

The Influence of Consumer Enduring Involvement on Country of Origin Effects

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Abstract

The interactions between consumer enduring involvement – which accounts not only for cognitive but also hedonic responses related to the product category – and country of origin effects have never been properly investigated. Such relations are an important issue since high enduring involvement subjects are expected to consider more carefully attribute information, and country of origin is a product attribute. This work aims to test whether elaboration on product attributes (including country of origin information) and product evaluations is affected by the consumer's *level of enduring involvement* with the product category. Results show that consumer enduring involvement with the product category affects cognitive elaboration with attribute information, but not with country of origin information. Predictions about the influence of enduring involvement levels on the effects of country image on product evaluations were confirmed only for a low technology product.

INTRODUCTION

The so-called country of origin effects (coo effects) have been exhaustively investigated for almost 40 years. Throughout these years (and particularly in the 70's and 80's), most research had a descriptive character, focusing on the existence of coo effects in a variety of country-product combinations. Even relatively recent works (e.g. Chinen, Jun & Hampton 2000; Mohamad *et alii* 2000; Quester, Dvezer, Chetty 2000) aim primarily to describe situations on which coo effects occur. This way, generalisability of coo effects on attitudinal and behavioural responses has been a difficult task. In the opinion of Peterson & Jolibert (1995), this is due to the way the concept has been operationalised by researchers: they suggest that researchers “should be focusing on the identification of moderators - variables, methodologies and designs that produce (or explain) differential country of origin effects” (p.885).

Taking aboard Peterson & Jolibert's (1995) suggestion, recent works by Phau & Prendergast (2000) and Papadopoulos & Heslop (2002) focus on the “country branding concept. Alternatively, researchers like Han (1989), Maheswaran (1989), and Knight & Calantone (2000) focused on the processing of country of origin information. The present work, also adopting an information processing perspective, aims to investigate how coo effects are affected by different levels of consumer enduring involvement with product categories. The three hypothesis tested here examine how consumers' enduring involvement level affects cognitive elaboration with product information and overall product evaluation, and how product evaluation scores are affected by country image in low and high enduring involvement situations.

LITERATURE REVIEW

Theoretical underpinnings of the present work come from two different research streams in marketing: (i) processing of country of origin information, and (ii) consumer involvement.

Processing of country of origin information

The influence of the country name on consumer attitudes and behaviour has motivated researchers due its academic and managerial relevance. It is a relevant issue for public and business managers because of the country's meaning as a product attribute. For academics, it

is important because, as much as brand name and price, the country of origin information is an extrinsic attribute that affects consumer responses towards a product, service, or country.

The country of origin has been treated as a relevant piece of information by researchers who adopt the information processing perspective. In this sense, of particular importance are the works by Johansson (1989) and Han (1989).

Johansson (1989) proposes that country of origin cue can be used alternatively as a “*summary cue*” or as a “*salient attribute*”. When used as a summary cue, the country of origin cue acts as a surrogate for information about other product attributes. When the consumer has few or no knowledge at all about the product class, country of origin cue can help him *infer* or *guess* other product attributes, in a cognitive *inference* effect. In this situation, Johansson (1989) proposes that country of origin information influences beliefs about other product attributes. When used as a salient attribute, the country of origin cue is assumed to be processed as a stand-alone piece of information, not a trigger to some sort of schema. It may be processed as a country stereotype, or be useful to help determine its social acceptability. When processed as a stereotype, Johansson (1989) assumes that it mainly influences an affective response towards the product by the consumer - “to decide whether to like it or not” (p. 55). When affecting behaviour intentions through “social norms”, Johansson (1989) argues that peer group pressure can stigmatise unacceptable countries and determine which ones are socially acceptable.

Han (1989) proposed that the country of origin cue is used differently depending on the familiarity subjects have with a country’s products. When familiarity is low, Han (1989) suggested that country of origin acts as a *halo*, indirectly affecting attitudes towards the product’s brand. The halo hypothesis suggests that country image effects on brand attitude are mediated by beliefs. If consumers are not able to correctly interpret attribute information, their beliefs about product attributes are expected to be influenced by the country of origin cue. Conversely, country image acts as a summary construct when consumers are familiar with the product in question. Knowledgeable of the product’s characteristics, the consumer organises information in “chunks” (see Bettman 1979 p.41). The consumer does not evaluate the attributes one by one, but instead retrieves from memory an overall evaluation for each alternative.

One shortcoming of Han’s (1989) model lies in the fact that he simply neglects the importance of country of origin as an affective or symbolic cue and puts emphasis on country of origin as a functional cue. Observing the indicators to beliefs on the halo model and to country image on the summary construct model, namely *technical advance*, *prestige*, *service*, *workmanship* and *price*, only “prestige” can aim to detect something related to country of origin as a symbolic cue. In fact, we are facing a major question here: *what type of cue country of origin is?* If in the classic example of wine purchasing, the knowledgeable consumer uses country of origin information in a very systematic manner, this might not apply to a product such as perfume or fashion clothes. In these situations a possible conjecture is that country image might be used to fulfill *symbolic* needs like self-enhancement, group membership or ego-identification (see Park, Jaworski & MacInnis 1986). There lies one of the advantages of Johansson’s (1989) model, since it clearly considers that when country of origin information is used as a salient attribute (as opposed to a summary cue, an “index” useful to reduce cognitive activity), it can directly influence affect through country stereotypes. Another shortcoming of Han’s (1989) refers to the fact that he does not consider the possibility of country of origin information be processed simply as an attribute, without triggering schematic structures or stereotypes.

Both Han and Johansson focused on the use of coo information, and refer to similar constructs using different names. These approaches have one point in common: people use the country of origin information differently depending on their knowledge about the product

being assessed. It is a contention of the present work that the involvement concept may integrate the two different perspectives – the “novice customer – related” and the “senior customer – related”. Ettenson & Gaeth (1991) suggested that involvement with the product category might play an important role in understanding country of origin effects. Nevertheless, it seems that the issue of involvement has never been properly investigated in the country of origin arena. Since consumers who display high levels of involvement are likely to have not only a more detailed knowledge of the product category in focus than low-involvement individuals, but also are more likely to engage in information processing and information search (Engel, Blackwell & Miniard 1993), we might expect that high-involvement consumers will use the country of origin information differently from low-involvement ones. It is an objective of this research to investigate this phenomenon.

Involvement research

The relationship between COO effects and consumer involvement has received little attention from either involvement or COO researchers to date. While some studies refer to the existence of such a relationship, only one study (Alden 1993) has been dedicated to its investigation. There is an underlying assumption in some COO research that high involvement products are more prone to country of origin effects than low involvement ones. Okechuku (1994) has suggested that further investigation is necessary to clarify the COO-involvement relationships. These studies, nevertheless, refer to involvement as a product and not as a consumer issue. A car is considered a high involvement product because: (a) it is an expensive product and its purchase involves a considerable financial risk; (b) it is a very salient product among an individual's possessions, probably related to the owner's value system and needs for self-expression; and (c) it is a technically complex product and involves considerable functional risk. Nevertheless, the individual's involvement with the product category has never been properly investigated in country of origin studies. For instance, despite all the reasons for a car to be considered a “high involvement product”, the consumer may have no interest whatsoever in cars and simply ignore the financial/functional aspects of the product, basing his evaluation and purchase decision in symbolic meaning.

At this point, it might be worthwhile asking: What is *involvement*? Since the term “involvement” was first used in a marketing context it refers to perception of relevance of an issue. In the seminal work by Krugman (1965), involvement was used to differentiate a person who carefully analyses advertising content (the highly personally involved individual) from another who does not engage in such an intense cognitive activity (the non-involved person). In Krugman's (1965) work, therefore, involvement refers to the intensity of cognitive activity with an issue. Foxall, Goldsmith & Brown (1998) mention the term “high involvement” when describing a consumer decision process where action is “preceded by a sequence of mental information processing” (p. 28). To approach the “low-involvement” end, Foxall *et alii* (1998) refer to the above mentioned work by Krugman (1965), stressing that “learning that results from watching televised commercials is, like the learning of things that are nonsensical or unimportant, *uninvolving*” (p. 30).

Involvement has been associated with a wide diversity of concepts, including commitment (Robertson 1976; Lastovicka & Gardner 1979), a state of arousal (Mitchell 1979, 1981), personal relevance (Laurent & Kapferer 1985; Petty & Cacioppo 1981b; Celsi & Olson 1988), motivation (Park & Mittal 1985; Johnson & Eagly 1989), perception of importance and / or interest (Laurent & Kapferer 1985; McQuarrie & Munson 1987, 1991; Bloch & Richins 1983; Petty & Cacioppo 1990; McQuarrie & Munson 1987, 1991; Engel, Blackwell & Miniard 1993; Zaichkowsky 1985), risk perception (Laurent & Kapferer 1985). Despite the diversity of concepts related to involvement, it is easy to notice that all of them are related to the individual, and not the product.

This work builds on the enduring involvement concept. Enduring involvement, “deals with the on-going personal concern with an issue that is exhibited by the individual. High levels of enduring involvement result from considerable prior experience in dealing with an issue and/or a strong linkage of the issue to the individual’s unique structure of values” (Rothschild & Houston 1980 pg. 655). Higie & Feick (1989) define enduring involvement as “an individual difference variable representing the arousal potential of a product or activity that causes personal relevance” (p. 690). For instance, a wine “connoisseur” shows a high enduring involvement with wine. Product-related enduring involvement is commonly associated with hobbies, or items involved with one’s professional craft.

There seems to be a consensus about the fact that high levels of enduring involvement with an issue are generated by perception of importance, relevance or instrumentality of this issue to the attainment of one’s goals. As noted by Rajaniemi (1992), enduring involvement can reveal how cognitive structures related to a product category are related to “a higher-order structure of self knowledge (e.g. a value-structure) of an individual” (p.43). As such, it is quite possible to assume that individuals highly involved with a product class hold more complex cognitive structures related to this product class than individuals displaying low levels of enduring involvement with it. As will be seen in the section dedicated to the schema theory, highly-involved individuals’ schemas related to a product category are likely to be more developed than low involvement ones. Researchers who have established a connection between high levels of enduring involvement and prior experience with a product class (e.g. Rothschild & Houston 1980; Celsi & Olson 1988) corroborate this assumption since schema development is affected by experience with the product in question. Furthermore, according to Higie & Feick (1992), high enduring involvement individuals are likely to be knowledgeable of the product/category, and as such influence other people’s opinions and purchases in the product category in question. “Hence, individuals with an enduring involvement are likely to be opinion leaders in the product category or activity.” (p. 690)

Considering that some works on country of origin effects have focused on the processing of country of origin information by individuals with high vs. low knowledge about the product (Han 1989, Johansson 1989, Maheswaran 1994), it might be possible to say that the use of country of origin information will differ from low enduring involvement subjects to high enduring involvement ones.

STUDY HYPOTHESES

Hypothesis 1 will investigate the effects of enduring involvement level on cognitive elaboration with attribute information. Hypothesis 2 will investigate the effects of enduring involvement on cognitive elaboration with country of origin information. Hypothesis 3 will focus on the effects of country image on product evaluation when enduring involvement is high and low separately.

Relationship between levels of enduring involvement and cognitive elaboration on attribute information and country of origin information: Schema development is a direct function of experience with the product category (Bettman 1979). Research findings point to the fact that consumers who display high enduring involvement with a product category are expected to have broad experience with it (Rothschild & Houston 1980; Celsi & Olson 1988). Bearing this in mind, one can deduce that consumers who display high enduring involvement with a product class are likely to have more developed schemas related to that category. These high-involvement consumers are, therefore, more likely than low-involvement ones to activate product-related schemas once attribute information is given. They are also more able than low-involvement consumers are to engage in cognitive elaboration with attribute information provided (Petty, Cacioppo & Schumann 1983, Bloch & Richins 1986; Celsi & Olson 1988).

Hypothesis 1, then, focuses on the effects of enduring involvement on cognitive elaboration with product attribute information. Note that this hypothesis does not take into consideration the possible effects of incongruity between country of origin information and activated product-related schemas.

Hypothesis 1: High enduring involvement subjects will display higher levels of cognitive elaboration with product attribute information than low enduring involvement subjects.

Even though not considering schema congruity, this hypothesis is important because it checks the main assumption of all this work: that high enduring involvement is directly related to cognitive elaboration with attribute information. If this specific hypothesis is flawed, this means that, given the available data and methodology, enduring involvement is not related to cognitive elaboration.

Following the proposition of the elaboration likelihood model (ELM) (Petty & Cacioppo 1983), high enduring involvement subjects are expected to process intrinsic product attributes, or more diagnostic pieces of information. This effect is tested on H₁. On the other hand, based on the same theoretical perspective, low enduring involvement subjects might process extrinsic attributes, using what ELM calls the “peripheral route to persuasion”. Considering that country of origin information is extrinsic to the product, it might be easier for low enduring involvement subjects to comprehend and hence, process. Hypothesis 2 focuses on this effect.

Hypothesis 2: *Low enduring involvement subjects are more likely to cognitively process country of origin information than high enduring involvement subjects.*

Note that Hypothesis 2 ignores the effects of incongruity perception. It proposes, then, that all high enduring involvement subjects will pay less attention and, therefore, devote less importance to country of origin information than low enduring involvement subjects. As will be seen later, this contradicts what the schema congruity theory predicts. This way, if this hypothesis is confirmed, one of schema congruity theory predictions might not find support on this work.

Relationship between enduring involvement levels and effects of country image on product evaluation: Product evaluation is supposed to follow the valence of information processed. As observed by Maheswaran (1994), knowledgeable subjects are supposed to evaluate products in line with attribute information, that is, a favourable product attribute description produces favourable product evaluations and vice-versa. On the other hand, novices are prone to evaluate products in line with country stereotype: an unfavourable country of origin produces a poor evaluation and vice-versa. In this research, we aim to test whether the same results arise for different levels of enduring involvement. This way, it is expected that high enduring involvement subjects use product attribute information to form their opinions about products, which is more strongly influenced by intrinsic attributes (e.g. power, gas mileage, tyres) and less influenced by extrinsic attributes, these including country of origin. Conversely, low involvement subjects are not able to come to terms with product attribute information in the same way as high enduring involvement subjects do. As such, they are expected to evaluate a product based on some piece of information that acts as a surrogate for more diagnostic data. These “surrogate cues” seem to make sense while attribute information looks so difficult to understand. This “surrogate information”, or “extrinsic cues”, can be brand name, warranty, price, and country of origin. As the present study focuses on country of origin information, this is the only extrinsic cue available in product descriptions.

Hypothesis 3 will focus on the effects of country image on product evaluation when enduring involvement is high.

***Hypothesis 3:** Country image score affects product evaluation when enduring involvement level is low, but not when it is high*

METHODOLOGY

A survey has been conducted in order to assess the relationships between the independent variables – consumer enduring involvement, country of origin image – and the dependent variables – cognitive elaboration with product and country information, product overall evaluation.

Independent variables

Enduring involvement was measured using the scale developed by Ayrosa & MacWilliam (2000). Decision to use this scale was made because it has been developed in Brazilian Portuguese and because of its small size. With 13 items, it can be considered small when compared to the 22 items of the first version of RPII (Revised Personal Involvement Inventory, McQuarrie & Munson 1986) or the 20 items of PII (Personal Involvement Inventory, Zaichkowsky 1985). As this work focuses only on enduring involvement, from now on the term “*involvement*” refers only to *enduring involvement*. The involvement scale used provides a three-dimensional measure. Enduring involvement dimensions are “Product importance and interest” (7 items), “Image and self expression” (3 items), and “Consumer knowledge and opinion leadership” (3 items). Alpha coefficients for all dimensions are well above the 0,70 threshold suggested by Nunnally & Bernstein (1994).

Country of origin image was measured using a scale developed by Ayrosa (1998). This scale was originally based on the one developed by Pisharodi & Parameswaran (1992), but completely redesigned so then it could reflect Brazilian language and culture. Its dimensional structure is completely different from the one developed by Pishadori & Parameswaran’s (1991). The country of origin image scale used provides a five-dimensional measure, namely: “Attitudes towards products and services” (6 items), “affect towards the country” (3 items), “ability in the arts and crafts” (2 items), “importance in the global community” (2 items), and “marketing issues” (2 items). Alpha coefficients for all dimensions are well above the 0,70 threshold suggested by Nunnally & Bernstein (1994).

Product stimuli was basically verbal, and no product images were used. Therefore, it was necessary to select a product category for which verbal attribute information was meaningful. It was not advisable to use as stimulus a fashion or an entertainment product, for instance. In these cases, preference formation and choice process can be very strongly influenced by affect (Holbrook & Hirschman 1982; Mittal 1988), and attribute information may be difficult to express verbally with the necessary precision for this work. Moreover, as consumer enduring involvement is one of the independent variables, it was necessary to select a product that covered a wide range of enduring involvement levels. Seven products were examined in the early stages of the work - beer, stereo system, car, television set, wine, sports shoes and personal computer. In personal interviews aimed to raise product attributes and check involvement levels, subjects (eleven) were also asked to indicate which countries could be related to each product. Wine, television set and sport shoes were discarded early because subjects were not able to elicit a workable list of attributes. Stereo systems and wine were discarded because enduring involvement distributions could be strongly skewed to the lower levels (i.e. subjects displayed very low levels of enduring involvement towards these products.). Of the three remaining products, two were selected: *cars* and *beer*. Thus, this work had the opportunity to analyse both a high technology and a low technology product. As only one high technology product was selected, car was considered a better product than personal computers because of a better balanced enduring involvement score distribution.

Attribute information about the beer description was taken – and adapted – from a site on the Internet where tasting notes of several beers are usually published (<http://www.beerjournal.com>). Car description was based on high quality sedan (GM Vectra) popular in Brazil. Both product descriptions were submitted to (and approved by) people who were reportedly knowledgeable about cars (3 people) and beers (2 people). The brand name itself has not been included in the product attribute, being substituted by “reputable brand”.

Dependent variables

Cognitive elaboration with attribute and country of origin information was assessed via recall of information provided and thoughts listing (whatever came to respondent's minds at the moment they were reading the descriptions). This procedure was used by Meyers-Levy & Tybout (1989) and Stayman, Alden & Smith (1992). The reasoning for the use of recall of information provided - or argument recall (Petty & Cacioppo 1986 p.37) - as an indicator of cognitive elaboration was given by Craik & Tulving (1975). According to their findings on memory for linguistic material (recall of words), subjects are more prone to remember stimulus when a deeper processing of information provided is necessary in order to understand its meaning than otherwise.

Overall product evaluation: Following the procedure adopted by Sujan & Bettman (1989), subjects indicate their overall product evaluation on three 7-point scales: positive/negative; good/bad; favourable/unfavourable. Overall product evaluation score is computed as the sum of the scores on each of the three scales.

Sample profile: A total of 334 respondents who completed the whole questionnaire. In this sample, 49% were male and 51% female. Around 70% of the respondents are aged between 18 and 29, and 88% are between 18 and 34. Nevertheless, this seemingly young sample seems to be quite mature in terms of family life cycle. Only 11% of the sample lives with their parents, and 27% have children.

DATA ANALYSIS

Relationship between levels of enduring involvement and cognitive elaboration on product attribute information

In order to provide a single measure of cognitive elaboration with attribute information, “mentioning of product attribute information” and “thoughts about product characteristics” (excluding thoughts about the product’s country of origin) were summed. Regression analysis was performed on each enduring involvement dimension (product importance and interest, knowledge and opinion leadership, product symbolic value) separately, and on a measure of overall enduring involvement. To provide an overall measure of enduring involvement, scores for each dimension were summed.

Regression analysis shows that a linear regression model poorly fits data. The models which use a single enduring involvement score (sum of the three dimensions scores) as independent variable show extremely low coefficients of determination: $r^2 = 0.05$ for car data, and $r^2 = 0.10$ for beer data. We see a similar picture when we use the three separate enduring involvement dimensions as independent variables: $r^2 = 0.07$ for car data, and $r^2 = 0.12$ for beer data. See Table 1 for regression analysis results with enduring involvement overall measure as independent variable, and Table 2 for results with enduring involvement dimensions as independent variables.

Such results may be caused by several factors. Apart from the non-linearity, other relevant variables not included in the present study – such as the individual’s personal experience or history with the product category or country of origin – might be acting here.

Table 1: Regression results for cognitive elaboration on attribute information and enduring involvement overall measure

	Regression results: CAR data					Regression results: BEER data				
	r ²	B (unstandardised)	B std. Error	t	sig. Level	r ²	B (unstandardised)	B std. Error	t	sig. Level
(Constant)		2.49	1.00	2.48	0.01		1.47	0.54	2.73	0.01
Enduring involvement overall measurement	0.05	0.05	0.02	2.92	0.00	0.10	0.04	0.01	4.02	0.00

Table 2: Regression results for cognitive elaboration on attribute information and enduring involvement dimensions

	Regression results: CAR data					Regression results: BEER data				
	R ²	B (unstandardised)	B std. Error	t	sig. Level	R ²	B (unstandardised)	B std. Error	t	sig. Level
(Constant)		2.90	1.11	2.62	0.01		1.37	0.54	2.54	0.01
“Image and self-expression”	0.07	0.00	0.04	-0.01	0.99	0.12	-0.01	0.04	-0.24	0.81
Knowledge and opinion leadership		0.13	0.05	2.84	0.01		-0.02	0.05	-0.41	0.68
Importance / interest		0.03	0.03	0.89	0.37		0.08	0.02	3.84	0.00

Despite of very low coefficients of determination, both regression coefficients are statistically significant at 1% (car and beer data) in the model with enduring involvement overall measurement. The same analysis with enduring involvement dimensions sheds new light on the data. Unstandardised coefficients seem to suggest that the enduring involvement dimensions are differentially important for car and beer data. While “knowledge and opinion leadership” is the only independent variable to show a significant regression coefficient on car data, importance / interest seems to be the only significant variable for beer data. Such results are understandable considering that car and beer are high- and low-technology products, respectively.

At this point, it should be noted that the use of regression analysis assumes a linear distribution of elaboration scores across involvement levels. Thus, it is advisable to analyse available data considering enduring involvement as a discrete variable, with two different levels: “high enduring involvement” and “low enduring involvement”. Enduring involvement overall scores were split on the median into two groups, and cognitive elaboration on attribute information means for each group were compared. Statistics indicate that cognitive elaboration on attribute information by high enduring involvement subjects (5.8 for car data, 4.2 for beer data) is significantly higher than that by low enduring involvement groups (4.9 for car data, 2.8 for beer data), which confirms regression analysis results. See statistics in Table 3

Table 3: Cognitive elaboration with attribute information for high enduring involvement and low enduring involvement subjects

	High enduring involvement group	Low enduring involvement group	t-statistic (significance level)
Cognitive elaboration on attribute information – CAR data	5.8	4.9	-2.09 (0.04)
Cognitive elaboration on attribute information – BEER data	4.2	2.8	-4.01 (0.01)

Spearman correlation indices between dependent and independent variables show that the hypothesised relationship between cognitive elaboration on product attribute information and enduring involvement level, albeit weak, is statistically significant. Observing the results for car data, two of the three enduring involvement dimensions are significantly correlated (at 5% level at least) with cognitive elaboration on product attribute information: “knowledge and opinion leadership” and “perceived importance / interest”. Observing beer data, all correlation coefficients are significantly different from zero. Spearman rank correlation coefficients between the variables are presented in Table 4.

Table 4: Spearman correlations (sig. level) between cognitive elaboration on product attribute information and enduring involvement level.

	Cognitive elaboration on product attributes – CAR data	Cognitive elaboration on product attributes – BEER data
Image and self-expression	0.05 (p=0.51)	0.19 (p=0.02)
Knowledge and opinion leadership	0.28 (p<0.00)	0.19 (p=0.02)
Importance and interest	0.16 (p=0.05=)	0.37 (p<0.00)
Enduring involvement overall measure	0.21 (p=0.01)	0.34 (p<0.00)

The non-parametric approach indicates that there is some relationship between enduring involvement level and cognitive elaboration with attribute information. It should be noted, however, that Spearman correlation indices are still low, and results should be treated cautiously.

Relationship between levels of enduring involvement and cognitive elaboration on country of origin information

Cognitive elaboration with country of origin information has been measured as a binary variable: it is detected or not. This way, it is not possible to use linear regression models. Being a dichotomous (binary) variable, it is necessary to adopt a model that focuses on the distribution of the probability that an event (the mentioning of coo in this case) happens or not. Bearing this in mind, a logistic regression model is an adequate choice when enduring involvement is treated as a scalar variable. Table 5 shows logistic regression results with overall enduring involvement score as the independent variable. Results with enduring involvement dimensions are presented in Table 6.

Table 5: Logistic regression results for cognitive elaboration on product country of origin information and enduring involvement consolidated score.

	CAR	BEER
Model chi-square (df); signif.	1.05 (1); p=0.31	1.841 (1); p=0.17
constant (Wald, sig.)	-1.15 Wald=1.66; p=0.20	-1.87 Wald=9.25; p<0.01
b (independent var.: Overall enduring involvement score) (Wald, sig., exp. (b); R)	0.01 Wald = 1.03; p=0.31; exp(b)=1.01; R=0	0.015 Wald=1.8; p=0.18 exp(b)=1.015; R=0

Results show that the model badly fits the observed data. Model chi-square index provides a measure of goodness-of-fit of the hypothesised model when compared with a baseline model, containing only a constant, with no independent variables at all. According to Norusis, model chi-square “tests the null hypothesis that the coefficients for all terms in the current model, except the constant, are zero” (Norusis 1994 p. 11). Results of model chi-square for car and beer data provide no evidence that the model is different from no model at all.

Table 6: Logistic regression results for cognitive elaboration on product country of origin information and enduring involvement dimensions.

	CAR	BEER
Model chi-square (df); signif.	1.70 (3); p=0.64	2.239 (3); p=0.52
constant (Wald, sig.)	-1.14 Wald=1.29; p=0.26	-1.82 Wald=8.86; p<0.01
b (independent var.: interest) (Wald, sig., exp. (b); R)	0.01 Wald = 0.27; p=0.60 exp(b)=1.01; R=0	0.00 Wald = 0.03; p=0.85 exp(b)=1.00; R=0
b (independent var.: knowledge and opinion leadership) (Wald, sig., exp. (b); R)	0.04 Wald=0.97; p=0.32 exp(b)=1.04; R=0	0.03 Wald=0.33; p=0.57 exp(b)=1.03; R=0
b (independent var.: symbolic value) (Wald, sig., exp. (b); R)	0.01 Wald=0.04; p=0.84 exp(b)=0.99; R=0	0.03 Wald=0.62; p=0.43 exp(b)=1.04; R=0

Logistic regression coefficients “*b*” are very low for both car and beer data, and for models with enduring involvement consolidated score and separate dimensions. Tests of significance of *b* coefficients are based on the Wald statistic, which is $(b/\text{standard error of } b)^2$ (Norusis 1994 p.5). Significance level associated with the Wald statistic assures that it is different from zero. Results provide no evidence at all that such statistics are different from zero.

The R statistic is used to examine the partial correlation between the dependent and each of the independent variables (Norusis 1994 p. 5), and ranges from –1 to 1. For this experiment, as a negative correlation between cognitive elaboration with product country of origin information and enduring involvement was hypothesised, R statistics are expected to be negative. Actually, data analysis shows that all R statistics in all conditions are equal to zero, which suggests that enduring involvement (be it a consolidated score or separate dimensions) contribute almost nothing to the whole model.

Based on such results, we can say that, given the available sample and experimental procedure, the likelihood of cognitive elaboration with country of origin information does not seem to be a function of enduring involvement level. Nevertheless, we can not say that subjects who engaged in cognitive elaboration with country of origin information have a lower enduring involvement level than the ones who did not. In order to check such a relationship, enduring involvement dimensions means for subjects in the two situations – presence vs. absence of cognitive elaboration with country of origin information – were compared. Curiously, while enduring involvement dimensions scores and overall scores are all significantly different when car and beer data are pooled, they are not significantly different when car and beer data are analysed separately. This is probably due to small sample sizes, as well as large difference of sizes between high and low enduring involvement conditions for beer data. Significant effects are as predicted by theory, i.e., enduring involvement scores for subjects who displayed cognitive elaboration with country of origin information is higher than that of subjects who did not elaborate on country of origin information. See Table 7 for results.

The possibility of non-normality of available data should call for concern about the presented analysis. A non-parametric alternative to t-tests would be the Mann-Whitney U test. As the U-test analysis totally confirms what t-tests indicate, it will not be reported here.

So far, analysis of collected data indicates that enduring involvement levels are related to cognitive elaboration with product attributes, but not with country attributes. Influence of enduring involvement level on the relationship between country of origin image and product evaluation will be analysed in the next section.

Table 7: Enduring involvement dimensions means for subjects who displayed vs. who did not display cognitive elaboration on country of origin information

		Elaborated with country of origin information (n)	Did not elaborate with country of origin information (n)	T statistic (significance level)
Enduring involvement overall score	Pooled data.	61 (105)	55.16 (200)	-3.02 (0.01)
	CAR data.	65.48 (67)	63.47 (87)	-1.02 (0.31)
	BEER data.	53.10 (38)	48.76 (113)	-1.40 (0.17)
Enduring involvement: Knowledge and opinion leadership	Pooled data.	10.71 (106)	9.50 (204)	-2.29 (0.02)
	CAR data.	11.20 (68)	10.34 (88)	-1.19 (0.24)
	BEER data.	9.81 (38)	8.84 (116)	-1.12 (0.23)
Enduring involvement: Product importance / interest	Pooled data.	38.81 (108)	37.72 (203)	-2.57 (0.01)
	CAR data.	41.44 (70)	40.63 (87)	-0.73 (0.47)
	BEER data.	33.94 (38)	32.04 (116)	-0.91 (0.36)
Enduring involvement: Product symbolic value	Pooled data.	11.39 (109)	10 (203)	-2.21 (0.03)
	CAR data.	12.48 (71)	12.55 (88)	0.08 (0.94)
	BEER data.	9.34 (38)	8.05 (115)	-1.49 (0.14)

Effects of country image on product evaluation in low and high enduring involvement situations

It has been hypothesized that country of origin image is more likely to affect product evaluation when enduring involvement is low. Conversely, when enduring involvement is high, it is not expected that country of origin image affects product evaluation.

A linear regression approach has been adopted, with product evaluation as the dependent variable and country of origin image dimensions as the independent variables. Stepwise linear regression was run. Table 8 shows the final results of stepwise regression.

When analyzing beer data, results are consistent with theoretical predictions. Both the country of origin image overall score and the “ability in the arts” dimension significantly affect product evaluation for low enduring involvement subjects, but not that of high enduring involvement ones.

Observing the car data, regression coefficients are significantly different from zero in both high and low enduring involvement samples. “Attitudes towards products” is the only country of origin image dimension with a significant regression coefficient between low and high enduring involvement samples.

Table 8: Effects of country of origin image on product evaluation in high and low enduring involvement conditions.

	Low enduring involvement				High enduring involvement			
	R ²	ANOVA results (F, p)	B	T (p)	R ²	ANOVA results (F, p)	B	T (p)
Country of origin image overall score, CAR data	0.13	10.89 (p=0.00)	0.08	3.30 (p=0.00)	0.10	8.16 (p=0.01)	0.05	2.86 (p=0.00)
Country of origin dimension: Attitudes towards products, CAR data	0.12	9.45 (0.00)	0.13	3.07 (p=0.00)	0.10	8.13 (p=0.01)	0.08	2.85 (p=0.01)
Country of origin image overall score, BEER data	0.06	4.07 (p=0.05)	0.05	2.01 (p=0.05)	0.00	0.3 (p=0.59)	0.02	0.55 (p=0.59)
Country of origin dimension: Ability in the arts, BEER data	0.16	11.60 (p=0.00)	0.50	3.41 (p=0.00)	0.02	1.33 (p=0.25)	0.18	1.15 (p=0.25)

CONCLUSION

H1: Relationship between levels of enduring involvement and cognitive elaboration on product attribute information:

The hypothesised effect of enduring involvement level on cognitive elaboration with attribute information has been supported by the data. This is consistent with what has been suggested by Petty, Cacioppo & Schumann (1983), Bloch & Richins (1983), and Celsi & Olson (1988). High enduring involvement subjects displayed cognitive elaboration means significantly higher than low enduring involvement subjects (see Table 3, p.9). Regression analysis shows that cognitive elaboration on car attributes has been significantly affected by “Knowledge and opinion leadership”, while elaboration on beer attributes has been influenced by “Perceived product importance and interest”. This way, given the available data and analytical procedure, it is possible to reject null hypothesis H₁. Note, however, that among the aforementioned researchers, only Celsi & Olson (1988) has openly investigated enduring involvement, having the others explored general involvement (Petty, Cacioppo & Schumann 1983, Bloch & Richins 1983).

Observing the regression results, we see that they that are consistent with think / feel product concepts (Vaughn 1980). Vaughn (1980) himself classifies cars as an “informative” product, i.e., a think – high involvement product category. Beer, on the other hand, may lie on the “self-satisfaction” product, i.e., a feel-low involvement product category. In fact, examining the dimensions that affect cognitive elaboration on attribute information, “knowledge and opinion leadership” is consistent with a “think” product in the sense that consumption and use of information about the product is a central issue to describe a person’s relationship with the product category in question. On the other hand, subjects with higher scores on “perceived product importance and interest” elaborated on beer attributes more intensely. Such elaboration is driven, then, by the interest of the consumer in “satisfying a personal taste” (Vaughn 1980 p. 32).

It should be noted that, despite confirming the direction predicted by theory, such results should be examined with caution, since the coefficients of determination are extremely low ($r^2 = 0.07$ form car data, and 0.12 for beer data).

H2: Relationship between levels of enduring involvement and cognitive elaboration on country of origin information.

Given the available data and analytic procedure, it was not possible to reject null hypothesis H₂. As can be observed in Table 6 (page 10), not only are the effects of enduring involvement dimensions not significantly different from zero, but also the whole model fits available data very poorly.

Results, then, indicate that there is no evidence whatsoever to believe that low enduring involvement subjects are more prone than high enduring involvement ones to elaborate on country of origin information.

It should be noted that other factors not included in this model might have influenced results. First, the measure of cognitive elaboration with country of origin information was made through recall of country of origin information. Subjects may simply tend to hide this sort of information because they think it's completely irrelevant, or it's not politically correct to evaluate a product based on its national origin.

H3: Effects of country image on product evaluation in low and high enduring involvement situations.

Study results show a significant effect of country image score on product evaluation in both low ("Attitudes towards products", $B=0.13$, $t=3.07$, $p=0.00$) and high enduring involvement conditions ("Attitudes towards products", $B=0.08$, $t=2.85$, $p=0.01$) when the product in question is a car. For beer data, the effect of country image score on product overall evaluation is significant when enduring involvement is low ("Ability in the arts", $B=0.50$, $t=3.41$, $p=0.00$), but not when it is high ("Ability in the arts", $B=0.18$, $t=1.15$, $p=0.25$). Thus, it was possible to reject the null Hypothesis H3 for beer data, but not for car data.

Results on car data showed that "Attitude towards products" has an effect on product overall evaluation. From the five country image dimensions (namely attitude towards products, affect towards the country, attitude towards arts, country perceived importance, marketing issues), this is the only one that directly assesses the country's capabilities to produce high quality products. Given that cars are high value, high technology and high risk products, it is likely that high enduring involvement subjects are affected by country of origin just as much as low involvement ones. We find that the results are consistent with those from studies in the country of origin area, such as Johansson & Nebenzahl (1986), Han & Terpstra (1988) and Roth & Romeo (1992), where individual differences – such as enduring involvement – were not taken into account.

The country image dimension "Ability in the arts" was the only one to significantly explain beer overall evaluation variance. Since beer and cars are very distinct products, these results claim for a suitable interpretation. One might consider that beer, as a traditional craft-based product, has little to do with technically complex products, and as such attitudes towards the technical or technological capabilities of a country may not be expected to affect product evaluation. Following the same line of reasoning, and observing the other country image dimensions, the only one that relates to low technology or "no-technology" (such as arts and crafts) products is "ability in the arts". Considering that beer can be schematically linked to low technology or products, the study results are consistent with this line of reasoning. It should also be noted that only low enduring involvement subjects were affected by country image when evaluating the described product.

Former research has concluded that country of origin effects are different depending on what subjects know about the product in question. Is it possible to expect the same effects from consumers who display different levels of enduring involvement with the product category? Maheswaran (1994) has concluded that experts and novices use different approaches to country of origin information. While experts are more likely to evaluate products based on attribute information, and use country of origin information when ambiguity happens, novices tend to use country of origin information even when there is no information ambiguity. Assuming that high enduring involvement subjects may act as experts, and low enduring involvement subjects may act as novices, it was expected that the same pattern of results arise when testing enduring involvement as independent variable, instead of the expert/novice dyad. Results from the present work suggest that high enduring involvement

subjects tend to elaborate more intensely with attribute information than low enduring involvement ones, which is consistent with Maheswaran's (1994) findings on consumer knowledge. The main advantage of this alternative approach is that it is easier to measure enduring involvement than objective knowledge.

On the other hand, results on cognitive elaboration with country of origin information, expected to be more intense when enduring involvement is low, as it is among novices, did not confirm expectations. Concerning product evaluation, it was predicted that only low enduring involvement subjects would evaluate products in line with country image scores. Results from beer dataset confirmed expected results, but not results from car dataset: both low and high enduring involvement subjects evaluated cars in line with country image scores. This can be explained by the fact that enduring involvement takes other variables apart from knowledge in consideration, namely information search (opinion leadership) and product symbolic value. There is, then, a strong possibility that high enduring involvement consumers relate country of origin information with the product symbolic value, and as such devalue products with weak country images.

Such results seem to indicate that, despite consumer knowledge and consumer enduring involvement producing similar results when it comes to the presence of attribute information processing, they are different constructs.

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