Measuring Balance of Response Set

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Today, non-response is an annoying problem in each sample survey. The resulting response set is usually out of balance with respect to the full sample. This means that the originally unbiased estimators become biased if applied in response set. Even special adjustment methods cannot remove the entire bias. C.-E. Särndal has recently worked out methodology for measuring balance of the response set. In this presentation we use his balance indicator to monitor sample selection process. The indicator is a measure of the weighted difference of the auxiliary variable means in the response set and in the full sample. We argue that response rate alone is not enough to express quality of the sample. Moreover, increasing response rate by the efforts to get data from arbitrary non-respondents may be even harmful to the balance of the response set. We describe methodology to identify those non-respondents who would bring highest increase towards balance. The idea is then to direct data collection process; to direct more efforts for incorporating the most influential non-respondents. The illustration is given.

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