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# A contingent approach to country-of-origin effects on foreign products evaluation: Interaction of facets of country image with product classes

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## ABSTRACT

This study investigates the effect of country-of-origin image on consumers' evaluations of foreign products and disaggregates the effects across facets of country image and across product classes. We disentangle country image into cognitive and affective dimensions, and additionally disaggregate the cognitive dimension into geographic and human aspects. We posit that country-of-origin effects will vary across distinct facets of country image and that the effect of each facet of country image will vary across different classes of products. By means of an online survey, data were collected from French consumers regarding their perceptions of cognitive and affective aspects of two countries – Brazil and Germany – and their evaluation of three product classes – utilitarian nature-based, utilitarian industrialized and hedonic industrialized – which were represented respectively by fruits, home appliances and clothes. Empirical results partially corroborate the hypothesized contingent impacts.

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## 1. Introduction

According to the World Trade Organization (2014), the value of exports of manufactured goods increased more than five-fold between 1990 and 2013, which implies that consumers in general are buying more foreign products. In their purchase decision, consumers may resort to several cues (e.g., size, visual appearance, weight and referrals from friends or from opinion leaders, among others) that somehow indicate whether the product is expected to meet the desired levels of performance (Manrai, Lascu, & Manrai, 1998). In the particular case of foreign products, one cue may be the image of the country-of-origin where the product was (or is thought to have been) produced. Consequently, firms should consider how the image of the country-of-origin is expected to influence the attitude of consumers towards their products—and make the appropriate adaptations to their marketing mix (Zhang, 1997).

The country-of-origin (CoO) effect has been researched since the early 1960s (cf. Roth & Diamantopoulos, 2009) and the focus of the studies has tended to evolve from the mere verification of the existence of the effect of the nationality of products to the

investigation of several determinants that would influence the magnitude of the effect. While the existence of the effect has generally been confirmed, there is controversy as to its size and the variables that would moderate the effect (Peterson & Jolibert, 1995; Verlegh & Steenkamp, 1999). In the quest for determining type and magnitude of influence, the country-of-origin image (CoI) – and its constituent dimensions – has emerged as a fundamental concept in the study of CoO effects on consumers' evaluation of, attitudes towards, and purchase intention of foreign products (Roth & Diamantopoulos, 2009).

This study takes a contingent approach to assess the impact of country-of-origin image on consumers' evaluation of foreign products. Specifically, the objective of this study is to examine whether the effect of CoI on the evaluation of the quality of foreign products varies across different facets of the construct (geography cognitions, human cognitions, and affections) and across classes of products (utilitarian nature-based, utilitarian industrialized, and hedonic industrialized).

The literature on CoI impacts (e.g., Howard, 1989; Kaynak & Cavusgil, 1983) has not properly disentangled the differential impacts of each conceptual dimension of CoI and has not properly addressed the dyadic effects (i.e., between individual dimensions of CoI and specific product classes). By treating CoI and product (quality) in more aggregate (vs. fine-grained) levels, some of the studies that found no significant effects might have incurred in Type II error.

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Our main contribution lies in disaggregating the impacts of the dimensions of CoI (instead of the usual approach of simply estimating an overall impact)—and finding evidence that the relative magnitudes of the effects of CoI dimensions vary across product classes.

## 2. Literature review

Country-of-origin (CoO) and country-of-origin image (CoI) are two inextricably related constructs. While CoO research has investigated whether or not the national origin of a product would affect consumers' evaluations and preferences, CoI research helps clarify which particular aspects of the country would drive consumers' perceptions and attitudes (e.g., product evaluations and behavioral intentions) towards products from a given country (Roth & Diamantopoulos, 2009).

Consumers resort to cues in order to assess the quality of products (Maheswaran, 1994). Some cues are intrinsic and directly associated with the product (e.g., physical aspects, such as color, smell, taste, size), while others are extrinsic, that is, more intangible (such as, warrant terms, brand, price or type of distribution channel; or CoO and CoI for that matter, cf. Manrai et al., 1998). Consumers' perceptions about quality or other product attributes influence their preferences and behavior (Chao and Gupta, 1995)—and extrinsic cues gain more importance when the consumer finds it difficult to objectively assess the product (Dawar & Parker, 1994; Srinivasan, Jain, & Sikand, 2004; Steenkamp, 1990).

Papadopoulos and Heslop (2002) reported that over 700 studies had been conducted in order to verify the existence of the country-of-origin effect and the magnitude of the impact. This multitude of studies has covered several product classes and types of buyers (cf. Peterson & Jolibert, 1995; Verlegh & Steenkamp, 1999).

Despite this huge amount of research, the literature on CoO and CoI still has some gaps, one of which is the lack of consistency in the conceptualization of the focal construct (Laroche, Papadopoulos, Heslop, & Mourali, 2005; Roth & Diamantopoulos, 2009) and the fact that most studies on CoO effects focus on product images, but not on country images (Papadopoulos & Heslop, 2003). While several reasons may be suggested to explain the mutually inconsistent results in the literature, such inconsistencies may be in part due to diversity in the conceptual and operational definition of the CoI construct as well as lack of proper disaggregation of the effects—which is the point that we address in the present study.

### 2.1. The country image (CoI) concept

There is still quite a lot of diversity in how researchers have conceptualized and operationalized country image (Hsieh, Pan, & Setiono, 2004; Roth & Diamantopoulos, 2009). Roth and Diamantopoulos (2009: 727) reviewed the literature on CoO and CoI research and identified three main groups of definitions of the focal image object: "(1) definitions of the (general) image of countries (i.e., country image), (2) definitions of the image of countries and their products (also referred to as product-country images), and (3) definitions of the images of products from a country (i.e., product image)". Hsieh et al. (2004) reached similar conclusions.

As for overall country image, Roth and Diamantopoulos (2009) highlight three dimensions: (1) a cognitive component, related to consumers' beliefs about a particular country, (2) an affective component regarding consumer's feelings or emotions towards the country, and (3) a conative component, capturing consumers' behavioral intentions or actual behavior with regard to the sourcing country.

The cognitive component refers to informational beliefs about a country, e.g., degree of economic development, degree of technological advancement, level of political maturity, historical events, social traits, culture and traditions, geography, climate, and also people's characteristics (e.g., competence, creativity, living standards or technical qualifications). The affective component captures emotions and feelings about a particular country. The conative component captures consumers' emotional reactions to a country (Maher & Carter, 2011) and consumers' "desired level of interaction" with the sourcing country (Laroche et al., 2005: 98)—for example, intention to invest in or visit the focal country (Oberecker & Diamantopoulos, 2011), or willingness to live there or socialize with its people.

Roth and Diamantopoulos (2009: 736) contended that "[t]he conative facet (intended/actual behavior) represents an outcome of these two [i.e., of the cognitive (beliefs) and the affective (feelings or emotions) components] and, hence, is a separate construct."

### 2.2. Differential impacts of CoI across product classes

Some researchers (e.g., Elliot and Cameron, 1994; Eroglu & Machleit, 1989; Kaynak & Cavusgil, 1983; Manrai et al., 1998; Wall, Liefeld, & Heslop, 1991; Witt & Rao, 1992) found evidence that the (average) perceived quality of products from the same country of origin would differ across product classes and that differences in (average) product quality assessments across countries would be statistically significant for some classes of products but not for others. However, these studies did not in fact measure the theoretical relationships between facets of CoI and product classes nor did they provide insights into the mechanisms that would underlie such relationships. Other studies (such as Zeugner-Roth, Diamantopoulos, & Montesinos, 2008) have modeled multiple dimensions of country image, but have aggregated them together by using a second-order, reflectively measured construct—which led them to estimate an overall CoI impact, but prevented them from estimating the individual impact of each dimensions of CoI.

A few studies, though, have disentangled CoI into its component dimensions and investigated the existence of differences in the impacts of distinct facets of CoI on consumers' responses to different products (classes).

Brijs, Bloemer, and Kasper (2011: 1265) concluded that: "[f]or utilitarian-oriented products, cognitive factors more explicitly drive attitude formation, whereas for hedonic-oriented products, the affective elements have greater importance". Verlegh (2001) similarly argued that affect would tend to influence action tendencies toward hedonic objects while cognitions would influence action tendencies toward functional objects.

Roth and Romeo (1992) measured product-country image of nine different countries (but not CoI dimensions in an overall and independent (from the products) assessment) along four dimensions: innovativeness, design, prestige, and workmanship. They evaluated willingness to buy different categories of products (five utilitarian industrialized, and one hedonic industrialized) and found that "willingness to buy a product from a particular country will be high when the country image is also an important characteristic for the product category". So, Roth and Romeo (1992) provided preliminary evidence that, for some classes of products, CoO (or possibly some CoI dimensions) would have a higher impact than for other classes, although they did not in fact measure the association between (overall) country image facets and perceived product quality.

In a similar vein, Han and Terpstra (1988) found that the particular dimensions in which (products from) a given country would be rated high or low would depend on the particular product class under consideration. However, like Roth and Romeo

(1992), they considered product-country dimensions – although in a rather broader sense (i.e., related to all (or most) classes of products from each given country) – that do not represent more general facets of Col *irrespective* of specific products (classes).

Overall, the review of the literature reveals that there has been little investigation on the (differential) impacts of *overall* country image aspects across product classes.

### 3. Conceptual framework and hypotheses of the study

Literature shows great variety in the (not always explicit) definitions that researchers employ to conceptualize and measure Col. In this study, we follow [Martin and Eroglu \(1993: 193\)](#) and define Col as “[the overall] descriptive, inferential and informational beliefs [and feelings] one has about a particular country”, irrespective of any specific product category or any particular product.

We disaggregated Col in terms of cognitive and affective components, but left out the conative aspects, since the conative component of Col is not expected to affect consumers' quality evaluation of products originating from a country. Given that past research suggests that, in their mental process of judging foreign products, consumers may employ distinct sets of information about the country-of-origin, the cognitive component was unfolded in two sub-dimensions: geographic aspects and human aspects ([Ittersum, Candel, & Meulenberg, 2003](#); [Shimp, Samiee, & Madden, 1993](#); [Verlegh, 2001](#)), while the affective component in our model comprises only feelings towards the country-of-origin ([Verlegh, 2001](#)).

[Roth and Diamantopoulos \(2009\)](#) contended that about one-third of Col scales in empirical research focused only in the cognitive component. As for those scales that employed both the cognitive and the affective components, they did not satisfactorily disentangle and operationalize the two components. Therefore, the model advanced here is an attempt to overcome this limitation in extant research on Col.

As previously argued, the impact of Col may not be the same for every class of product from a given country ([Eroglu & Machleit, 1989](#); [Han & Terpstra, 1998](#); [Kaynak & Cavusgil, 1983](#); [Manrai et al., 1998](#); [Witt & Rao, 1992](#)). Cognitions about climate and nature would be expected to weigh more on the evaluation of food products or touristic services, while cognitions about economic development or workforce competencies would be expected to present higher impact on the evaluation of industrialized products ([Ittersum et al., 2003](#); [Javalgi, Thomas, & Rao, 1992](#); [Roth & Diamantopoulos, 2009](#); [Verlegh, 2001](#)). Additionally, attitudes or behaviors regarding hedonic objects would tend to depend more on emotions and affect than on cognitions, whereas the reverse would be expected regarding utilitarian objects ([Kempf, 1999](#); [Verlegh, 2001](#)).

In general, more favorable evaluations of products would tend to occur when the consumer perceives that the country's “strengths” correspond to the skills or conditions necessary to produce such products ([Roth & Romeo, 1992](#)). Therefore, it can be expected that geographic conditions (e.g., climate, landscapes, fertility of soil) would tend to affect the perceived quality of nature-based products, whereas (perceived) skills of the workforce would bear more impact on the evaluation of industrialized products, and feelings and emotions would influence perceptions about hedonic products more strongly. Even if the consumer does not have a correct evaluation of those aspects of the country of origin, s/he may have some perceptions (albeit sometimes incorrect) about those aspects. Besides, these perceptions of Col (whether consistent with reality or not) might influence the consumer's assessments of products originating from that country. According to [Magnusson, Westjohn, and Zdravkovic \(2011: 454\)](#),

“perceived [country of] brand origin strongly affects brand attitudes, and this happens regardless of the perceptions' objective accuracy.”

[Verlegh \(2001: 50\)](#) contended that “[a]lthough technological developments have led to a decrease of the importance of geographic characteristics of countries for that country's competitive position, they remain particularly significant in areas such as food and tourism”. Regarding food in particular, [Ittersum et al. \(2003\)](#) report on a consumer who stated that the natural setting – pastures, temperature – influences the final quality of a product (in that case, cheese). Therefore, we present the following hypothesis:

**H1.** *The impact of (a) geographic aspects of the country-of-origin on consumers' evaluation of utilitarian nature-based products (e.g., fruits) is higher than the impact of (b) human aspects and the impact of (c) feelings towards a country.*

[Verlegh \(2001\)](#) posited that human features (such as competence and creativity) are relevant to product evaluations and argued that “[t]hese [technical] skills are more relevant for technology-based consumer durables than for foods, which are to a larger extent ‘natural’ products” (pp. 59–60). Even if some consumers are not knowledgeable about the skills of a country's workforce, they may still construct a mental notion of that characteristic and use it to infer the quality of products that demand labor skills in their manufacture process. So, we advance the following hypothesis:

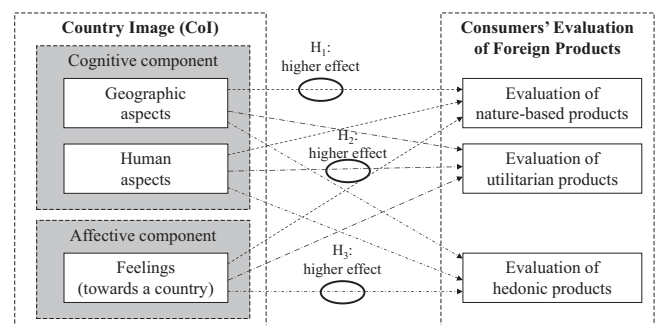
**H2.** *The impact of (b) human aspects of the country-of-origin on consumers' evaluation of utilitarian industrialized products (e.g., home appliances) is higher than the impact of (a) geographic aspects and the impact of (c) feelings towards a country.*

[Brijs et al. \(2011: 1261\)](#) contend that affections exert a high influence on “hedonic or experiential products whose evaluations rely on non-rational factors such as imagery, symbolism, feelings, or sensory experiences.” Their findings indicated that “[f]or utilitarian-oriented products, cognitive factors more explicitly drive attitude formation, whereas for hedonic-oriented products, the affective elements have greater importance” (p. 1266). So, we present the third hypothesis:

**H3.** *The impact of (c) feelings towards a country on consumers' evaluation of hedonic products (e.g., clothes) is higher than the impact of (a) geographic aspects and the impact of (b) human aspects.*

[Fig. 1](#) presents a pictorial representation of the conceptual model.

The argumentation about differential impacts (i.e., each dimension of Col may have a distinct effect size regarding each product class) suggests that one should explicitly model the individual impacts of each dimension—so, the diverse aspects of



**Fig. 1.** Conceptual model of the differential effects, across product classes, of facets of country image on consumers' evaluation of foreign products.

the construct should be treated as reasonably independent, albeit possibly correlated, not as manifestations of, or as determinants of, a more abstract level of the construct.

By explicitly keeping distinct dimensions of the CoI construct as first-order constructs, instead of aggregating all the indicators into a single index, or aggregating the dimensions into a second-order construct (as did, for example, Diamantopoulos, Schlegelmilch, & Paliawadana, 2011; Laroche et al., 2005), we have followed Paunonen, Rothstein, and Jackson's (1999) argument for multiple unidimensional predictors (narrower traits) vis-à-vis multidimensional aggregates (broader traits) in order to increase meaningfulness and empirical accuracy in prediction—thus, allowing us to assess the potentially distinct impacts of each dimension of the construct.

#### 4. Operational model and measures

We deliberately chose to model country image by general aspects of the country that are independent of its products—thus avoiding circularity in the posited relationships between country image and product quality. Besides, we selected only particular aspects of the country that would be expected to influence consumers' quality evaluations of products originating from that country—specifically, we employed geographic, human and emotional aspects (which are expected to bear more influence, respectively, on utilitarian nature-based products, utilitarian industrialized products, and hedonic products), and we did not use political or religious aspects (which would not be expected to influence quality evaluations).

A wide range of different operational indicators have been used for measuring the geographic aspects of the cognitive component of CoI, as well as diverse indicators have been employed for the human aspects and for feelings towards a country. We selected indicators – used in the literature or slightly adapted – that represented aspects of each CoI dimension that seem to be relevant for the consumer to make her/his judgment about the quality of the respective classes of products. We do not claim that respondents know (or do not know, for that matter) about the “real” geographic conditions of the foreign countries; rather, we argue that it is their perceptions (whether consistent or otherwise at odds with reality) that drive their assessments.

Regarding geographic aspects, the following items have been frequently considered: the right atmosphere, a suitable natural environment, a sufficiently clean environment, the appropriate type of soil, amount of sunshine and amount of precipitation (Ittersum et al., 2003), climate and landscape (Verlegh, 2001) and landscape and environment (Allred, Chakraborty, & Miller, 2000). We chose to measure the geographic aspect of CoI by quantity of sunshine and fertility of soil, which are expected to influence the quality of fruits. While we agree that the particular indicators we used to operationalize the geography aspect may not present a

uniform value across a country (especially a very large country like Brazil), consumers may not be aware of the differences and may have some overarching perception of the geographic characteristics of the country. Since consumers' decisions are influenced by their perceptions (and not solely by the “objective” reality), we believe that our operationalization of the geography construct is consistent with the way that respondents would perceive the construct.

As for human aspects, frequently used indicators have been: educational level, technical skills, hardworking spirit, creativity, friendliness and pleasantness (Parameswaran & Yaprak, 1987), kindness and reliability (Papadopoulos, Heslop, & Bamossy, 1994), competence (Verlegh, 2001), quality of the workforce, knowledge, the right people, expertise, tradition and suitable culture (Ittersum et al., 2003), educational level and ethics (Heslop, Papadopoulos, Dowdles, Wall, & Compeau, 2004). We chose three indicators to measure the human aspect of CoI, all related to workforce: competence, creativity and diligence.

Indicators of feelings towards a country have included: positive and negative country affect (Verlegh, 2001; Brijs et al., 2011), pleasure–arousal–dominance (PAD) scale (Russell & Mehrabian, 1974), eight basic emotions (Plutchik, 1980), pleasant–unpleasant scale (Diener, Smith, & Fujita, 1995); as well as scales from the literature on attitude (Derbaix, 1995). We employed three semantic-differential scales, among those suggested by Verlegh (2001): distrust ↔ trust, irritation ↔ pleasure, and hostility ↔ enthusiasm toward the CoO.

As regards consumers' responses, this study focused only on product quality evaluation (and not other preferences, attitudes, intentions or behaviors). Some examples found in the literature are: positive vs. negative, appealing vs. unappealing, good vs. bad (Verlegh, 2001), innovativeness, design, prestige, workmanship (Koschate-Fischer, Diamantopoulos, & Oldenkotte, 2012; Roth & Romeo, 1992). Two indicators were selected to measure quality evaluation: expected attractiveness and expected satisfaction with the foreign product. Expected attractiveness was operationally measured according to each class of product in order to better reflect one particular attribute that the consumer might consider relevant for quality of the respective product class, thus increasing construct validity. So, attractiveness of fruits was assessed in terms of taste, attractiveness of home appliances in terms of efficiency/durability, and attractiveness of clothes in terms of originality/style. Expected satisfaction was elicited as an overall rating by the consumer (e.g., “When consuming Brazilian [German] fruits, I would be: unsatisfied . . . satisfied”, on a 7-point response scale).

Fig. 2 presents the operational model.

The geographic facet of CoI was modeled in a formative perspective of measurement, since its indicators are not expected to necessarily co-vary together; besides, each indicator seems to form part of the respective facet and not to be determined by the facet. As for the indicators of the other two facets of CoI – human

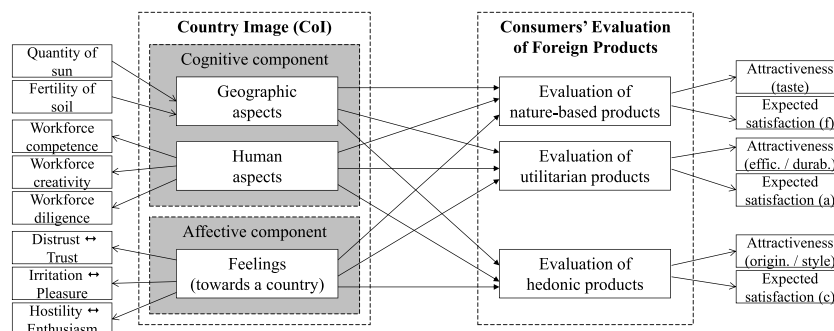


Fig. 2. Operationalization of the explanatory model.

and feelings – they were operationalized in a reflective perspective because it can be argued that they are somehow manifestations of their respective latent facet and also they are expected to co-vary.

## 5. Methods

### 5.1. Object of analysis

The image object for this study was the “country”, instead of the “product-country” or the “product (from a country)”. So, we followed Laroche et al.’s (2005: 103) recommendation and obtained “global rather than product-[country-]specific assessments [of Col]”. By defining and measuring country image independently of the image of the products from that country, it is possible to test the relationship between Col (dimensions) and product (classes) quality without incurring in circularity.

### 5.2. Classes of products

We categorized products in terms of two aspects—whether their evaluation and purchase are driven mainly by utilitarian reasons or by hedonic motives; and whether they are a (virtually) direct result of nature or of industrial processes. We chose one example of each of three generic classes of products for which differential impacts of Col would be expected. Fruits represented utilitarian nature-based products, home appliances were an example of utilitarian industrialized products, and clothes illustrated hedonic industrialized products. We left out the category of hedonic nature-based products, since a fourth category would add complexity to the analysis, while not being actually necessary to test our theoretical arguments.

### 5.3. Physical products vs. verbal descriptions of products vs. mention of a specific example of a product class

If the consumer is shown a real physical object or given a verbal description of it, s/he may employ other cues, besides Col, when reporting her/his attitude towards the product (Peterson & Jolibert, 1995). So, we chose to provide mere mentions to examples of the classes of products (but no physical or verbal presentations) and indications of the respective country of origin. Also, we explicitly refrained from presenting any brand names in order to avoid “brand origin confusion” (Zhuang, Wang, Zhou, & Zhou, 2008). Although the lack of contact with the physical product may inadvertently inflate the effect of Col (Veale & Quester, 2009), we were in fact interested not in the particular magnitude of the effect, but rather in the differences in magnitude across distinct product classes. So, in order to better compare the differential impacts of Col dimensions, it is better to avoid other intrinsic or extrinsic cues, which might not be the same or have the same impact across the distinct product classes.

### 5.4. Countries-of-origin

We chose two countries that would (expectedly) be rather different in terms of the cognitions (geographic and human aspects) and also in terms of the affections that consumers form about them. Besides, respondents (French consumers) should not show any strong pre-dispositions (favorable or unfavorable) towards the object countries. The two focal countries chosen were Brazil and Germany.

### 5.5. Data collection

Data was collected by means of an online survey of French consumers whose were recruited by snowball sampling starting

from a seed group of 35 undergraduate French students who were taking a course in a Brazilian university. These 35 French students were not included in the sample; any other respondents who had lived in either of the target countries under evaluation (Brazil or Germany) were also removed from the final sample. From an initial pool of 271 questionnaires, 153 were retained for analysis after eliminating non-French and respondents with too many (over 15%) missing values. These respondents included 63.6% women and 36.4% men, mostly youngsters (84.3% between 18 and 29 years of age); in terms of educational level, 2.6% had a high school degree, 32.7% had an incomplete university degree, 24.2% held a full university degree and 40.5% had a postgraduate degree. Missing data was MCAR (missing completely at random) and missing values were imputed by the mean.

We employed 7-point semantic differential scales to measure the indicators of Col and of product quality, as shown here:

		-3	-2	-1	0	1	2	3	Je ne sais pas/Je ne connais pas
D'une manière générale, je considère que le sol allemand (terres cultivables) est:	Très improductif								Très fertile

### 5.6. Within-subjects vs. between-subjects design

Following Verlegh and Steenkamp’s (1999) advice, we employed a within-subjects (vs. between-subjects) design. So, each consumer responded about each of the three products from each of the two countries-of-origin. This research design is appropriate because it reduces error variance associated with individual differences. Besides, in the particular research setting of our study – where the respondent has no other cue (visual or otherwise) to judge the products, but solely the information about the country of origin – other potential determinants of the perceived quality of products would not influence the responses; thus we can capture the net effect of the COO differences.

### 5.7. Association between differences of Col and differences of product evaluation

In this study, we wanted to determine whether differences in consumers’ assessment of (each component of) country image would be associated with differences in product evaluation of (specific classes of) foreign products. So, in order to estimate the operational model parameters, we took the differences between each consumer’s responses about (each facet of) country image across the two countries and about evaluation of each product (from each country) and estimated the model based on the association between pairs of differences. Not only did this “differences” approach seem to better reflect the impact of Col on consumers’ product evaluation, but also it potentially eliminated the between-subjects variance, allowing for more precise estimates of the effects of within-subjects differences related to our focal constructs. As a robustness check, we also estimated a model using the absolute values.

### 5.8. Assessment of common method bias

Given that every participant answered about the questions related to independent as well as to dependent variables, common

method variance (CMV) could have inflated or deflated the estimated relationships. To safeguard against common method bias, we followed Podsakoff, MacKenzie, Lee, and Podsakoff's (2003) suggestion and used the Harman single-factor test to control for CMV. Since more than one factor was extracted and less than 50% of the variance was associated with the first factor, common method bias is unlikely to have been a major problem in this study. Moreover, our main hypotheses are not about direct effects but about differences in the effects of CoI facets on distinct products evaluations. This can be seen as a moderation effect of product class on the CoI facet–product evaluation relation. Significant interaction effects cannot be artifacts of common method variance, so they might reduce but not inflate such effects (Siemsen, Roth, & Oliveira, 2010). Thus, although CMV may have influenced our data, it is not a plausible alternative explanation for the main results.

### 5.9. Model estimation

Given the formative measurement perspective of one of the CoI facets (Geography), we employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to estimate the measurement model and test the hypotheses, following recent papers (e.g., Sinkovics, Sinkovics, & Jean, 2013) published in top-tier Marketing journals (for a review, see Hair, Sarstedt, Ringle, & Mena, 2012).

Cadogan and Lee (2013) warn about the perils of using endogenous formative variables. Although Geography is an exogenous construct in our model, formative measurement still presents some challenges. Following recommendations of Lee, Cadogan, and Chamberlain (2013), two alternative models were estimated. The first one used a simple composite score with equal weights for the indicators of the Geography construct (Sunshine and Soil), as we have no theoretical reason to assume that one of them should be more relevant than the other in the measurement of this construct. The second one considered the possibility that each of the formative indicators might have different effects on product evaluation, so the indicators were directly connected to the endogenous variable Quality Evaluation.

Finally, the difference between the coefficients was tested using the distribution of the difference of the coefficients in each of the bootstrapped samples used for estimation of the PLS model. All models were estimated using SmartPLS.

### 5.10. Limitations of the method

The set of operational indicators (Fig. 2) may not fully represent the constructs, but the PLS-SEM approach at least allows for a preliminary verification of the degree of adequacy of the measures. Additionally, the sample was not randomly drawn, but rather composed of volunteers and overrepresented with students—so generalization to the population of general consumers is not immediately warranted. Regarding student samples in CoO studies, Verlegh and Steenkamp (1999) argued that two counter-balancing effects would be in place: first, CoO effects are generally smaller for younger consumers and for consumers with a higher level of education; second, student samples comprise a more homogeneous set, thereby yielding larger effects because they have lower response variance due to smaller individual differences.

It is worth noting that the purpose of this study was not to determine with precision the magnitude of the effect of CoI (or of its dimensions) on the consumers' assessment of the quality of foreign products; rather we sought to reveal that the impact of CoI should not be treated as a generic effect, but should be disaggregated, since the effects of each of its dimensions may be heterogeneous – regarding any given product class – and may indeed vary across product classes—a point which has been overlooked in the literature about CoI effects. Although the absolute value of the effects estimated in this study may be idiosyncratic to the particular sample (and the illustrative products employed) and may not generalizable to the population of consumers, our aim was not to provide statistical generalization (from the sample to the population), but rather we searched for analytical generalization (from some particular case(s) to the theory). So, our argument that, for a given product class, the effects of CoI dimensions will be distinct and that the relative order of magnitude of the effects of the CoI dimensions will vary across product classes was well illustrated by this particular combination of consumers (sample) and products (as illustrative examples of each respective product class). The fact that we found statistically significant differences (as expected) for this sample-products arrangement is enough to provide initial support to our arguments about the heterogeneity of the effects. Of course, we contend that further empirical scrutiny with other samples, research contexts and product classes can help refine theory and generalize the results (in terms of classes of products, countries of origin of the products, nationality/segments of respondents or dimensions of country image).

**Table 1**  
Estimated measurement model parameters.

Constructs	AVE (average variance explained)		Composite reliability		Indicators	Loadings		Weights	
	Absolute values	Differences	Absolute values	Differences		Absolute values	Differences	Absolute values	Differences
Geography	n.a.	n.a.	n.a.	n.a.	Sunshine			.851 <sup>***</sup>	.411 <sup>***</sup>
Human	.60	.60	.82	.82	Soil			.335 <sup>***</sup>	.394 <sup>***</sup>
					Competence	.833 <sup>***</sup>	.810 <sup>***</sup>		
Feelings	.62	.61	.83	.82	Creativity	.726 <sup>***</sup>	.791 <sup>***</sup>		
					Dedication	.758 <sup>***</sup>	.728 <sup>***</sup>		
					Trust	.726 <sup>***</sup>	.764 <sup>***</sup>		
					Enthusiasm	.758 <sup>***</sup>	.788 <sup>***</sup>		
Product assessment (Fruits)	.79	.77	.88	.87	Pleasure	.719 <sup>***</sup>	.795 <sup>***</sup>		
					Attractiveness	.857 <sup>***</sup>	.857 <sup>***</sup>		
					Satisfaction	.911 <sup>***</sup>	.899 <sup>***</sup>		
Product assessment (Home appliances)	.81	.82	.89	.89	Attractiveness	.907 <sup>***</sup>	.918 <sup>***</sup>		
					Satisfaction	.857 <sup>***</sup>	.895 <sup>***</sup>		
Product assessment (Clothes)	.79	.81	.89	.89	Attractiveness	.871 <sup>***</sup>	.949 <sup>***</sup>		
					Satisfaction	.907 <sup>***</sup>	.865 <sup>***</sup>		

<sup>\*\*\*</sup> Significant at the 1% level; n.a. = not applicable.

## 6. Findings

The psychometric properties of the measurement models were adequate. The indicators of the formatively-measured Geography construct were statistically significant and there were no multicollinearity problems. The other constructs, measured in a reflective perspective, presented indicators loading higher than .7, composite reliabilities over .7 and AVEs above .5 (see Table 1), which indicates adequate psychometric properties. All correlations between the Col constructs and the Product Quality Assessment constructs were lower than .5 (Table 2) and the squared correlations between pairs of constructs were smaller than the AVE of each construct, which supports discriminant validity (Fornell & Larcker, 1981) among the three dimensions of Col.

In Table 1, the “Absolute values” column refers to the models estimated from the raw values reported by each respondent regarding Col indicators and product quality indicators; and the “Differences” column refers to the models estimated from the within-subjects differences of values, as explained in the Section 5. Table 2 presents correlations and descriptive statistics of the differences.

It is advisable that, before assessing the existence (and magnitude) of a moderating effect, one tests whether there is some direct effect. In order to test for the main effects (of differences) in geographic, human and feelings aspects of Col, the whole sample of observations about classes of products – utilitarian nature-based (fruits), utilitarian industrialized (home appliances) and hedonic industrialized (clothes) – was pooled together, given that interaction effects were not relevant for this test. The estimation of the measurement model parameters, after inclusion of the structural path between Col facets and product evaluation, revealed satisfactory properties—significant and high weights and low VIFs (smaller than 4).

The average effects of the (absolute values of and of differences between) Geographic, Human and Feelings aspects on Product Evaluation were significant (see path coefficients in Table 3). However,  $R^2$  was low (10% for absolute values and 6% for differences), signaling that direct effects do not seem to provide a satisfactory explanation of the variation in Product Evaluation, which may be due to the heterogeneity of the effects across different classes of products.

To test Hypotheses H1 through H3 we compared the coefficients of the three exogenous constructs (Geography, Human and Feelings) on the endogenous variable (Product Evaluation) across each class of product. In order for a given hypothesis to be supported, the differences between the coefficients would have to be in the posited direction and be statistically significant. The test was based on the empirical distribution of the differences of the coefficients in each bootstrap sample.

H1 and H2 were supported, since the differences between coefficients were significant and in the expected direction (Table 3). In fact, for H2, the statistical significance is found both with the absolute values and the differences (between individual consumer's responses about each country image and each product evaluation) approaches; as for H1, it was supported when using

the differences approach, but only partially supported when considering the absolute values approach (the difference between Geography and Feelings coefficients was not statistically significant for Fruits).

H3 was not supported. Although the differences between the coefficients were in the hypothesized direction (i.e., the impact of Feelings on Clothes was higher than the impact of Geography and the impact of Human aspects), these differences were not statistically significant.

These findings suggest that there is an interaction effect between facets of country image and product class in the determination of the effect of Col on product evaluation. In short:

- a) For a given product class, the effect of country-of-origin on quality evaluation is not homogeneous, but rather varies across facets of country image; and
- b) For a given facet of country image, product class moderates the impact of (facet of) country image on quality evaluation.

## 7. Discussion

Our findings on the differential impacts of Col dimensions across product classes suggest that Col effects should be investigated at the dimensions' level (not as aggregated effects of a more abstract construct) and that they may not be fully compensatory (as also argued by Wang, Li, Barnes, & Ahn, 2012).

Similarly to Witt and Rao's (1992) findings, our results show that the overall Col effect (as indicated by  $R^2$  in the columns about the differences approach in Table 3) is smaller on clothes than on home appliances (or on fruits in general, for that matter), but the differences were not statistically significant, at least in our sample. Additionally, similarly to Eroglu and Machleit (1989), who found that the CoO effect was higher on technologically advanced products, our results indicate that the overall explained variance of product evaluation of home appliances (a more advanced product; explained variance equal to 41%) is higher than that of fruits (25%) or that of clothes (16%). However, our findings challenge Brijis et al.'s (2011) contention that the effects of Col would be stronger for hedonic-oriented than for utilitarian-oriented products.

Similarly to Verlegh's (2001) findings, our results show that geographic aspects of Col are more relevant for natural food than for utilitarian industrialized (technology-based) products, while the impact of human (competence) aspects is inverse, as expected. Like Brijis et al. (2011), we also found that the affective component of Col would affect the evaluation of a hedonic product more strongly than the evaluation of utilitarian products.

Our results suggest that Col continues to be a relevant cue for foreign product evaluation, thus reinforcing Häubl and Elrod's (1999) findings that consumers may report different ratings of product quality according to the information they have about the country where the product was manufactured—even when they are asked to rate the quality of products of identical brands and they are told that the products have otherwise identical features. Interestingly, d'Astous and Ahmed (1999: 122–123) reported a

**Table 2**  
Descriptive statistics and correlations of differences.

Variable	Mean	Std. dev.	1	2	3	4	5
1 Geography	1.91	1.25					
2 Human	−1.40	1.33	.073				
3 Feelings	.44	1.44	.375	.455			
4 Product assessment—fruits	1.83	1.38	.482	.001	.278		
5 Product assessment—appliances	−2.35	1.30	.069	.613	.404	.043	
6 Product assessment—clothes	.99	1.51	.232	.245	.382	.275	.191

**Table 3**  
Estimated structural model parameters.

Class of product		Direct effect		Moderating effects					
		Pooled sample		Fruits		Appliances		Clothes	
		Abs. values	Diff.	Abs. values	Diff.	Abs. values	Diff.	Abs. values	Diff.
Path coefficient	Geography	.19 <sup>***</sup>	.10 <sup>*</sup>	.28 <sup>***</sup>	.43 <sup>***</sup>	.11 <sup>*</sup>	-.02	.14 <sup>*</sup>	.11
	Human aspects	.19 <sup>***</sup>	.10 <sup>**</sup>	.05	-.09	.45 <sup>***</sup>	.54 <sup>***</sup>	.15 <sup>**</sup>	.09
	Feelings	.13 <sup>***</sup>	.13 <sup>**</sup>	.18 <sup>**</sup>	.16	.16 <sup>**</sup>	.17 <sup>**</sup>	.23 <sup>***</sup>	.29 <sup>***</sup>
R <sup>2</sup>		10%	6%	16%	25%	33%	41%	15%	16%
Empirically-derived highest coefficient				Geog.		Human		Feelings	
Hypothesized highest coefficient				Geog.		Human		Feelings	
Difference between coefficients	Geog.–Human			.23 <sup>**</sup>	.52 <sup>***</sup>	-.34 <sup>***</sup>	-.56 <sup>***</sup>	n.a.	n.a.
	Geogr.–Feelings			.10	.27	n.a.	n.a.	-.09	-.18
	Human–Feelings			n.a.	n.a.	.29 <sup>***</sup>	.37 <sup>***</sup>	-.08	-.20
Hypothesis test				H1 part. supp.	H1 supp.	H2 supp	H2 supp.	H3 not supp.	H3 not supp.
Results with alternative measurement models of the formative variable									
Equal weights for formative indicators				H1 not supp.	H1 part. supp.	H2 supp.	H2 supp.	H3 not supp.	H3 not supp.
Different path coefficients for each formative indicator				H1 not supp.	H1 part. supp.	H2 supp.	H2 supp.	H3 not supp.	H3 not supp.

n.a. = not applicable (i.e., this parameter was not of interest to this study).

<sup>\*</sup> Significant at the 10% level.

<sup>\*\*</sup> Significant at the 5% level.

<sup>\*\*\*</sup> Significant at the 1% level.

“made-in paradox”, that is, “the frequently observed inconsistency between consumers’ report of the low importance they give to COO when making purchases of products and the actual significant impact of COO in research studies where such information is made available.”

While the majority of studies on CoO effects have taken CoO as a whole (e.g., “How do you rate the overall quality of products made in [country X]?”), our study has responded to the plea that CoI should be treated as a multidimensional construct (Martin & Eroglu, 1993; Roth & Diamantopoulos, 2009). We explicitly covered the cognitive and affective dimensions and left out the conative dimension, as recommended by Roth and Diamantopoulos (2009), Maher and Carter (2011) and Manrai et al. (1998).

Those studies that treated CoO as a “bulk” construct (e.g., Howard, 1989; Kaynak & Cavusgil, 1983) did not in fact measure the theoretical relationship between facets of CoI and product class nor did they provide insights into the mechanisms that would underlie such relationship, but rather just empirically measured whether the quality of a specific product class would be rated higher or lower across different countries of origin. That, is, they investigated whether there would be an effect of CoO on product evaluation, but did not investigate the facets of CoI that would lie behind, or be related to, such effect.

As presented in the literature review section, there is preliminary evidence that the effect of CoO, and more specifically

of CoI, would depend on the specific class of product under examination. Overall, our findings corroborate those of previous studies and serve as further evidence of the differential impacts of CoI across distinct product classes. More important, the current study brings an additional contribution to Marketing theory by disentangling the effects and indicating that the *relative* strength of the impact of each CoI *dimension* varies across product classes.

### 7.1. Managerial implications

Although CoI is unlikely to be a dominant cue for purchase decision (Elliot & Cameron, 1994), in cases where the country image is favorable in aspects that are relevant to consumers’ perceptions of quality of a particular class of product, marketing managers may take the opportunity to make the information about CoI “visible” to consumers; and if the country image would somehow be negative to the assessment of the product, then managers should minimize any clue to such information or else work to offset the negative impact by emphasizing other attributes (as recommended by Laroche et al., 2005). Moreover, managers ought to be attentive to which particular dimensions of CoI would affect which classes of products more strongly—in order to take more assertive marketing actions.

As practitioners better understand how CoI manifests itself in consumers’ attitudes towards foreign products, they can take

**Table 4**  
Implications for managers.

	Impact of CoI dimension on quality assessment of respective product class	
	High	Low
Rating of the country in the respective CoI dimension	<ul style="list-style-type: none"> <li>Promote information (e.g., packaging or advertising) about CoO and respective CoI dimension</li> <li>Inform salesmen about the country where the product is designed and/or assembled</li> </ul>	<ul style="list-style-type: none"> <li>Try to move up the order of importance of the CoI dimension as an attribute in the consumer’s evaluation process</li> <li>Promote CoI dimension as secondary benefit if the choice process is of a compensatory nature</li> </ul>
	<ul style="list-style-type: none"> <li>Do not explicitly reveal CoO</li> <li>Emphasize attributes other than CoO</li> <li>Choose a brand name that does not resemble the CoO</li> </ul>	<ul style="list-style-type: none"> <li>(nothing to be done)</li> </ul>



appropriate positioning and promotion measures, specifically taking into account which aspects of the country-of-origin image are expected to affect more the evaluation of their products. In a complementary vein, policymakers can gain information to help them adapt their programs so that the image of their country is modified in the minds of foreign consumers.

Understanding the specific impact that each CoI dimension would exert on each product class, together with the recognition of how a given CoO would be rated in each of those dimensions, can lead to some implications for managers as presented in Table 4.

There may be differences between country of design and country of manufacture/assembly and also differences between the country of brand origin and the country of manufacture (Balabanis & Diamantopoulos, 2011); besides, consumers often do not know the country of origin of the products they buy (Balabanis & Diamantopoulos, 2008; Samiee, Shimp, & Sharma, 2005). All these facts may downplay the role of the “real” country of origin, but this does not make the concept less important, since what counts is the country that the consumers associate with a product (whichever it is, right or not).

## 8. Conclusions

This study adds to the literature about the impact of country-of-origin image on consumers' attitudes (specifically, product evaluation) towards foreign products and brings several contributions.

From a theoretical and empirical viewpoint, this study stands among the few that have comparatively investigated the effect of CoI across different classes of products, whereas the vast majority of studies has employed only utilitarian industrialized products. Besides, this study has explicitly recognized and modeled the multi-dimensional structure of CoI and has disentangled the differential effects of two dimensions of CoI – cognitions (specifically, geographic and human aspects) and affection (specifically, feelings) – instead of simply modeling some overall CoO or CoI effect. By following Paunonen et al.'s (1999) advice to employ multiple unidimensional predictors (narrower traits) instead of multidimensional aggregates (broader traits), we have contributed to increasing meaningfulness and empirical accuracy in prediction.

In particular, this study examines the impact of the affective component of CoI, which has been somewhat neglected in the literature (cf. Laroche et al., 2005). Moreover, this study moves one step ahead by estimating the interaction relationship between facets of CoI and product classes (as did Brijs et al., 2011; Verlegh, 2001) in the determination of the impact of CoO on product evaluation. This dyadic effect has not received proper attention in the literature.

So, academics can benefit from more information on the mechanisms by which CoO operates and can gain insight into what underlies (un)favorable matches between a country and a product class.

Specifically, results of this study indicate that the geographic component of the cognitive facet of CoI bears more impact on quality evaluation of fruits (a utilitarian nature-based product) than on home appliances (a utilitarian industrialized product) or clothes (a hedonic industrialized product); the human component of the cognitive facet of CoI affects more strongly the quality assessment of home appliances than of fruits or clothes; while the affective facet of CoI bears a stronger impact on quality perceptions about clothes than about fruits or home appliances. However, results should be interpreted with care given that, although it has been argued that different facets of CoI might each have specific contributions to consumers' evaluations of products, it may not be easy to disentangle the individual effects, since the dimensions of the construct seem to correlate reasonably highly.

Furthermore, given that Roth and Diamantopoulos (2009) extensive review identified no study with Brazil as a country-of-origin and that Usunier (2006) reported that only 2.06%, out of 583 studies reviewed, had employed Brazil as a country-of-origin (while 10.46% had employed Germany), this study contributes to external generalization of previous findings.

As limitations to this study, it should be noted that the explanatory model did not include any of several variables that have been argued to also affect the impact of CoO on consumers' evaluation of products. As a result, the effects of CoI may have been overestimated. Although the objective of this study was not to estimate the magnitude of the CoO effect(s) per se, but rather to examine whether there would be some interaction effects between facets of CoI and products classes, one should consider the possibility that the variables just mentioned might moderate the interactions.

The sample of this study was composed of consumers from a single country—France. Therefore, findings should be regarded as preliminary and generalizations should not be immediately drawn to other country contexts. The use of a sample composed mostly of young consumers (84.3%) also cautions against immediate generalization of the findings to adult populations. In fact, although it has been argued that CoO effects would tend to be smaller (or not at all relevant) for young consumers (e.g., Usunier, 2006; Wong, Polonsky, & Garma 2008), some researchers found significant effects (e.g., Josiassen, 2009; Zdravkovic, 2013)—so has the present study, which provides evidence of our arguments regarding the contingent effects.

Consumers who are familiar with products (either the same as those in the study or not) from the given country of origin (or other countries that the respondents believe to be similar to that one) may make their judgments based on their experience with such product-country pair. Therefore, familiarity (with products from a given country) could be included as a moderating variable in future studies.

Regarding the classification of products in specific classes, some fruits may present a hedonic component (in addition to or instead of) a utilitarian appeal. Further research might explore sources of heterogeneity of the CoI impact, such as type of product use (utilitarian vs. hedonic), mode of production (nature-based vs. industrialized), consumer involvement (high vs. low involvement), as well as the type of buyer (end-consumer vs. organizational buyer), and consumer's characteristics—such as age (younger vs. older), gender (men vs. women), level of education (higher vs. lower) and level of income (higher vs. lower). Additionally, investigation about CoO/CoI effects across distinct conations (e.g., quality assessment, risk perception or purchase intention) would be welcome.

This study has shed some additional light about the contingent nature of CoO (in particular, CoI) effects on foreign product evaluation by disaggregating the impacts across dimensions of the CoI construct and across distinct classes of products.

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