EVALUATIONS OF FOREIGN-MADE PRODUCTS IN A LIMITED CHOICE ENVIRONMENT: A REPLICATION AND EXTENSION OF THE DIRECT MEDIATION MODEL

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Situations where a market offers only foreign-produced products are becoming more and more common. Nonetheless, little research has focused on this interesting development. This study validates and extends a dual mediation hypothesis for foreign-made product evaluations. It offers insights into how ethnocentric tendencies influence attitudes and purchase intentions of a foreign brand where the available products in the consumer's choice-set are all foreign made. The results show that country of origin-related cognitive responses influence attitude toward the ad and attitude toward the brand with differing intensity under conditions of high or low ethnocentrism and country of origin. The study provides some insights into the process of structural configurations of the relationships among cognitive response dimensions and purchase intentions and into the processes underlying how consumers evaluate foreign-made products.

INTRODUCTION

As international trade expands and development in global markets grows, questions about the nature of competitiveness arise. One of the many factors believed to impact national competitiveness is country of origin effects (Al-Sulaiti and Baker 1998). As a result of outsourcing and globalization, consumers face a new shopping environment. For certain products (e.g., color televisions), the available products in a consumer's choice set are all foreign made. Such situations are becoming more and more common as United States firms transfer or outsource their manufacturing capabilities to foreign countries. Nonetheless, little country of origin (COO) and ethnocentrism research has focused on this interesting development. Thus, the question of how much influence the country of origin provides in product evaluations remains unanswered (Al-Sulaiti and Baker 1998; Peterson and Jolibert 1995), especially in situations where a market has only foreign-produced products.

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In the market place, COO information is often presented together with advertising claims that contain product information (Verlegh, Steenkamp and Muehlenberg 2005). To get a comprehensive understanding of the complex psychological processes consumers employ when exposed to advertising stimuli with the country of origin (COO) cue, we focus on the model of advertising effects as presented by Mackenzie, Lutz and Belch (1986), referred to as MLB. This model is thought to be a good representation of the process used by consumers to deal with advertising information because it is consistent with Petty and Cacioppo's (1986) concepts of central and peripheral routes to persuasion (Yoon, Laczniak, Muehling and Reece 1995). MLB's model is the most widely accepted model of ad effects (Karson and Fisher 2005ab; Brown and Stayman 1992; Homer 1990; Moore and Lutz 2000). Also, numerous studies in marketing and consumer behavior (Brown and Stayman 1992) have found support for the central and peripheral routes to persuasion (Petty and Cacioppo 1986) contained in Mackenzie, Lutz and Belch's (1986) dual mediation hypothesis for the prediction of purchase intention across various media, age categories, and product categories (Brown and Stayman 1992; Yoon, Laczniak, Muehling and Reece 1995; Karson

and Fisher 2005a, 2005b; Phelps and Hoy 1996; Homer 1990; Sicilia, Ruiz and Reynolds 2006).

Thus, this study seeks to investigate how the consumer evaluates foreign made products in a limited choice environment where all products are foreign made. Specifically, we are interested in the processes underlying how country of origin thoughts are generated and used, how consumers evaluate foreign-made products, how such antecedents influence attitudes and purchase intentions, and how such processes vary depending on the country of origin and consumer ethnocentrism. This research also extends the line of research involving the Dual Mediation Hypothesis (Mackenzie, Lutz and Belch 1986; Mackenzie and Lutz 1989) by (a) developing and testing the validity of a modified dual mediation model of the mediating role of attitude toward the ad under different country of origin (COO) and ethnocentric conditions, and (b) testing this model with data collected from a laboratory experiment. Further, this study adds to the growing literature on country image effects by examining the interaction of country image and ethnocentrism on several diagnostic measures in the absence of domestic products that traditionally serve as anchor or reference products in product evaluation**.**

While the growth of multinational companies and the rise of multinational production, where products are designed/branded in one country and manufactured in another (e.g., hybrid products), may blur the accuracy of made in___ labels (Chao 1993; Al-Sulaiti and Baker 1998), consumers through some mechanism still attach value to country of origin provided on some continuum. This value is updated or validated through some underlying consumer behavior process. In this paper, we do not distinguish between country of design and country of assembly because "separating country of design and country of manufacture may result in a decrease of the meaning that consumers attach to these constructs" (Verlegh and Steenkamp 1999, p. 531).

Finally, this research has important implications for both academicians and managers. First, the research expands the theoretical domain of Mackenzie, Lutz and Belch's (1986) by incorporating consumer ethnocentrism and country of origin. From a managerial perspective, the research develops and tests the appropriateness of a modified dual mediation hypothesis in the context of country of origin and consumer ethnocentrism, addressing the extent to which managers may find it appropriate to exploit country of origin and consumer ethnocentrism to increase market share.

MODELING CONSUMER REACTIONS TO COUNTRY OF ORIGIN CUES AND CONSUMER ETHNOCENTRISM

There is evidence to suggest that consumers compare incoming information to their existing knowledge structures, thereby producing a series of cognitive responses. These cognitive responses are said to mediate subsequent affective and conative reactions (Wright 1973, p. 54). In the context of country of origin effects and ethnocentrism, consumer reactions to the country image and ethnocentric tendencies should generate cognitive responses that can be identified in similar terms as suggested by Wright (1973).

Country Image Effects

Research has shown that country of origin leads to greater elaboration in thinking about product information and affects how products are evaluated (Hong and Wyer 1989; Gurhan-canli and Maheswaran 2000). Country image may serve as a halo construct from which consumers input product attributes and may then indirectly affect brand attitude through their inferential beliefs. However, when consumers are more familiar with the products from a specific country, country of origin operates as a summary construct encompassing product-specific beliefs and affecting attitudes directly (Han 1989).

In a review by Al-Sulaiti and Baker (1998), the authors report that consumer product perceptions differ significantly as to the type of product and country of origin, and that the country of origin may be an important element in the perceptions consumers have of products and services, especially where little other information is known. In an another review and meta-analysis of country of origin research, Verlegh and Steenkamp (1999) report that COO had a larger effect on perceived quality than on attitude toward the product and purchase intention. In addition, differences in economic development were an important factor underlying the COO effect. Verlegh, Steenkamp and Meulenberg (2005) also find direct effect of COO on product evaluations and a three way interaction between COO, claim favorability and involvement. COO influences the way consumers respond to moderate and extreme claims under high or low involvement conditions.

The importance that consumers place on COO image when they evaluate products is contingent on the product context (Josiassen, Lukas and Whitwell 2008). Knowing the country of origin of a product, however, may not be a sufficient indicator of whether a consumer will use the country image information in evaluating a specific product and/or in deciding to buy the product. Nonetheless, such individual COO knowledge may be based on limited information about a country and its products or on rich cognitive underpinnings, and thus, may lead to a consumer's attitude or country image that is held with (greater/lesser) confidence and is (highly/not highly) accessible to consumers (Shimp, Samiee and Madden 1993).

Whereas research by Gurhan-canli and Maheswaran (2000) provides sufficient justification for the direct COO effect on product-related thoughts, the exact mechanism by which COO influences A_{ad} is less clear (see Moon and Jain 2001) and is still under investigation. Thus, in this study the influence of COO on attitude toward the ad is simply postulated to occur (Peterson and Jolibert 1995). Taken together, these studies suggest the need for additional research to diagnose and tease out the underlying effects of country of origin.

Consumer Ethnocentrism Effects

Consumer ethnocentrism distinguishes between individuals who are more or less likely to be receptive to foreign-made products. Shimp and Sharma (1987, p. 280) defined consumer ethnocentrism as "beliefs regarding the appropriateness, indeed the morality of purchasing foreign-made products. An ethnocentric consumer believes that one should not buy imported products because imports threaten the national economy, reduce American job security and such buying behavior is unpatriotic." Thus, consumers feel a natural affinity for their own country and its products. Such tendencies influence how consumers view products from other countries and produce a "home-country bias." However, consumers temper their nationalistic sentiments with certain realism (Penrice 2000). Several studies (e.g., Shimp and Sharma 1987; Sharma, Shimp and Shim 1995; Brodowsky 1998) have shown that consumers' ethnocentric tendencies play a role in purchase decisions and may influence attitudes and behaviors towards products.

Whereas ethnocentrism predicts preference for own-country products, thus exhibiting home-country bias, it is not clear how ethnocentrism operates in a market condition where the products in the consumer's choice set are all foreign made. For example, for certain product categories in the United States (e.g., color televisions), most of the available products have foreign origin**.** Hence, it is reasonable to speculate that ethnocentrism will play a role in the generation and utilization of COO related thoughts wherein consumers may discount positive COO-related thoughts or exaggerate negative COO related thoughts emanating from their level of ethnocentrism. Although, Moon and Jain (2001) reported negative effects of consumer's ethnocentrism on responses to the creative presentation of international

advertising, the nature of the impact of ethnocentrism on attitude toward the advertisement, $A_{ad,}$ is not well understood in a limited choice environment.

Research by Brodowsky (1998) also suggests that high and low ethnocentric consumers should show differences in the number of COO-related thoughts generated, where low ethnocentric consumers are more likely to use COO cues as objective information. Depending on the level of ethnocentrism, the amount of COO-related thoughts generated could lead to biased evaluations. Consumers process inconsistent information in a biased manner (e.g., Kunda 1990; Ahluwalia, Unnava and Burnkrant 2001).

Modification of the Dual Mediation Hypothesis

Since attitudes influence purchase intentions, both the role of attitudes and how they are formed are important to academicians and managers. Recently, researchers have focused on the role of attitude toward the ad (A_{ad}) in the process through which advertising influences brand attitudes (A_b) and purchase intention (Sicilia, Ruiz and Reynolds 2006). Reviewing the existing literature, Mackenzie, Lutz and Belch (1986) identify four models that could account for the effects of attitude toward the ad (A_{ad}) on attitude toward the brand (A_b). These models are "couched within a general hierarchy-of-effects framework, with cognition preceding affect which, in turn, precedes conation (i.e., purchase intentions). Ad-related cognitions (C_{ad}) influence attitude toward the ad (A_{ad}), and brand-related cognitions (C_b) are posited as causal antecedents of brand attitude (A_{ad})" (Mackenzie, Lutz and Belch 1986, p. 131).

Mackenzie, Lutz and Belch (1986) concluded that a dual mediation hypothesis (DMH), which posits that A_{ad} influences brand attitudes (A_b) both directly and indirectly through brand cognitions (C_b), "best" accounted for the observed relationships under the particular set of conditions in the pretest setting (Homer 1990). The dual mediation hypothesis (DMH) also has proven robust (a) to such effects as level of involvement and brand consideration set (Gardner 1985; Homer 1990), and (b) to the decomposition of ad attitude into claim and non-claim dimensions (Miniard, Bhatla and Rose 1990).

Using Mackenzie, Lutz and Belch (1986) as backdrop and a theoretical base, we developed a modified model of dual mediation hypothesis (MDMH) presented in Figure 1. The modified model (Figure 1) introduces the effects of COO related cognitive responses to the original dual mediation model. This modification is predicated on the fact that COO thoughts can directly influence attitude toward the ad (A_{ad}) and attitude toward the brand (A_b), and consumers' affective reactions can enhance message acceptance (Coulter and Punj 1999). As noted, stronger product-related cognitions generate more favorable brand affect when implicitly evaluated (thereby completing the indirect loop from $C_{ad}\rightarrow A_{ad}\rightarrow C_b\rightarrow A_b$).

For ad receivers who are motivated to process an ad, cognitive response activity is viewed as occurring prior to formation of ad-induced attitudes. Also, highly involved ad receivers are inclined to rely on cognitive reactions when evaluating an ad, while less involved subjects are inclined to use affective reactions. Brand-related cognitive responses are expected to influence brand attitudes, which in turn, influence purchase intention. Ad-induced brand attitudes mediate both ad-induced attitudes and brand cognition's influence on purchase intention (Yoon, Laczniak, Muehling and Reece 1995; Madden, Allen and Twibble 1988).

Extrapolating from MacKenzie, Lutz and Belch (1986), when low ethnocentric subjects are given instructions that create high motivation in the ad message and executional aspects, A_{ad} (attitude toward the ad) will have a direct impact on C_b (brand cognition) and A_b (attitude toward the brand). Low ethnocentric individuals will make use of the positive thoughts or cognitive responses generated from

country image cues in forming their attitude toward the ad (A_{ad}). Thus, cognitive responses such as COO thoughts (C_{coo}) and ad execution related thoughts (C_{ad}) will directly influence their attitude toward the ad (A_{ad}). In general, highly ethnocentric consumers are inclined to accentuate the positive aspects of domestic products and to discount the virtues of foreign–made products (Shimp and Sharma 1987). However, in the context where all the products are foreign made, the high ethnocentric individuals will tend to under utilize the high country image cues and the subsequent COO thoughts because of a natural tendency to discount or deflate the significance of the high country image. For low country image cues, low ethnocentric individuals will be less likely to utilize the apparently negative low country image information (COO) in forming attitude toward the ad. They will be less biased against foreign made products. However, the high ethnocentric individuals will be more likely to use the negative information or exaggerate the information from low image countries to form ad attitude (A_{ad}).

METHODOLOGY

Subjects

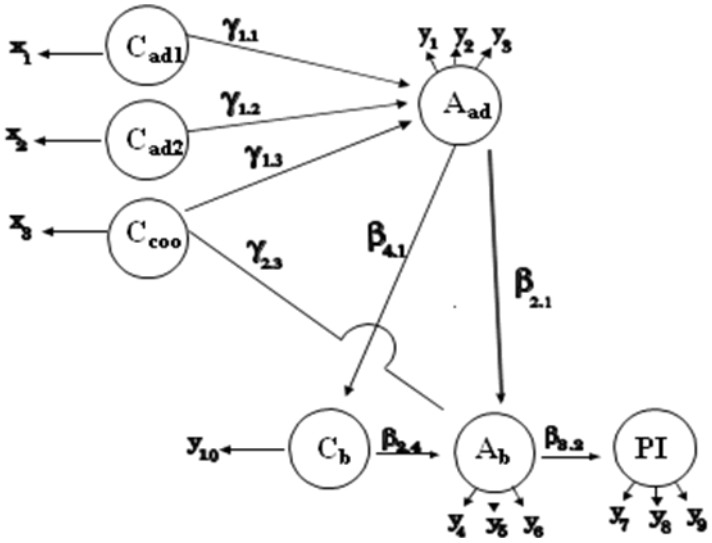
Three hundred and sixty students from a large mid-western university participated in the study. Sixty-two percent were males and 38 percent were females. About 90 percent were between 20 to 25 years old and about ten percent were older than 25. Only ten percent were married and about 77 percent had total family income greater than the $35,000 to $45,000 range. Eighty-two percent were white. Most of the participants had completed 15 years or more of formal education, and 25 percent had more than 16 years of formal education. The students were familiar with purchasing domestic and foreign products and were appropriate for our study because they buy imported products such as electronics and computers.

Manipulations

Subjects were randomly assigned to either high or low country of origin (COO) image or favorable or unfavorable country of origin conditions. COO was manipulated by specifying the country in which the television set of interest was manufactured and was embedded in an ad. The ad contained information about the size, price, remote control, graphic tuning system, on-screen graphic displays, 178-channel cable-ready tuner, built-in clock with sleeper timer, and multiple-jack stereo monitor panel. In addition, the ad contained a nondescript picture of the product. Japan represented "high COO" image or favorable product-country image and Mexico represented "low COO" image or unfavorable product-country image with respect to the degree of favorability of the image as a producer of electronic products. The product category (i.e., color television) was selected to reflect a limited choice environment since all the available television sets are made in foreign countries. Japan and Mexico were selected because they are major trading partners with United States. Other researchers have used Japan and Mexico to represent high and low country image, respectively (Arpan and Sun 2006; Hong and Yi 1992; Hong and Wyer 1989; Lim, Darley and Summers 1994).

The country of origin was unobtrusively embedded in a professionally produced advertisement along with information on eight product attributes. In addition to the country of origin, information was provided on the eight product attributes mentioned above. Similar to Verlegh, Steenkamp and Muehlenberg (2005) and Mackenzie, Lutz and Belch (1986), a fictitious brand name, Dyna.Color TV, was used. Employing a fictitious brand name with key product attributes avoids the potential threat of generating artificially high and significant COO effects found in single-cue studies (Lim, Darley and Summers 1994). Both the ad copy and the picture were carefully examined to make sure that they did not include any unintended information. In addition, the two ads for the "high COO" and "low COO"

FIGURE 1:
Theoretical Constructs and Their Relationship



Key:

X_1: Ad execution cognitive responses } C_{ad1}

X_2: Source-bolstering/derogation cognitive responses } C_{ad2}

X_3: COO-related cognitive responses } C_{coo}

y_1: Good/bad reaction to ad
y_2: Irritable/not irritable reaction to ad
y_3: Unpleasant/pleasant reaction to ad } A_{ad}

y_4: Good/bad feeling toward the brand
y_5: High quality/poor quality impression of the brand
y_6: Likable/not likable feeling toward the brand } A_b

y_7: Likelihood/unlikelihood of purchasing the brand
y_8: Possibility/impossibility of purchasing the brand
y_9: High/low chance of purchasing the brand } PI

Y_{10}: Product/claim-related cognitive responses } C_b

conditions were identical except for the COO cue. Immediately after being exposed to the stimulus material, subjects completed the dependent measures, manipulation check items, and ancillary items.

To operationalize the construct of consumer ethnocentrism, Shimp and Sharma's (1987) consumer-ethnocentric tendency scale was used. This 17-item scale has been further validated in other countries (Durvasula, Andrews and Netemeyer 1997; Netemeyer, Durvasula and Lichtenstein 1991). Subjects were asked to indicate on a 5-point Likert-type scale the extent to which they agreed or disagreed with the 17 statements. Cronbach's Alpha reliability of this scale was .90 for this sample. Subjects were classified into high and low ethnocentric groups by median split (median = 2.51). A T-test showed the high ethnocentric group (mean = 3.26) differed significantly ($t = 26.34$, $p<.001$) from the low ethnocentric group (mean = 1.93). Also, chi-square test showed that the two groups were similar in terms of education, age, and family income.

Dependent Measures

a. *Cognitive Responses.* After exposure to the experimental stimulus (i.e., the advertisement), subjects were given an unexpected thought-listing measure and were asked to "please write on this page all the thoughts you can remember going through your mind while you were looking at the advertisement." A three-minute time limit was imposed to "protect the validity of the measure." This procedure is a common means of obtaining cognitive responses (Darley and Smith 1993; Smith and Swinyard 1988; Wright 1973). Each respondent's questionnaire page showing the cognitive responses was photocopied to avoid disclosing the treatment condition to coders. The responses of each subject were then divided into discrete thoughts. Each thought was assigned to a cognitive response category according to the operational definitions used by Smith and Swinyard (1988) and Darley and Smith (1993). Two graduate research assistants were trained to understand, memorize, and carefully apply the coding scheme (for details, see Smith and Swinyard 1988). After a series of discussions and mock practices, these two independent judges categorized each thought as identified earlier. Inter-rater agreement was 89 percent and discrepancies were resolved through discussion.

In this coding procedure, the three dimensions of interest were the *subject* of the statement (product-related, ad execution-related, and source-related), the *intent* of the statement (positive, negative, or neutral) and the *COO related* nature of the statement. The following are examples of thoughts classified under each of the categories. *Product-related thoughts* referred to the brand or product class and included statements relating to performance of the product, evaluation of product attributes, and the consequences of using the product. *Ad execution thoughts* identified or evaluated execution aspects of the advertising message and included statements regarding the effectiveness of, interest in, attributes of, or questions about the ad. *Source-related thoughts* were defined as the perceived purveyor of the message and included thoughts that related to the credibility of the source such as the perceived expertise and trustworthiness of the source and/or the effectiveness of the source such as the source's likeability, similarity, confidence, and status. *Intent of the thought* referred to statements in favor of or in support of the product, message or source (positive), statements that were unfavorable toward the product message or source or challenged assertions made (negative). *Presence of COO related thoughts* linked the brand, product class or elements in the advertisements to aspects of a particular country (e.g., "I thought about country X or this ethnic group from this or that area" or "This country X produces products that are of high quality or good quality"), while *non-COO related thoughts* did not link the brand, product class or elements in the ad to aspects of any country or ethnic group. Thus, the cognitive responses were classified accordingly.

Four indices were created following a procedure that was first suggested by Calder, Insko and Yandell (1974) and employed by other researchers (e.g., Homer 1990; MacKenzie, Lutz and Belch 1986; and Maheswaran 1994). The indices pertained to the net valences of message related cognitive responses, source related cognitive responses, product related cognitive responses, and total ethnocentric cognitive responses. The procedure subtracts the total number of negative thoughts from the corresponding total number of positive thoughts so that each index represents the net valence of the cognitions included in the categories which form the index.

b. Other *Dependent Variables.* After collecting the cognitive responses, the subjects were asked to fill out standard measures for attitudes toward the ad, brand attitudes, and purchase intentions. These dependent variables were assessed with multi-item measures employing seven-point semantic differential scales. The attitude toward the advertisement (A_{ad}) scale used the bipolar adjective pairs "good/bad," "irritating/not irritating," and "pleasant/not pleasant." The attitude toward the advertised product (A_b) scale utilized the adjective pairs "good/bad," "poor/high quality," and "likeable/not likeable." For purchase intention (PI), subjects were asked to indicate the likelihood of their purchasing the item. The anchors for this scale were: likely/unlikely, impossible/possible, and high/low chance. These measures were patterned after A_{ad}, A_b, and PI measures used in previous studies (Edell and Staelin 1983; Homer 1990; Mackenzie, Lutz and Belch 1986). Scale reliabilities were assessed by calculating Cronbach's coefficient alphas. The alphas were: .71, .78, .87, respectively for $A_{ad,}$ $A_{b,}$ and PI and exceeded Nunnally's (1978) criterion value of .70. In addition to the foregoing measures, the obtained demographic information included age, gender, education level, total family income, marital status, employment status, and other ancillary items.

ANALYSIS AND RESULTS

Manipulation Check

Manipulation check items confirmed that subjects viewed Japan as producing higher quality, longer lasting, and more prestigious electronic products (means = 5.49, 5.25, 4.76) than Mexico (means = 2.84, 2.88, 2.20), respectively. Matched pairs were significantly different at $p < .01$ level. In addition, chi-square tests showed that subjects in the high image and low image conditions were similar in terms of education, age, and family income.

Cognitive Response Generation: ANOVA

The results for the cognitive response generation were analyzed using ANOVA. A 2 (high vs. low country of origin) x 2 (high vs. low ethnocentrism) ANOVA was performed using the net valences of the cognitive responses as dependent measures. The ANOVA results of the non-COO related cognitive responses showed no significant main effects of country of origin or ethnocentrism condition and no significant Country of Origin x Ethnocentrism interaction. The non-significant interaction effect found between COO and ethnocentrism suggests that ethnocentrism does not have a moderating effect on the type and amount of non-COO related cognitive responses (i.e., message, source, and product) generated from the low and high image conditions. Because the non-COO related cognitive responses did not produce any significant main and interaction effects, these results are not discussed further.

However, some significant country of origin (COO) main effects prevailed for COO-related cognitive responses. The detailed cell means and ANOVA results for COO-related cognitive responses are presented in Table 1. The total COO related cognitive responses was significantly higher for the low country image than for the high country image. The low image COO conditions generated more negative valence than the high COO condition. Thus, in terms of cue generation, the low image COO's

negative impact was demonstrated. The total cognitive response valences reported ranged from -.10 to -.37 for the four treatment conditions. Also, COO-related product cognitive responses revealed significant country of origin main effect with the low country image showing more negative valence.

The results of the cognitive structure elements of attitude toward the ad, attitude toward the brand, and purchase intention patterned those of the cognitive responses. Significant COO main effects were obtained for the aforementioned cognitive structure measures. No significant main ethnocentric condition effect and no significant COO x Ethnocentrism interaction effect were obtained.

In sum, the ANOVA results revealed only significant COO main effects but no significant Ethnocentrism main effects and no significant COO x Ethnocentrism effects. These results are to be expected because the countries (i.e., Japan and Mexico) employed to reflect high and low COO are both foreign to the subjects of this study. Hence, neither Ethnocentrism nor COO x Ethnocentrism interaction should be expected to yield significant effects since for our United States subjects both Japan and Mexico may elicit no ethnocentric outcomes.

Cognitive Response Utilization: LISREL

However, as implicitly hypothesized in this study, it was expected that differential effects of COO and Ethnocentrism will prevail under the four conditions (i.e., low ethnocentrism-low country image, low ethnocentrism-high country image, high ethnocentrism-low country image, high ethnocentrism-high country image) in the way the process model operates and in the way the underlying individual effects manifest themselves. Thus, the modified dual mediation model (see Figure 1), with its theoretical constructs and relationships, was evaluated using LISREL.

Four separate LISREL analyses were performed using data for the four conditions. The exogenous variables were ad execution cognitive responses (x_1), source-related cognitive responses (x_2), ethnocentric cognitive responses (x_3), ad-affect (η_1), product-related cognitions (η_4), brand attitude (η_2), and behavioral intention (η_3). Ad execution-related, source-related, COO-related, and product-related thoughts were operationalized via the aforementioned definitions. The modified model of dual hypothesis (MDMH) in Figure 1 specifies that three cognitive responses (x_1, x_2, and x_3) impact ad-affect, with ethnocentric cognitive responses (x_3) also influencing brand-affect. The causal ordering among the endogenous variables is that ad-affect (η_1) influences brand attitude (η_2), and behavioral intention (η_3) and product-related cognitions (η_4). Product-related cognitions (η_4) in turn affect brand attitude (η_2) which then influences purchase intention (η_3). The disturbance terms are uncorrelated across equations.

The coefficients and fit indices for the four conditions are discussed in the subsequent section (see Table 2). The sample sizes for the multi-group analysis ranged from 94 to 103. These sample sizes were similar to those used in Homer (1990) and in Droge (1989). For the *low ethnocentric-high image condition*, the MDMH model had a B&B index of .906 with χ^2 value of 168.03 (d.f. = 61). The χ^2/d.f. ratio was 2.75. These indices show acceptable fit for the MDMH model. All beta coefficients were significant with coefficients ranging from .20 to .61. COO thoughts had direct significant effect on A_b.

For the *high ethnocentric-high country image condition*, the fit indices for the MDMH model showed acceptable fit to the data. The B&B index was .865 with χ^2 value of 161.52 (d.f. = 61). The χ^2/d.f. ratio was 2.65. All the beta coefficients except β_{24} were significant. The significant coefficients ranged from .43 to .90. COO thoughts (C_{coo}) and product related thoughts (Cb) showed no significant effect on brand attitude.

For the *low ethnocentric-low country image condition*, the MDMH model had a B&B index of .967 with χ^2 value of 129.75 (d.f. = 61). The

TABLE 1:
Cell Means and ANOVA Results

Cell Means for Cognitive Responses (Net Valences) and for Cognitive Structure Items	L (COO) L (ETHNO)	L (COO) H (ETHNO)	H (COO) L (ETHNO)	H (COO) H (ETHNO)
TCR	-.33	-.37	-.10	-.10
CPCR	-.20	-.27	-.02	-.03
CMCR	-.08	-.04	-.07	-.02
CSCR	-.05	-.06	-.01	-.04
Aad	4.40	4.31	4.43	4.67
Ab	4.05	3.96	4.73	4.82
PI	2.47	2.45	3.24	2.99

ANOVA Results

Source of Variation	TCR	CMCR	CSCR	CPCR	A_{ad}	A_b	PI
Main Effects							
Country of Origin (COO)	18.69**	.36	1.29	19.81**	3.09*	50.05**	35.21**
Ethnocentrism (ETHNO)	.13	2.41	.51	.86	.46	.01	1.70
2-way Interaction Effect							
COO x ETHNO	.17	.10	.42	.48	2.33	.68	1.09

Note: F (1, 354) values are presented in the table; **p < .05; *p<.10.
TCR = Total COO related cognitive responses
CPCR = COO-related product cognitive responses
CMCR = COO-related ad execution cognitive responses
CSCR = COO-related source cognitive responses;
A_{ad} = Attitude toward the advertisement;
A_b = Attitude toward the advertised product;

χ^2/d.f ratio was 2.13. These indexes provide support for an acceptable fit. All four beta coefficients were significant with coefficient values ranging from .26 to .59. COO thoughts and product-related thoughts, however, had significant direct effect on $A_{b.}$

For the *high ethnocentric-low country image condition*, the MDMH model had a B&B index of .933 with χ^2 value of 84.13 (d.f. = 61) and χ^2/d.f. ratio of 1.38. These indices indicate a good fit for the data. The four beta coefficients were significant and range from .34 to .70. The COO thoughts showed direct effect on attitude toward the brand (A_b).

The path coefficients from COO thoughts to brand attitude (A_b) were significant for all conditions except for the high ethnocentric-high country image condition. However, the non-significance of the direct effects of COO thoughts for the high ethnocentric-high COO

condition was to be expected. A plausible explanation is that high ethnocentric individuals would tend to downgrade or deflate high country image products by blocking or interfering with access to the positive ethnocentric or product-related thoughts, thus leading to underutilization of such thoughts.

Table 2 also shows gamma coefficients for the four conditions. In the case of the low ethnocentric-high image condition, all the gamma coefficients were significant. These coefficients ranged from .21 to .48. Ad execution, source bolstering and ethnocentric cognitive responses had a significant impact on attitude toward the ad (A_{ad}). In addition, COO-related cognitive responses were significantly related brand attitude (Ab).

For the high ethnocentric-high image condition, two gamma coefficients ($\gamma_{1.1}$ and $\gamma_{1.3}$) were significant and had values of .43 and .28, respectively. Ad execution thoughts and ethnocentric cognitive responses had significant effect on A_{ad}. Source-related thoughts had no significant effect on Aad and COO-related thoughts showed no significant effect on brand attitude (Ab). For the low ethnocentric-low country image condition, two gamma coefficients ($\gamma_{1.1}$) and ($\gamma_{2.3}$) were significant and had values of .57 and .21, respectively. Ad execution had significant impact on attitude toward the ad (A_{ad}) and COO thoughts showed no significant direct effect on A_b.

In the case of high ethnocentric-low country image condition, $\gamma_{1.1}$ (.42), $\gamma_{1.3}$ (.45) and $\gamma_{2.3}$ (.23) were significant. Ad execution thoughts

TABLE 2:
Standardized Structural Estimates and Goodness of Fit Indices

Conditions	MDMH Model	Conditions	MDMH Model
Low ETHNO, High COO (n=100)		**High ETHNO, High COO** (n=96)	
$\beta_{2.1}$	.51*	$\beta_{2.1}$	.57*
$\beta_{4.1}$	.30*	$\beta_{4.1}$	.43*
$\beta_{1.2}$	---	$\beta_{1.2}$	---
$\beta_{2.4}$	.20*	$\beta_{2.4}$	.12
$\beta_{3.1}$	---	$\beta_{3.1}$	---
$\beta_{3.2}$	.61*	$\beta_{3.2}$	.90*
$\gamma_{1.1}$	.48*	$\gamma_{1.1}$	.43*
$\gamma_{1.2}$	.25*	$\gamma_{1.2}$	-.03
$\gamma_{1.3}$	.29*	$\gamma_{1.3}$	.28*
$\gamma_{2.3}$	.21*	$\gamma_{2.3}$	.08
χ^2	168.03	χ^2	161.52
d.f./p-value	61/.000	d.f./p-value	61/.000
B & B Index	.906	B & B Index	.865
Low ETHNO, Low COO (n=103)		**High ETHNO, Low COO** (n=94)	
$\beta_{2.1}$	.59*	$\beta_{2.1}$	.49*
$\beta_{4.1}$	.44*	$\beta_{4.1}$	.50*
$\beta_{1.2}$	---	$\beta_{1.2}$	---
$\beta_{2.4}$	.26*	$\beta_{2.4}$	.34*
$\beta_{3.1}$	---	$\beta_{3.1}$	---
$\beta_{3.2}$	.58*	$\beta_{3.2}$	.70*
$\gamma_{1.1}$	.57*	$\gamma_{1.1}$	.42*
$\gamma_{1.2}$	-.09	$\gamma_{1.2}$	-.04
$\gamma_{1.3}$	-.09	$\gamma_{1.3}$	.45*
$\gamma_{2.3}$	.21*	$\gamma_{2.3}$	.23*
χ^2	129.75	χ^2	84.13
d.f./p-value	61/.000	d.f./p-value	61/.027
B & B Index	.967	B & B Index	.933

and COO thoughts showed significant direct effect on A_{ad} and COO- related thoughts had significant effect on brand attitude (Ab). Source bolstering thought had no significant effect on A_{ad} or Ab.

Ad execution thoughts showed significant direct effect on A_{ad} for all four conditions. Source bolstering thoughts had direct significant effect on A_{ad} only for the low ethnocentric-high country image condition. The COO thoughts had significant impact on (a) A_{ad} for all conditions except in the low-ethnocentric-low country image condition and (b) on Ab for all conditions except for the high-ethnocentric- high country image condition. Thus, country of origin (COO) appears to have differential effect on attitude toward the ad and brand attitude with the level of ethnocentrism moderating its effects.

DISCUSSION AND CONCLUSIONS

We developed and tested a theoretical model that extends McKenzie, Lutz and Belch (1986) in a limited choice environment and explains the underlying processes of how consumers process country image information. First, country of origin (COO) was found to impact cognitive response generation, especially for product-related thoughts. Low COO condition generated more negative thoughts than the high COO condition. This appears to be consistent with the notion that the COO cue is an important piece of information that is factored into the decision making process (Harris and Garner-Earl 1994; Shimp, Samiee and Madden 1993).

Whereas the exact process through which the attitude toward the ad and attitude toward the brand linkage effect is manifested remains an important issue, our study provides some insights into the process of the structural configurations of the relationships among C_b, A_{ad}, A_b, and purchase intentions. We explicitly considered two important antecedents (i.e., country image and ethnocentrism) and modeled ad execution, source bolstering, and COO cognitive responses as direct antecedents of A_{ad} and modeled country of origin cognitive responses as direct antecedent of A_b.

For the low ethnocentric groups, the MDMH model provided a fairly good fit for the data. For the low ethnocentric groups, the high country image condition revealed significant COO cognitive responses effects on both A_{ad} and $A_{b,}$ while COO cognitive responses exhibited a significant relationship only to $A_{b.}$ for the low country image condition. COO thoughts showed direct effects on both A_{ad} and A_b when a high country image cue was conveyed. COO thoughts revealed direct effect only on brand attitude when a low country image cue was portrayed.

For the high ethnocentric groups, the MDMH model also showed acceptable fit for the data. The high image condition showed a much weaker cognitive response effect on A_{ad} than the low image condition for the high ethnocentric groups. In addition, the high ethnocentric condition, COO thoughts had significant effect on A_b only when a low image COO cue was presented.

The significant direct effects of the COO related cognitive responses on A_b for the low ethnocentric condition could be attributed to the fact that the low ethnocentric consumers process the high and low COO cue accordingly. For the high ethnocentric condition, however, limited or null effects of the COO related cognitive responses generated from the high COO cue were reported. The limited or null effects may be due to interference or conscious effort of the high ethnocentric consumers to limit or reduce the importance of COO related cognitive responses.

Managerial Implications

The differential effect of COO thoughts on A_{ad} or A_b has several managerial implications. Manufacturers from high image countries or those outsourcing manufacturing components of their products need to consider their target market's level of ethnocentrism in their marketing decisions. The intensity of

ethnocentric tendencies could vary (Shimp and Sharma 1987) because of situational or geo-cultural factors. For example, if the firm's primary target market exhibits a low level of ethnocentrism, outsourcing manufacturing from a high image country should be appropriate. A firm also can use the high country image of the manufacturer in its promotional efforts. However, retailers in low ethnocentric regions should endeavor to sell the low COO image brands or products by making every effort to minimize the elicitation of the COO related thoughts in their marketing communications.

In a limited choice environment where all products are foreign made, marketers can leverage the effects of country of origin on consumer evaluations by associating their brand with favorable country of origin connotations or insinuations (Verlegh, Steenkamp and Meulenberg 2005). In addition, marketers of products or brands from a country of origin with an unfavorable image need to address the negative image through advertising campaigns, warranty terms, or reputable marketing channels (e.g., Thorelli, Lim and Ye 1989).

Since consumer bias in favor of home country products is absent in the limited choice environment and any bias against foreign products is unevenly distributed across products, marketers need to understand the consumer bias distribution of the product categories of interest to the specific marketer. Although some studies indicate that consumer ethnocentrism appears to be less capable of predicting bias against foreign products from specific countries (Balabanis and Diamatopoulos 2004), our study suggests differential effects and underlying processes of COO cues under high and low ethnocentric conditions. Thus, it would behoove marketers to pay attention to the level of consumer ethnocentrism of the host country or target market and adapt their marketing strategies accordingly.

The low country image manufacturers need to develop marketing programs to compensate for the low image in their market. Previous studies report the effects of low COO cue and suggested remedies such as warranty to offset such effects (e.g., Thorelli, Lim and Ye 1989). For the high ethnocentricism condition, this study finds only the low image COO cue has a significant effect on A_b. Both high and low image COO cues show significant effect on A_{ad}. Thus, the elicitation of the high COO image related thoughts have positive effects on A_{ad}.

Limitations and Future Research

Our study is not without its share of limitations. First, whereas our subjects were appropriate for the target product, our study may not have given ethnocentrism a full opportunity to play a role as ethnocentrism was measured in a group of highly homogeneous subjects rather than activating ethnocentrism by giving subjects of the study a choice between foreign versus domestic brands. Thus, the experimental and task situation may not have elicited the full effect of ethnocentrism. Since the ethnocentric sentiments are more likely to be stronger for consumers who are threatened by foreign competition or who fear the loss of jobs and reduction in their quality of life, the use of a subset of consumers in the workforce may have created a more relevant situation.

Second, since study participants completed the ethnocentrism scale just before the treatment or the experimental stimulus was introduced, the temporal proximity may have sensitized subjects to the COO manipulation and perhaps made participants' attitude toward these effects highly salient at the time of exposure. Third, the non-significance of ethnocentrism results may be the loss of statistical power from dichotomizing this variable (see Irwin and McClelland 2003). However, the split was necessary to evaluate the process model or the structural linkages and causal paths. Fourth, in the absence of domestic products, the high ethnocentric group may have exhibited low levels of product involvement. In such situations, consumers may tend to select a COO that is closest geographically or culturally to the home country, given equivalent quality perceptions.

That said, our research leaves unresolved some important issues about the role of ethnocentrism in consumer response to country image and product evaluation. Clearly, more research is necessary to fully understand the antecedents and moderators of ethnocentrism. Relevant factors that moderate ethnocentrism's effects and relevant antecedents of consumer ethnocentrism ought to be explored. Social identity theory, the extent to which in-group favoritism is related to the degree of identification with the in-group, may offer new insights in that the degree of identification with one's countrymen could be an important antecedent of ethnocentric attitudes and behavior (Supphellen and Rittenburg 2001).

Further research is needed to understand the contextual factors, individual factors, and the complexity of hybrid products (i.e., different brand origin and country of origin) that may interact with ethnocentrism to impact a company's marketing program. To fully understand how ethnocentrism works, research is needed to explore the conditions that affect the strength of its influence, intensity and situations where the product category is produced in both high and low image countries, as well as within the consumer's own country. Exploration of the combined impact of multiple country images associated with "hybrid" products should also be of interest in both full and limited choice environment. For example, a car could have its drive train from Mexico, the engine from Germany, the computer dashboard from Brazil and the body from Canada, but it is assembled in the United States versus in Japan.

While this study evaluates the direct effects of country of origin (COO) related cognitive responses, the underlying conditions that lead to positive and negative cognitive response elicitations are not investigated. Understanding such underlying conditions can provide useful information to producers and retailers and aid producers and retailers to (a) inhibit or inoculate against any negative thoughts elicitation and usage and (b) promote or enhance positive thoughts elicitation and usage. COO may be product specific and ethnocentrism may vary by country. For example, one may be ethnocentric and buy only United States cars, but prefer French wine, Japanese electronics, Italian shoes and German watches, or may find South Korean products acceptable but German and Brazilian products unacceptable. Thus, future research is needed to explore the boundaries of these interactions and to investigate the underlying conditions that influence COO and ethnocentric cues in eliciting positive and/or negative thoughts.

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