

Measuring Images of Foreign Products

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This paper presents a method for measuring country-level images for products. The method, which requires only ordinally scaled data and produces more efficient estimates than simple averages, is applied to American skiers' images of European ski-vacations. The results indicate that the images of Switzerland, Austria, and France are relatively homogeneous with Switzerland and slightly more positively viewed than that of France.

A POTENTIAL SOURCE for establishing differential advantage is the product's country of origin. It is assumed that consumers develop either positive or negative attitudes toward products from a foreign country. A prevalent recommendation is to measure these attitudes and to utilize them in developing marketing and advertising strategies. Dichter (1962), for example, argued that the label "Made in . . ." could have a tremendous influence on the success of foreign products. Nagashima (1970, 1977) demonstrated the change in attitudes toward foreign products, in particular Japanese, and stressed their importance in determining marketing strategies. Similar arguments were made by Keegan (1980) and Schooler (1971).

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The availability of many foreign products has provided the opportunity for direct experience with these products. This, in turn, has led to increased familiarity. Higher levels of familiarity with foreign products may diminish the importance of measuring these global images (Johnson, Douglas, and Nonaka, 1985). Based on their empirical results Etzel and Walker (1974) concluded that measuring images of products at the level of a specific country may be too general and misleading. A practical question, therefore, is, should an international marketing manager measure these images and, if so, at what level (country, product category, brand)?

The recommendations of Etzel and Walker (1974) should be qualified. Even if customers are familiar with products and brands from a foreign country their images are influenced by their higher level perception and attitudes of national products in general. These attitudes and perceptions serve as an anchor point and are adjusted at the brand or product level in the light of new information. These perceptions, therefore, should be mea-

sured along with other relevant variables.

At the product category level our recommendations are stronger. There are several situations in which analysis of a country's product-category image is crucial in developing marketing and advertising strategies. The following are examples demonstrating such instances: (1) Foreign product categories in their early life cycle stages are associated with a low level of awareness and customers probably possess only general attitudes at the category level; (2) In order to compete in the US or other large international markets, foreign trade associations and governmental agencies develop combined marketing strategies at the category level. The goal is to create positive attitudes toward their products in general. The associated promotion is typically at the product category level; and, (3) Some products and services are inherently more connected to the national level and potentially more influenced by attitudes at this general level.

This paper will demonstrate the benefit of measuring category related

images in the context of the European market for ski-vacations as perceived by American skiers. This product category is particularly suitable for our purposes. First, European ski resorts are not very familiar to American skiers. Second, marketing strategies are often developed jointly by airlines and trade associations for a country rather than for a specific ski resort. Third, inherent to this category are subject perceptions of the country in question which are likely to have influence on category attitudes and would influence the skier in determining which country to choose.

The study employs a new scaling model which enables one to obtain the latent population position on attitudes toward resorts from each country. This model differs from the naive measurement model—simply calculating averages—employed previously. The advantages of the new model for measuring foreign product images are discussed.

THE EUROPEAN SKI-RESORT MARKET

The European ski-resort market was relatively undeveloped in the early life-cycle stages of the late 1970s. Few promotion dollars were allocated to this product category in the US. The only significant marketing effort was done by Swiss Air, which traditionally captured a dominant market share. This market, however, was thought to possess the potential for growth as a result of the influx of relatively inexpensive flights from the East Coast to Europe. Furthermore, the lack of investment in this market and the existence of only one established 'brand' reinforced this belief. In France, for example, Air-France and major resort owners established the French Ski International Company to develop marketing strategies to compete in the international market, particularly in the US (Dorr. et al., 1978)

This study is based on data collected for such a European company. The objective was to provide information for the design of marketing and advertising strategies in order to penetrate the US market. The focus

was at the country level and therefore images of resorts (in general) from a particular country were very important. Only the results pertaining to the image issue are presented. The study concentrated on three European countries — Switzerland, France and Austria.

GENERATING SCALE ITEMS

The following sources were used to create a list of attributes suitable for measuring foreign ski-resort images: commercial publications; experts and practitioners; and a pre-test. The commercial publications supplied insight into the characteristics of the market, consumer behavior, and provided key attributes. Several interviews were conducted with professionals in this market in an attempt to deepen our understanding of the topic and trace key attributes. Finally, a pre-test was undertaken. Semi-structured interviews were carried out with students, all of whom were interested and active skiers. Young adults, students and educated people are a major segment in the American ski market (*Ski Travel and Vacation Survey*, 1976); thus it was assumed that they could appropriately generate the required attributes. Two elicitation techniques were used in this pre-test, (e.g. Dickson and Albaum, 1977), including free elicitation and asking respondents directly to create

a list of descriptive adjectives for a specified product category.

A list of about 40 adjectives was generated by the pre-test. Combining the attributes obtained from the publications and experts with the most frequently mentioned attributes from the pre-test produced the ten items used in the main study (see Table 1).

DATA

The data for this study were collected by a survey. Two hundred and ninety-six skiers attending a ski-show in New York State responded to a questionnaire. The respondents rated each of the three countries on a five point scale for each of the ten attributes in Table 1. In return for their participation, respondents were included in a lottery in which two individuals received as a gift a free week in a European ski resort. Of the sample 48% were married, 69% were males and the median household income was \$26,249. Median household annual ski-spending was \$965.40. Ski experience was 7.4 years (median) and 27% of the sample belonged to a ski club.

RESULTS AND DISCUSSION

The scaling model employed here is an extension of random utility models used in choice theory (e.g.

TABLE I

Images of European Ski Resorts

	Switzerland	France	Austria
Modern	0.981	1.229	1.079
Exciting	1.908	1.932	1.969
Entertaining	1.428	1.552	1.457
Challenging	2.605	2.499	2.921
Friendly	1.447	1.037	1.872
Honest	1.345	1.074	1.763
Sophisticated	1.283	1.297	1.363
Romantic	1.653	1.577	1.846
Picturesque	3.036	2.937	3.412
Expensive	2.274	2.373	2.334

McFadden, 1974) to categorical judgment models (Torgerson, 1958). The model is adopted to the measurement of beliefs related to foreign ski resorts. Estimating the model produces the position of each country on the attributes (see Appendix for further details). These estimates are given in Table 1, where a larger number indicates stronger association between the attribute and the resorts.

The quality of these estimates could be examined by testing the hypothesis that the systematic error components are zero (i.e. $H_0: \gamma_{jk} = 0$). The estimated γ_{jk} 's are, as expected, very small and the corresponding test statistic is not significant ($F_{9,26} = 1.47$) indicating that the attribute estimates (i.e. v_{ij}) could be used.

It is interesting to test whether images of resorts from different European countries differ. Significant difference was obtained for the profile of Switzerland vs. France ($\chi^2_{10} = 22.6$, $p < .025$). The comparisons of the profiles of Switzerland vs. Austria ($\chi^2_{10} = 0.39$) and France vs. Austria ($\chi^2_{10} = 11.73$) are not significant.

These results are very important. First, they demonstrate the low level of American skier's familiarity with European ski resorts. Second, the results indicate that, overall, potential customers did not perceive differences between resorts in Austria and Switzerland which are major competitors. Swiss resorts, however, were perceived to be different from French ski resorts. Specifically a more positive position was obtained on four attributes: Challenging; Friendly; Honest; and Romantic. This analysis suggests that the Swiss promotional effort in the US was not very successful in creating a differential advantage for their resorts over Austria.

The profiles presented in Table 1 are similar in form to the common practice of foreign image analysis based on averages (e.g. Nagashima, 1977). The difference, however, is in the method used to estimate these latent variables. The scaling model employed here provides the framework to test the quality of the estimated latent variables. In contrast, the prevalent measurement model used to measure a foreign product's

image is the mean (across respondents) of the observed scores. This is a very naive model which could not be tested and requires the assumption that the measurement scale possess at least equal intervals. Moreover, the scaling model used here enables us to test differences among selected attributes and/or boundaries. This is done while taking into consideration the information regarding covariation among attributes which exist in survey research. Hypothesis tests done within this scaling model provide powerful tests which could uncover small differences in perceptions. For example, promotions for ski vacations in Switzerland often stress the beauty of the country. Hence it is of interest to test whether the attribute "picturesque" is perceived differently in Switzerland and Austria. It is—but actually Austria has a significant advantage on this dimension ($\chi^2_1 = 11.36$, $p < .01$).

SUMMARY

This study in the context of the European ski resort market for American skiers has suggested that measuring national product class images may be very important for developing marketing and advertising strategies. Image analysis at the product class level is particularly crucial for products which could not compete independently at the brand level in large international markets, and for foreign product classes in early life-cycle stages. Both conditions exist in the European ski-resort example. American skiers, according to our results, could not distinguish between resorts in European countries, indicating low level of familiarity with the 'product'. An airline

or trade association could therefore use these measures and measurement procedures in developing and monitoring their marketing and communication strategies.

There are two basic implications of this study, one methodological and the other substantive. In terms of methodology, this study has shown how a different method of analyzing ratings data can be used to assess country image. Technically, the scaling method is superior to simply analyzing means in terms of efficiency (i.e., using more information), ability to test the quality of the estimates, and the weaker assumption regarding scale on which the ratings were measured. Practically, this latter advantage would enable the use of this procedure in other situations, namely when the rating scale produces only ordinal responses.

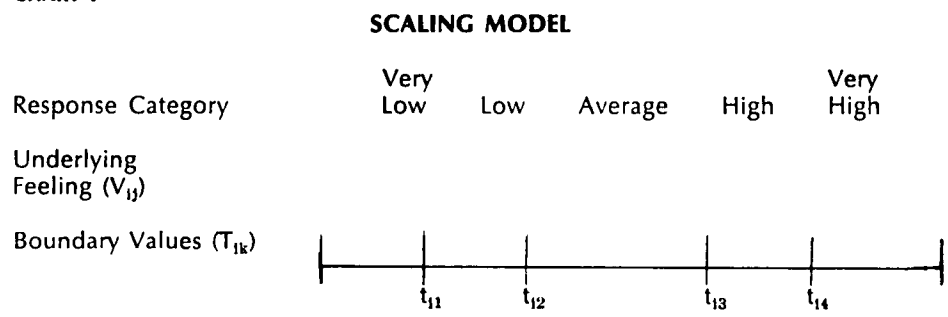
In terms of substantive findings, it appears that the image of product category from a specific country may be more important than images of specific brands, in some cases. In particular, when the specific brands are not well known the country's product-category image will dominate. This will occur more for non-expert customers (e.g. infrequent or first time buyers) and for attitudes formed early in the consideration of alternatives. This would be especially true for new product categories.

APPENDIX

The Scaling Model

The model assumes that the response categories (e.g., very high, high, average, low, and very low) are ordinal in nature. Furthermore, the procedure assumes that each individual

CHART I



has an underlying continuous feeling about reacting to the attribute. This feeling is converted into the ordinal scale (very high, etc.) by seeing where the feeling is in relation to four cut-off or boundary values which set apart the five response categories (see Chart 1). The boundaries are assumed to vary across individuals, thus allowing explicitly for heterogeneity of opinion.

More formally, the model employed here assumes a Thurstone type of discriminate process modelled in a manner similar to random utility models in choice theory (e.g. McFadden, 1974). The model is given by:

$$u_{ij} = v_{ij} + \varepsilon_{ij}, \quad (1a)$$

$$t_{ijk} = \tau_{ijk} + \delta_i, \quad (1b)$$

u_{ij} is a random, individual-level reaction to attribute j for country i

v_{ij} is a fixed, population reaction to attribute j , for country i

t_{ijk} is a random, individual-level boundary k for country i

τ_{ik} is a fixed, population boundary on scale i .

Here ε_{ij} and δ_i are assumed to be random variates with double exponential distribution. Bechtel and Wiley

(1983) proved that the probability that attribute j will be rated above boundary k for ski resorts from country i is given by:

$$P(u_{ij} > t_{ik}) = \frac{e^{v_{ij}}}{e^{v_{ij}} + e^{\tau_{ik}}} \quad (2)$$

which is the Rasch (1966) model for attribute j . The significance of Bechtel and Wiley's work is in providing a theoretical justification for the Rasch model. In its reduced form the model is given:

$$1_{ijk} = v_{ij} - \tau_{ik} + \gamma_{jk} + \varepsilon_{ijk}, \quad (3)$$

where:

1_{ijk} is the 'observed' logit, namely the natural logarithm of the proportion of responses to attribute j of resorts from country i above boundary k divided by the complement of this proportion

γ_{jk} is the double interaction term, representing specification error

ε_{ijk} is residual error.

The estimation of this model requires the aggregation of the responses into

a three-way layout, namely, country by belief by an ordered set of category boundaries. Each entry represents the proportion of ski resorts from country i rated above category k for belief j . Three categories were employed (i.e., $k = 1, 2$) representing the degree the specific belief was associated with ski resorts in each of the European countries. These data are transformed to logits (as in (3)), which are submitted to a GLS (Generalized Least Squares) estimation procedure. The variance-covariance matrix of the errors in (3) incorporates the inter- and intra-item covariation. The former are inter-items covariances common in survey research. The latter are intra-item covariances stemming from the aggregation of responses to produce the proportions above the boundaries in the three-way layout table.

In this analysis the origin of the scale for each country i was set at the mean of the boundaries (i.e., $\tau_i = 0$). Thus v_{ij} could be interpreted as the log odds of j above the mean of the boundaries. This provides the scale for comparing the population position on the attributes across countries.

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