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## ON THE VALIDITY OF USING THE MICROSEGMENTATION PRINCIPLE IN MEDIA SIMULATIONS

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### ABSTRACT

Media simulations have traditionally used the principle of *microsegmentation* to address the fact that media and target market data are often obtained from different studies. *Microsegmentation* links databases by decomposing each of them into mutually exclusive, exhaustive segments using variables (typically demographics) that are contained in both studies. The segment characteristics obtained from one study are assumed to hold true for the corresponding segments of the other. This study seeks to evaluate the validity of using this approach.

### INTRODUCTION

Over the years, media planning has drawn heavily on simulation technology to increase the efficiency of the decision making process. One of the key issues is how to match advertising media to target market members. In this context, target market membership is generally defined in terms of some kind of product usage. Indeed, the need to link media usage to product usage data is the motivation for developing modern syndicated product-media research, or what is often called *single-source data*.

Media simulation can draw upon single-source data to develop an index of media efficiency consisting of the proportion of each media audience who are target market members (i.e. product users). But these data are only available for a limited number of media. In an era of integrated marketing communications, planners need data regarding virtually every possible medium, many of which are beyond the scope of even the most comprehensive product-media studies. Furthermore, as studies become more comprehensive, the quality of the data often suffers. Determining media usage by means of a single question on a notebook-sized, self-administered questionnaire is inevitably less accurate than deeper, more expensive methodologies.

The alternative approach is to link data sets, where one set contains target market data, and another data on media usage. One of the most widely accepted methods of addressing this problem is *microsegmentation*. Using one data set, the sample is divided into small demographic or psychographic groups, each of which has different potential for market response. The simulation can then estimate the response potential for each media audience by dividing it into the same microsegments, weighting it by the segments response potential. Thus, if  $R_i$  represents the response potential for microsegment  $i$ , and  $P_i$  represents the proportion of a media audience falling into microsegment  $i$ , the estimated response potential of the medium would be the sum of  $R_i P_i$  for all values of  $i$ .

Following the logic of media planning, as we have described it, response potential is measured in terms of product usage. The microsegments are made up of demographic groups, drawing on the fact that demographics are commonly available in most marketing databases. For the method to work, microsegment membership must be independent of media audience membership. That is, if a particular percentage of a microsegment are target market members, the same percentage of microsegment members who are audience members should also be target market members.

The question is whether the method works. Notwithstanding the prominent role played by the *microsegmentation* principle in media simulations, little published research has been done to assess its validity. The purpose of this paper is to review the evidence that does exist and make such an assessment.

### THE STUDY

Prior research suggests that *microsegmentation* results in underestimates of target market member concentrations for highly selective media and overestimates of concentrations for negatively selective media.

In order to determine what effect this kind of error might have in an actual media simulation, the study used Lancaster and Katz *Adplan* program to simulate the frequency distribution of a sample schedule (six insertions in each of the six most selective television programs for Mexican food users, for a total of 370 gross target rating points), using both actual data and *microsegmentation* estimates.

### RESULTS

The *microsegmentation* method of linking databases underestimated the actual target market ratings by an average of 10.73% for the television programs used. The reach of the schedule (i.e. the proportion of the target market receiving one or more advertising exposure) was only understated by 2.72%. The proportion of the target market reached five or more times (a figure commonly used for media planning purposes) was underestimated by 9.86%.

Upon reflection, this makes sense. The closer a schedule gets to reaching 100% of the market, the less improvement is available from adding new media vehicles. A schedule of 370 gross rating points is a relatively heavy schedule, and so the added exposures are likely to be duplicates, thus moving the errors to higher levels of frequency.

### CONCLUSIONS

This analysis suggests that the impact of using *microsegmentation* depends on the targeted level of frequency specified by the media plan. In the case of our schedule, if a planner were seeking to build reach (one or more exposures), the use of "microsegmentation" estimates would have relatively little effect. However, if the objective were to target an effective frequency rate of 3+, the impact would be much greater.

Because of its quantitative nature, media planning is one of the most fruitful areas for business simulations, whether it be to develop decision support systems for actual media planners or educational tools for students of media planning. Furthermore, given the importance of market segmentation in the current practice of marketing, it makes sense to construct these simulations so that they address target market members, not just audience members in general. Notwithstanding the prominence of the *microsegmentation* approach, it appears to have serious drawbacks for use in these simulations.

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