

A motivation-based segmentation of cigarette smokers: implications for improving antismoking campaigns

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Extended abstract

The attributes (A)–consequences (C)–values (V) associations, embedded in the means-end chain (MEC) theory, are often seen as a representation of the basic drive that motivates consumer behavior. Laddering is a technique used to elicit such associations from the respondent's cognitive-motivational structure. A quota sample (N = 374) of cigarette smokers was surveyed in a European city. Respondents were chosen according to gender, age, and level of finished education, so that the proportions of the sample matched the corresponding proportions in the population. Although additional socio-demographic characteristics of the respondents were not controlled in this quota sample, such as marital status, household size, and income, they were included in the analyses as well.

Respondents were initially asked to write down the three most important attributes or characteristics of cigarettes that they liked. For this purpose, respondents were presented with three text boxes to type in the attributes, which then were referred to in the subsequent laddering questions. Next, respondents were asked why the first attribute they have just identified was important to them. Respondents subsequently were asked to give a reason why they indicated that this consequence was important to them. After completing the laddering process for the first attribute, respondents were then prompted to fill in text boxes for the second and third most important attributes as well.

Two researchers familiar with the topic coded the data. The first step of the data coding consisted of the content analysis of the attribute and consequence levels. Then the values were coded using the Schwartz's list of values. Cases where there were disagreements were resolved by the third, independent, researcher. In the end, eight key attributes, six consequences, and four values were elicited.

The resulting laddering data combined with the socio-demographic characteristics of the respondents were subsequently subjected to a market segmentation procedure. Such the means-end chain-based approach to market segmentation is useful because it takes into account not only product attributes and the resulting consequences, but also the underlying personal values that are known to be remarkably stable over time.

Segmentation is the sine qua non of most marketing strategies and positioning efforts. The purpose of market segmentation is to distinguish, in a heterogeneous market, a number of homogeneous groups of customers (market segments) with similar needs and preferences. This desired internal homogeneity of the segments theoretically enables marketing managers and/or policymakers to target the segment with a specific marketing mix under the assumption that segment members will reveal uniform and stable responses to a particular set of marketing variables. Such recognition of the importance of personal values is consistent with a widely accepted philosophy that any marketing research should stem from a consideration of the consumer's viewpoint. The task of segmenting a market is deceptively simple: identify a means of differentiating between people who are similar in some fashion, and those who differ from them; and methods to identify the ultimate market segment are extensive and varied.

In this study, we applied the following method based on laddering data for market segmentation. The procedure consisted of two steps.

Step 1. *A hierarchical value map (HVM) was constructed based on the summary implication matrix (SIM).*

A SIM is obtained through an aggregation of the individual ladders across all the respondents. The elements of a SIM represent the number of times each laddering category leads to another category. Specifically, a SIM shows the number of connections produced by all respondents for any pair of concepts: A-C, A-V, and C-V.

A hierarchical value map (HVM) constitutes the most popular approach for presenting/analyzing laddering data. The HVM is a graphical representation of the most meaningful (i.e., exceeding a certain cut-off level, typically 5%-10% of the sample size) relationships between the A, C, and V categories in the SIM. Specifically, the cut-off level determines how many bilateral A-C and C-V links in the SIM will be directly represented in the HVM; the A-V links are indirect and therefore are not specifically accounted for in the HVM.

Step 2. *A multidimensional scaling method (MDS), followed by a standard clustering procedure, was applied to the SIM expanded by socio-demographic characteristics of the respondents. As the elements of such matrix can be treated as proximities (similarities) between different categories (the larger the element in the matrix, the closer the two corresponding categories), the use of the MDS is a natural choice for this type of data. This approach yielded six clusters of elements of the consumers' cognitive-motivational structures, supplemented with their characteristics.*

These clusters form potential market segments with the laddering categories and consumers' characteristics attached to them. As a result, a multifaceted picture of potential types of smokers was determined.

The results can be applied in the creation and implementation of advertising and strategy policies to discourage smoking among the population. The significant contribution of this research is that it follows the suggestions voiced in previous studies to take the analysis into the multidimensional setting with values playing a central role in it.
