4	5	6	7
> I would consider buying the Canon camera described above.	1	2	3	4	5	6	7
> Most people who are important to me would think I should buy the Canon brand camera described above.	1	2	3	4	5	6	7
> My decision to buy the Canon camera described above would be influenced by knowing how many of the people who are close to me would also buy this brand.	1	2	3	4	5	6	7
> Most people who are important to me would think that it is good for me to buy the Canon brand camera described above.	1	2	3	4	5	6	7
> My decision to buy the Canon camera described above would be influenced by whether owning it would make me fit in with people who are close to me.	1	2	3	4	5	6	7
> I would recommend the Canon brand camera described above to people who are close to me.	1	2	3	4	5	6	7
> Next time I intend to buy the Canon camera described above.	1	2	3	4	5	6	7

Section III. Suppose that in a department store you find a TV set. Next to the TV set is a sign with the features listed below. Please read the description carefully because we are going to ask you in questions 12-16 to evaluate the TV set described in the box below.

LG (Gold Star) 20" Color TV Set

Multi-function remote control

High-clear picture

Split-screen viewing option

On-screen display option

Manufactured in Korea

One-year warranty

Easily accessible authorized service centers

Hi-fi stereo sound system

12. How likely is it that the LG (Gold Star) TV set described above would have the following characteristics:

	Extremely Unlikely	Quite Unlikely	Somewhat Unlikely	Neither Likely nor Unlikely	Somewhat Likely	Quite Likely	Extremely Likely
> it has a high-clear picture	1	2	3	4	5	6	7
> it has a quality hi-fi stereo sound system	1	2	3	4	5	6	7
> it has a prestigious/famous brand name	1	2	3	4	5	6	7
> its price is expensive	1	2	3	4	5	6	7
> there are easily accessible authorized service centers	1	2	3	4	5	6	7
> it is manufactured in an advanced/hi-tech country	1	2	3	4	5	6	7

13. How good do you think the quality of the LG (Gold Star) TV set manufactured in Korea would be?

	Extremely Bad	Quite Bad	Somewhat Bad	Neither Bad nor Good	Somewhat Good	Quite Good	Extremely Good
	1	2	3	4	5	6	7

14. How likely is it that the following people would think that you should buy a LG (Gold Star) TV set when you need a TV:

	Extremely Unlikely	Quite Unlikely	Somewhat Unlikely	Neither Likely nor Unlikely	Somewhat Likely	Quite Likely	Extremely Likely
> your friends	1	2	3	4	5	6	7
> your family/relatives	1	2	3	4	5	6	7
> your neighbors	1	2	3	4	5	6	7
> the salesperson	1	2	3	4	5	6	7

15. When you need a new TV, how do you think that buying a LG(Gold Star) brand TV described above would be:

	Disagree Extremely	Disagree Quite	Disagree Some- what	Neither Agree nor Disagree	Agree Some- what	Agree Quite	Agree Extremely
> it is beneficial	1	2	3	4	5	6	7
> it is worthwhile	1	2	3	4	5	6	7
> it is wise	1	2	3	4	5	6	7
> it is good	1	2	3	4	5	6	7

The following questions are related to the next time you would purchase a TV. Please indicate your level of agreement with the following statements:

16.

	Disagree Extremely	Disagree Quite	Disagree Some- what	Neither Agree nor Disagree	Agree Some- what	Agree Quite	Agree Extremely
> My decision to buy the LG(Gold Star) TV set described above would be influenced by whether owning it would hurt my reputation.	1	2	3	4	5	6	7
> My decision to buy the LG(Gold Star) TV set described above would be influenced by whether I feel ashamed when people who are important to me see me using this product.	1	2	3	4	5	6	7

- My decision to buy the LG (*Gold Star*) brand TV described above would be affected by whether I think the brand and the price would improve my reputation. 1 2 3 4 5 6 7
- I would consider buying the LG (*Gold Star*) brand TV described above. 1 2 3 4 5 6 7
- Most people who are important to me would think I should buy the LG (*Gold Star*) brand TV described above. 1 2 3 4 5 6 7
- My decision to buy the LG(*Gold Star*) TV set described above would be influenced by knowing how many of the people who are close to me would also buy this brand. 1 2 3 4 5 6 7
- Most people who are important to me would think that it is good for me to buy the LG (*Gold Star*) TV described above. 1 2 3 4 5 6 7
- My decision to buy the LG(*Gold Star*) TV set described above would be influenced by whether owning it would make me fit in with people who are close to me. 1 2 3 4 5 6 7
- I would recommend the LG (*Gold Star*) TV described above to people who are close to me. 1 2 3 4 5 6 7
- Next time I intend to buy the LG (*Gold Star*) TV described above 1 2 3 4 5 6 7

CONTINUED ON NEXT PAGE

Section IV. In Sections IV & V, we are interested in your general beliefs. Please answer each question with the response that best describes **your view** by checking (1-5).

17. In general, how much do you want to do what:

	Never Want	Don't Want	Sometimes Don't Want	Neither Want nor Don't	Sometimes Want	Want	Always Want
> your friends think that you <i>should</i> do	1	2	3	4	5	6	7
> your relatives think that you <i>should</i> do	1	2	3	4	5	6	7
> your neighbors think that you <i>should</i> do	1	2	3	4	5	6	7
> the salesperson thinks that you <i>should</i> do	1	2	3	4	5	6	7

Section V.

18. Please indicate your level of agreement or disagreement with each of the following statements by circling the appropriate number.

	Disagree Extremely	Disagree Quite	Disagree Somewhat	Neither Agree nor Disagree	Agree Somewhat	Agree Quite	Agree Extremely
> Korean people should always buy domestic products instead of imported products.	1	2	3	4	5	6	7
> Only those products that are unavailable in Korea should be imported.	1	2	3	4	5	6	7
> Buy domestic products. Keep Korea working.	1	2	3	4	5	6	7
> Domestic products are the best.	1	2	3	4	5	6	7
> Purchasing imported products is un-Korean.	1	2	3	4	5	6	7
> It is not right to purchase imported products because it puts Koreans out of jobs.	1	2	3	4	5	6	7
> A real Korean should always buy domestic products.	1	2	3	4	5	6	7
> We should purchase domestic products instead of letting other countries get rich off of us.	1	2	3	4	5	6	7
> To purchase domestic products is always the best.	1	2	3	4	5	6	7

> There should be very little trading or purchasing of imported products unless out of necessity.	1	2	3	4	5	6	7
> Koreans should not buy imported products because this hurts Korean business and causes unemployment.	1	2	3	4	5	6	7
> Curbs should be put on all imported products.	1	2	3	4	5	6	7
> It may cost me in the long-run, but I prefer to support domestic products.	1	2	3	4	5	6	7
> Foreigners should not be allowed to put their products on our markets.	1	2	3	4	5	6	7
> Imported products should be taxed heavily to reduce their entry into Korea.	1	2	3	4	5	6	7
> We should buy from foreign countries only those products that we cannot obtain within our own country.	1	2	3	4	5	6	7
> Korean consumers who purchase imported products are responsible for putting their fellow Koreans out of work.	1	2	3	4	5	6	7

19. The following questions are related to your familiarity with a country.

	Extremely Unfamiliar	Quite Unfamiliar	Somewhat Unfamiliar	Neither Familiar nor Unfamiliar	Somewhat Familiar	Quite Familiar
> How familiar are you with products made in China?	1	2	3	4	5	6
> How familiar are you with products made in Korea?	1	2	3	4	5	6

Section VI. Demographic questions. Please fill in the blank or check the appropriate response for each question.

20. Age: _____ years
21. Gender of person who is completing the questionnaire: _____ Male _____ Female
22. Your present marital status: _____ Single _____ Married
23. Where do you live? _____ gu _____ dong
24. Please check the following category that most accurately identifies your total monthly family income.
- | | |
|--|--|
| (1) _____ less than 1,000,000_ | (5) _____ 4,000,00 but less than 5,000,000_ |
| (2) _____ 1,000,000 but less than 2,000,000_ | (6) _____ 5,000,000 but less than 6,000,000_ |
| (3) _____ 2,000,000 but less than 3,000,000_ | (7) _____ 6,000,000_ or more |
| (4) _____ 3,000,000 but less than 4,000,000_ | |
25. Education (level of degree)
- | | |
|--|-------------------------------------|
| (1) _____ some high school | (6) _____ university student |
| (2) _____ high school degree | (7) _____ university degree |
| (3) _____ some junior college/no degree | (8) _____ graduate student |
| (4) _____ junior college degree (2 year) | (9) _____ master's degree or higher |
| (5) _____ some university/no degree | |
26. Occupation:.
- (1) _____ personal business/business owner, <9 employees
 - (2) _____ personal business/business owner, >9 employees
 - (3) _____ sales and service, salesperson
 - (4) _____ skilled worker/tradesperson, manual worker
 - (5) _____ businessperson, technical worker
 - (6) _____ marketing and management (executive level)
 - (7) _____ specialist or freelancer (ex: professor, medical doctor, lawyer, artist)
 - (8) _____ student
 - (9) _____ unemployed or others

Thank you for taking the time to help us with our survey.

APPENDIX II

COVARIANCE MATRICES FOR CONFIRMATORY ANALYSIS

Covariance Matrices for Confirmatory Analysis

Camera (n=456)

	V1	V2	V3	V4	V5	V6	V7
V1	1.460						
V2	1.140	1.462					
V3	1.112	1.152	1.556				
V4	1.130	1.177	1.128	1.594			
V5	0.571	0.529	0.602	0.716	1.676		
V6	0.601	0.629	0.769	0.779	0.830	1.711	
V7	0.701	0.739	0.752	0.786	0.921	1.158	2.039

TV (n=229)

	V1	V2	V3	V4	V5	V6	V7	V8	V9
V1	1.248								
V2	0.855	1.132							
V3	0.706	0.607	1.397						
V4	0.669	0.639	1.207	1.447					
V5	0.762	0.658	1.297	1.291	1.709				
V6	0.760	0.682	1.241	1.317	1.438	1.731			
V7	0.184	0.292	0.509	0.493	0.577	0.621	1.917		
V8	0.461	0.395	0.796	0.856	0.899	1.005	0.905	1.735	
V9	0.603	0.563	1.040	1.073	1.139	1.233	0.973	1.527	2.117

Sweaters (n=227)

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11
V1	1.295										
V2	0.600	1.270									
V3	0.444	0.478	1.357								
V4	0.321	0.486	0.642	1.175							
V5	0.400	0.364	0.255	0.339	1.403						
V6	0.331	0.381	0.228	0.363	1.186	1.481					
V7	0.345	0.268	0.154	0.280	1.163	1.135	1.389				
V8	0.273	0.294	0.236	0.385	1.092	1.198	1.173	1.503			
V9	0.245	0.287	0.166	0.323	0.766	0.862	0.802	0.828	1.554		
V10	0.336	0.272	0.128	0.413	0.979	1.062	1.061	1.125	1.177	1.923	
V11	0.362	0.364	0.255	0.475	1.067	1.127	1.088	1.123	1.304	1.707	2.254

Camera: V1-V4=purchase attitudes 1 to 4; V5-V7=intention to buy 1 to 3

TV: V1=picture; V2=sound; V3-V6=purchase attitudes 1 to 4; V7-V9=intention to buy 1 to 3

Sweater: V1=color; V2=design; V3=care; V4=comfort; V5-V8=purchase attitudes 1 to 4; V9-V11=intention to buy 1 to 3

APPENDIX III

COVARIANCE MATRICES FOR STRUCTURAL EQUATION MODEL

Covariance Matrices For Structural Equation Model

Product: Camera (n=456)

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14
V1	0.25													
V2	0.01	0.85												
V3	-0.11	0.31	1.05											
V4	-0.02	0.09	0.74	2.49										
V5	-0.13	0.38	0.38	0.26	1.28									
V6	-0.39	0.19	0.65	0.49	0.91	2.64								
V7	-0.90	1.99	4.73	6.01	4.50	6.67	50.49							
V8	-0.13	0.24	0.39	0.43	0.46	0.67	3.25	1.46						
V9	-0.14	0.27	0.44	0.44	0.54	0.74	3.38	1.14	1.46					
V10	-0.13	0.32	0.49	0.41	0.49	0.68	3.16	1.11	1.15	1.56				
V11	-0.17	0.29	0.41	0.40	0.43	0.74	3.21	1.13	1.18	1.13	1.59			
V12	-0.08	0.21	0.24	0.32	0.31	0.30	2.73	0.57	0.53	0.60	0.72	1.68		
V13	-0.08	0.19	0.24	0.48	0.32	0.58	2.71	0.60	0.63	0.77	0.78	0.83	1.71	
V14	-0.13	0.22	0.40	0.39	0.37	0.59	2.51	0.70	0.74	0.75	0.79	0.92	1.16	2.04

Camera: v1=COM; v2=brand image; v3=picture; v4=serviceability; v5=brand prestige; v6=technical prestige; v7=overall quality; v8-v11=purchase attitudes 1-4; v12-v14=intention to buy 1-3;

Product: TV (n=229)

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
V1	0.25														
V2	0.01	1.10													
V3	-0.09	0.56	1.25												
V4	-0.05	0.46	0.86	1.13											
V5	-0.00	0.45	0.64	0.67	2.06										
V6	-0.07	0.56	0.69	0.62	0.64	1.32									
V7	-0.27	0.37	0.67	0.59	0.60	1.02	2.20								
V8	-0.07	0.54	0.93	0.92	1.11	0.92	0.98	1.41							
V9	-0.11	0.59	0.71	0.61	0.63	0.72	0.80	0.80	1.40						
V10	-0.15	0.56	0.67	0.64	0.63	0.72	0.88	0.82	1.21	1.45					
V11	-0.17	0.63	0.76	0.66	0.66	0.78	0.95	0.87	1.30	1.29	1.71				
V12	-0.19	0.62	0.76	0.68	0.60	0.80	0.95	0.84	1.24	1.32	1.44	1.73			
V13	-0.08	0.29	0.31	0.29	0.38	0.38	0.44	0.31	0.51	0.49	0.58	0.62	1.92		
V14	-0.15	0.44	0.46	0.40	0.40	0.53	0.60	0.48	0.80	0.86	0.90	1.01	0.91	1.74	
V15	-0.15	0.49	0.60	0.56	0.64	0.72	0.65	0.53	1.04	1.07	1.14	1.23	0.97	1.53	2.12

TV: v1=COM; v2=brand image; v3=picture; v4=sound; v5=serviceability; v6=brand prestige; v7=technical prestige; v8=overall quality; v9-v12=purchase attitudes 1-4; v13-v15=intention to buy 1-3;

Covariance Matrices for Structural Equation Model Cont'd

Product: Sweater (n=227)

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16
V1	0.25															
V2	-0.01	1.13														
V3	-0.05	0.21	1.30													
V4	-0.01	0.30	0.60	1.27												
V5	-0.01	0.08	0.44	0.48	1.36											
V6	-0.03	0.30	0.32	0.49	0.64	1.18										
V7	-0.03	0.49	0.35	0.42	0.18	0.41	1.31									
V8	-0.37	0.41	0.35	0.34	0.04	0.13	0.82	2.35								
V9	-0.48	2.79	4.09	4.21	3.48	4.08	4.21	4.17	40.58							
V10	-0.04	0.49	0.40	0.36	0.26	0.34	0.45	0.50	2.77	1.40						
V11	-0.07	0.40	0.33	0.38	0.23	0.36	0.50	0.57	2.95	1.19	1.48					
V12	-0.05	0.39	0.35	0.27	0.15	0.28	0.42	0.48	2.52	1.16	1.14	1.39				
V13	-0.04	0.45	0.27	0.29	0.24	0.39	0.51	0.49	2.91	1.09	1.20	1.17	1.50			
V14	-0.05	0.45	0.25	0.29	0.17	0.32	0.45	0.59	2.49	0.77	0.86	0.80	0.83	1.55		
V15	-0.05	0.55	0.34	0.27	0.21	0.41	0.55	0.73	2.84	0.98	1.06	1.06	1.13	1.18	1.92	
V16	-0.05	0.66	0.36	0.36	0.26	0.48	0.59	0.85	3.53	1.07	1.13	1.09	1.12	1.30	1.67	2.25

Sweater: v1=COM; v2=brand image; v3=color; v4=fashion; v5=care; v6=comfort; v7=brand prestige;
v8=technical prestige; v9=overall quality; v10-v13=purchase attitudes 1-4; v14-v16=intention to buy 1-3

APPENDIX IV

INPUT SEM MODELS FOR EQS

```

/TITLE
Camera:SEM: Raw quality dimension
/SPECIFICATIONS
VARIABLES=14; CASES=456;
METHODS=ML;
MATRIX=CORRELATION;AN=COV;
/Equations
v1 = f1 + e1;
v2 = f2 + e2;
v3 = f3 + e3;
v4 = f4 + e4;
v5 = f5 + e5;
v6 = f6 + e6;
v7 = f7 + e7;
v8 = f8 + e8;
v9 = *f8 + e9;
v10 = *f8 + e10;
v11 = *f8 + e11;
v12 = f9 + e12;
v13 = *f9 + e13;
v14 = *f9 + e14;
f3 = *f1 + *f2 + d1;
f4 = *f1 + *f2 + d2;
f5 = *f1 + *f2 + d3;
f6 = *f1 + *f2 + d4;
f7 = *f1 + *f2 + *f3 + *f4 + *f5 + *f6 + d5;
f8 = *f1 + *f2 + *f7 + d6;
f9 = *f1 + *f2 + *f8 + d7;
/VARIANCES
f1 to f2 = 0.1*;
e1 to e7 = 0.0;
e8 to e14 = 0.1*;
d1 to d7 = 6*;
/covariances
d1,d2=3*;
d3,d4=3*;
/labels
v1=country; v2=brimage; v3=pict; v4=serv; v5=pres; v6=tech; v7=quality; v8=att1;
v9=att2;
v10=att3; v11=att4; v12=int1; v13=int2; v14=int3;
f1=com; f2=brand; f3=workman; f4=service; f5=prestige; f6=technica; f7=oquality;
f8=attitude; f9=intent;
/constraints
!(f3,f1)=(f3,f2);
!(f4,f1)=(f4,f2);
!(f5,f1)=(f5,f2);

```



```

!(f6,f1)=(f6,f2);
/Matrix
1.000
.023 1.000
-.206 .324      1.000
-.027 .061      .459 1.000
-.226 .359      .325 .145 1.000
-.481 .128      .389 .191 .496 1.000
-.252 .303      .649 .536 .561 .577 1.000
-.216 .218      .318 .223 .337 .339 .379 1.000
-.227 .237      .356 .231 .393 .377      .393
-.211 .274      .381 .207 .346 .335      .356
-.261 .247      .317 .200 .303 .360      .358
-.128 .171      .180 .156 .215 .142      .297
-.119 .159      .177 .231 .217 .274      .291
-.181 .167      .275 .172 .227 .256      .247
/Standard deviation
.5005 .9243 1.025 1.577 1.129 1.626 7.1055 1.2083 1.2091 1.2475 1.2625 1.2947 1.3081 1.428
/LMTEST
/PRINT
effect = yes;
digit=3;
linesize =80;
fit=all;
/TECHNICAL
iteration= 500;
/END

```

```

/TITLE
TV:SEM: Raw quality dimension
/SPECIFICATIONS
VARIABLES=15; CASES=229;
METHODS=ML;
MATRIX=CORRELATION; AN=COV;
/Equations
v1 = f1 + e1;
v2 = f2 + e2;
v3 = f3 + e3;
v4 = *f3 + e4;
v5 = f4 + e5;
v6 = f5 + e6;
v7 = f6 + e7;
v8 = f7 + e8;
v9 = f8 + e9;
v10 = *f8 + e10;
v11 = *f8 + e11;
v12 = *f8 + e12;
v13 = f9 + e13;
v14 = *f9 + e14;
v15 = *f9 + e15;
f3 = *f1 + *f2 + d1;
f4 = *f1 + *f2 + d2;
f5 = *f1 + *f2 + d3;
f6 = *f1 + *f2 + d4;
f7 = *f1 + *f2 + *f3 + *f4 + *f5 + *f6 + d5;
f8 = *f1 + *f2 + *f7 + d6;
f9 = *f1 + *f2 + *f8 + d7;
/VARIANCES
f1 to f2 = 1*;
e1 to e2 = 0.0;
e5 to e8 = 0.0;
e3 to e4 = 1*;
e9 to e15 = 1*;
d1 to d7 = 1*;
/covariances;
d1,d2 = 1*;
d3,d4 = 1*;
/constraints
!(f3,f1)=(f3,f2);
!(f4,f1)=(f4,f2);
!(f5,f1)=(f5,f2);
!(f6,f1)=(f6,f2);
/labels
v1=country; v2=brimage; v3=picture; v4=sound; v5=service; v6=prest;

```

```

v7=tech; v8=quality;
v9=att1; v10=att2; v11=att3; v12=att4; v13=int1; v14=int2; v15=int3;
f1=com; f2=brand; f3=workman; f4=servicea; f5=prestige; f6=technica;
f7=quality; f8=attitude; f9=intention;
/Matrix
1.000
.010 1.000
-.152 .476 1.000
-.097 .414 .719 1.000
-.006 .296 .399 .437 1.000
-.114 .467 .535 .504 .390 1.000
-.370 .240 .403 .377 .283 .596 1.000
-.121 .435 .702 .730 .653 .676 .558 1.000
-.187 .477 .535 .483 .369 .528 .455 .567 1.000
-.251 .445 .498 .499 .365 .517 .494 .570 .849 1.000
-.265 .461 .522 .473 .353 .517 .488 .557 .839 .821 1.000
-.292 .451 .517 .487 .319 .530 .487 .537 .798 .832 .836 1.000
-.118 .197 .199 .198 .193 .238 .216 .186 .311 .296 .319 .341 1.000
-.227 .319 .313 .282 .212 .351 .306 .309 .511 .540 .522 .580 .496 1.000
-.211 .319 .371 .364 .306 .431 .302 .308 .605 .613 .599 .644 .483 .797 1.000
/Standard deviation
.50 1.0507 1.117 1.064 1.434 1.149 1.482 1.189 1.182 1.203 1.307 1.3156 1.3844 1.3173 1.4549
/LMTEST
/PRINT
effect = yes;
digit=3;
linesize =80;
fit=all;
/TECHNICAL
iteration= 500;
/END

```

```

/TITLE
Sweater:SEM : Raw quality dimension; delete fiber (v7)
/SPECIFICATIONS
VARIABLES=16; CASES=227;
METHODS=ML;
MATRIX=CORRELATION; AN=COV;
/Equations
V1 = f1 + e1;
V2 = f2 + e2;
V3 = f3 + e3;
V4 = *f3 + e4;
V5 = f4 + e5;
v6 = *f4 + e6;
v7 = f5 + e7;
v8 = f6 + e8;
v9 = f7 + e9;
v10 = f8 + e10;
v11 = *f8 + e11;
v12 = *f8 + e12;
v13 = *f8 + e13;
v14 = f9 + e14;
v15 = *f9 + e15;
v16 = *f9 + e16;
f3 = *f1 + *f2 + d1;
f4 = *f1 + *f2 + d2;
f5 = *f1 + *f2 + d3;
f6 = *f1 + *f2 + d4;
f7 = *f1 + *f2 + *f3 + *f4 + *f5 + *f6 + d5;
f8 = *f1 + *f2 + *f7 + d6;
f9 = *f1 + *f2 + *f8 + d7;
/VARIANCES
f1 to f2 = *;
e1 to e2 = 0.0;
e3 to e6 = 0.5*;
e7 to e9 = 0.0;
e10 to e16 = 0.5*;
d1 to d7 = 2*;
/covariances
d3,d4=2*;
/constraints
!(f3,f1)=(f3,f2);
!(f4,f1)=(f4,f2);
!(f5,f1)=(f5,f2);
!(f6,f1)=(f6,f2);
/LABELS
v1=country; v2=brimage; v3=design; v4=color; v5=care; v6=comfort;

```

```

v7=prest; v8=tech; v9 = quality; v10=att1; v11=att2; v12=att3; v13=att4;
v14=int1; v15=int2; v16=int3;
f1=com; f2=brand; f3=design; f4=workman; f5=prestige; f6=technical; f7=quality;
f8=attitude; f9=intenton;
/Matrix
1.000
-.015 1.000
-.083 .176 1.000
-.107 .252 .468 1.000
-.012 .061 .335 .364 1.000
-.059 .260 .260 .368 .508 1.000
-.058 .403 .269 .324 .136 .327 1.000
-.488 .252 .201 .198 .020 .075 .468 1.000
-.151 .412 .564 .586 .469 .591 .578 .427 1.000
-.071 .387 .297 .273 .185 .264 .335 .273 .368 1.000
-.120 .306 .239 .278 .161 .275 .361 .306 .380 .823 1.000
-.083 .309 .257 .202 .112 .219 .312 .264 .336 .833 .791 1.000
-.064 .342 .196 .213 .165 .290 .363 .261 .372 .752 .803 .812 1.000
-.082 .336 .173 .204 .114 .239 .315 .310 .313 .519 .568 .546 .542 1.000
-.075 .370 .213 .174 .129 .275 .347 .344 .321 .596 .629 .649 .662 .681 1.000
-.067 .413 .212 .215 .146 .292 .346 .370 .369 .600 .617 .615 .610 .697 .802 1.000
/Standard deviation
.50 1.0634 1.138 1.127 1.165 1.084 1.144 1.534 6.3704 1.1843 1.2171 1.1786 1.2258 1.2466 1.3867
1.5013
/LMTEST
/PRINT
effect = yes;
digit=3;
linesize =80;
fit=all;
/TECHNICAL
iteration= 500;
/END

```

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