

Developing a Media Basket: Using Simultaneous Two-Way Clustering of Multiple Correspondence Analysis

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Abstract

Advertising remains the most important promotional tool used by marketers to influence consumer choice. [US firms allocated \$280B in 2007 towards media spending, a slight decline from 2006's peak of \$285B.] Critical to those efforts is media strategy and media planning. A variety of media models are available to media planners in their quest to optimize their budget allocation, each of which has unique strengths and weaknesses. Fundamental to any media plan are the media mix and media vehicle decisions. To our knowledge, none of the current approaches allows for the mapping of multiple media types/vehicles and individual consumer media patterns.

We present a two-stage approach to the development of such a media “basket”, that is, the “mix” of media types and specific vehicles selected for a particular media plan. At the first stage, we develop a new method that can identify clusters of both consumers and media categories (i.e., general media types such as print and electronic) using MCA (Multiple Correspondence Analysis). We can also then distinguish specific media vehicles within each media category. The proposed model combines MCA with k -means in a unified framework so as to classify the object scores of target consumers and the weights for a set of media categories/vehicles *simultaneously*. As such, the proposed method can show explicitly which media types and vehicles are closely associated with a particular group of consumers on the basis of fuzzy cluster membership. At the second stage, based on the cluster characteristics obtained, we determine which media plan is optimal given specific media objectives (e.g., reach, frequency, continuity) and budget. That is, the model lets us compare the efficiency and effectiveness of alternative media plans.

Initial findings based on TV program data show that the joint map offered by the proposed method is much easier to interpret than that by the extant approach. Moreover, the clustering information on consumers and program categories greatly contributes to profiling clusters in a more objective way.