

Dissertation Defense

Nonresponse and Measurement Error in Mixed-Mode Designs

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Because of declining response rates in surveys (de Leeuw & van der Zouwen, 1988), survey researchers are increasingly using data collection methods that can increase response rates while containing costs. One such method is the use of sequential mixedmode designs; in these designs, the mode of administration is switched. In general, the initial mode is less expensive than the second mode, and survey designers believe the use of a second mode will likely increase response rates, relative to just using the first mode. Sequential designs can be used in both cross-sectional surveys and panel surveys. While we know a great deal about response rates across modes in cross-sectional surveys (e.g., Dillman et al., 2008), we know little about other response behaviors in sequential designs used at each wave of a panel survey. Furthermore, we know little about how survey error is affected by sequential mixed-mode designs. Nonresponse bias may still increase after adding respondents who used the second mode, even if the response rates increase from the first mode to the second mode. In panel surveys, this change in nonresponse bias between the first mode and the second may also change across waves. And although we know a great deal about measurement error differences across modes (Tourangeau et al., 2000), sequential designs may create a situation in which nonresponse and measurement error are linked. The respondents in the second mode may be less likely to respond than the respondents in the first and may be different with respect to some key estimates. This dissertation will examine the use of sequential designs in panel surveys. Response propensity, the propensity to be a late respondent, and the propensity to use a particular mode will be examined across waves of a panel survey. Nonresponse bias in this panel survey will also be estimated, and the effect of the mode switch on the nonresponse bias will be evaluated. In a single wave of a second panel survey, nonresponse bias, measurement error, and the relationship between response propensity and measurement error will also be examined.