“Variance Estimation for Survey-Weighted Data Using Bootstrap Resampling Methods: 2013 Methods-of-Payment Survey Questionnaire” (with Rallye Shen)

Abstract:
Sampling units for the 2013 Methods-of-Payment Survey were selected through an approximate stratified random sampling design. To compensate for non-response and non-coverage, the observations are weighted through a raking procedure. The variance estimation of weighted estimates must take into account both the sampling design and the raking procedure. We propose using bootstrap resampling methods to estimate the variance. We find that the variance is smaller when estimated through the bootstrap resampling method than through Stata's linearization method, where the latter does not take into account the correlation between the variables used for weighting and the outcome variable of interest.

“The Mode is the Message” (with Geoff Dunbar and Rallye Shen)

Abstract:
We propose a novel selectivity correction procedure to deal with survey non-response in treatment effect models. As a substitute for the instrument needed in sample selectivity correction models, we use information on the past average response rate which is potentially mismeasured. We use both small parameter asymptotic methods and mean-matching variance stabilization transformation to obtain the approximate generic effects of measurement error. The approximations can be estimated using data on observed outcomes, the treatment indicator and error contaminated covariates providing an indication of the nature and size of measurement error effects.