

MACRO CONSULTING INC.

WHITE PAPER®

SEGMENTATION

**The key to conducting successful
segmentation research**

SEGMENTATION

The goal of segmentation is to divide the total marketplace into subgroups whose members are similar to one another and different from members of other subgroups. The key to conducting successful segmentation research is to define “similar” and “different” in terms that are relevant to the client’s business. For example, a segmentation based on gender may create segments that are in some ways similar within segments and different across segments, but if men and women don’t have different purchase patterns in the client’s category, this segmentation will not be useful. A gender-based segmentation in the fashion apparel category may be useful but a gender-based segmentation in the smart phone category may not.

Our Approach

MACRO’s approach to segmentation has consistently yielded actionable segmentations and is described below:

- ① Identify or construct a variable representing the most relevant outcome to the client. This might be brand preference, purchase interest, click through, awareness, consideration set, etc. Most often, this variable will be related to purchase behavior.
- ② Divide the total set of candidate segmentation variables into subject areas, eg, demographics, category attitudes, product usage, brand imagery, lifestyles, psychographics, etc.
- ③ Clean and edit the entire data set to handle missing values, don't know/not sure, recode where necessary, create new variables as necessary.
- ④ If the study is a multi-country project, it is important that all ratings scales based batteries be standardized and centered to diminish the effects of scale usage bias. Note: MACRO recommends replacing all ratings based batteries with MaxDiff exercises whenever possible, regardless of the number of countries involved.
- ⑤ In some cases where there are high levels of collinearity within subject area variables, exploratory factor analysis may be conducted to control collinearity in the linear regression models.
- ⑥ Using various statistical techniques, typically SPSS's Two Step Cluster, Sawtooth's Convergent Cluster, Latent Gold's latent class linear regression (and occasionally Latent Gold's latent class choice (logistic) regression and AMOS's structural equation mixture modeling), run numerous segmentation solutions for each subject area. The dependent variable identified in the first bullet point above will be used in any and all regression-based segmentations.
- ⑦ All of these segmentation solutions are combined using Sawtooth's Cluster Ensemble Analysis into one final segmentation solution. A recent MACRO segmentation had 124 individual segmentation solutions that were combined into an eight segment solution. The final solution was very well received. It had substantial and meaningful differences across groups so that profiling was clear and actionable.

Our Statistical Tools

MACRO's primary statistical tools for creating actionable segmentations are:

Cluster Analysis (CA)

Cluster Analysis is a common, distance based procedure for grouping respondents into groups. In its traditional form, CA requires metric data in order to calculate distances. MACRO uses two improved variations of traditional CA in our segmentation projects:

Two Step Cluster Analysis (TSCA)

TSCA is an SPSS technique that combines categorical and metric data in the same segmentation basis. It also provides statistical diagnostics to indicate the optimal number of segments in the best fitting solution.

Convergent Cluster Analysis (CCA)

CCA is a Sawtooth program that examines numerous cluster solutions and searches for the most stable, as reflected by a reproducibility statistic.



Latent Class Choice (logistic regression) Models (LCCM)

Using the raw choice data from a traditional Choice-based Conjoint or a MaxDiff exercise, an LCCM can be constructed. Such an LCCM simultaneously divides the survey sample into segments and estimates parameters for the predictor variables (conjoint attributes or MaxDiff items) in choice models for each segment. The resulting segmentation solution is virtually assured of having significantly different drivers or hot buttons across segments.

Latent Class Linear Regression Models (LCRM)

Similar to LCCM, LCRM simultaneously divides the survey sample into segments and estimates parameters for the predictor variables for each segment. The resulting segmentation solution is virtually assured of having significantly different drivers or hot buttons across segments. LCRM is used when the dependent variable contains metric data instead of choice data.

Decision Pathway Segmentation (DPS)

DPS is a multi-stage approach. First, a Structural Equation Model is developed for the total marketplace. This model will provide substantial insight into overall market structure. The predictor variables from this model are then used as the segmentation basis in a traditional segmentation scheme, eg, Latent Class Cluster Analysis, SPSS's Two Step Cluster Analysis, Sawtooth's Convergent Cluster Analysis, etc. The resulting segments are more likely to have different drivers across segments than with traditional segmentation.



Structural Equation Mixture Modeling (SEMM)

SEMM is a more elegant form of DPS. With SEMM, the SEM is estimated and the segments are defined simultaneously, similarly to LCCM and LCRM. SEMM based segmentation solutions are virtually assured of having significantly different drivers or hot buttons across segments.

Cluster Ensemble Analysis

Cluster Ensemble Analysis (CEA) is the latest advancement in segmentation. With CEA, multiple independent segmentation solutions are combined. This “consensus” solution has been shown to be a more accurate reflection of the underlying market structure than any of the single segmentations on which it is based. Additionally, classification algorithms have been shown to be more accurate when assigning subjects to the CEA segmentation solution than to any other segmentation solution.

An important conceptual benefit of CEA is that CEA, by virtue of building consensus across solutions, tends to keep the basic characteristics of the separate segmentations on which it is based. If one segmentation, for example, was structured based on key drivers of purchase interest and another was based on demographics and media habits, the CEA solution would attempt to retain the fundamental patterns and structures of both.

MACRO CONSULTING INC.

INTELLIGENT DECISIONS.

Tel. : 650-823-3042

Fax : 831-480-8419

General Inquiries:

info@macroinc.com

Advanced Analysis Inquiries:

analysis@macroinc.com

richard@macroinc.com

www.macroinc.com