DISSERTATION DEFENSE

March 16, 2023, 12:00 pm EDT

Please join Zoom 949 3061 9580 using passcode 031623

Combining Adaptive Survey Design with Post-Survey Weighting Adjustment

Adaptive survey design is a recruitment method that tailors survey protocols to distinctive characteristics of sample subgroups. The goal of adaptive design is to improve response rates and balance respondent compositions, which may in turn lead to survey estimates with lower biases and variances. However, it is not well understood how adaptive design can improve data and estimates beyond the standard practice of post-survey weighting adjustment. This question is asked because, just like adaptive design, the purpose of weighting adjustment is also to reduce biases and variances of survey estimates. At the same time, the input information available for developing adaptive design is also available for performing weighting adjustment. So can combining adaptive design and weighting adjustment lead to survey estimates with small biases and variances compared to only performing weighting adjustment? This dissertation reports the results of one simulation study and two experiments that address this question from different angles.

Shiyu Zhang is a PhD candidate in the Program in Survey and Data Science at the University of Michigan. She holds an MA in sociology from the University of Chicago, an MSc in immigration studies from Utrecht University, and an MS in data science from Tilburg University. Her primary research interests include studying data representation, the mechanism of survey nonresponse, and the use of responsive and adaptive design to improve survey participation and data quality.