

Using paradata to identify response styles and respondent profiles for adaptive survey design

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Adaptive survey designs originate from a focus on nonresponse error and from trade-offs between proxy measures for nonresponse bias and survey costs. The rationale behind the designs is that survey target populations are diffuse in their response behaviour to different survey design features. The most prominent design feature in survey design decisions is the survey mode as it varies strongly in both costs and accuracy. The survey mode is, however, known to produce method effects that are broader than just differences in nonresponse error, and a single-minded focus on nonresponse in adaptive survey design is, therefore, too naïve and simple. To become applicable in mixed-mode surveys, the adaptive survey design framework needs to be extended to measurement error.

There have been some recent attempts in the literature to develop a framework in which adaptive survey designs account for both mode-specific nonresponse error and measurement error. For a survey with only one key variable or with strongly related key variables, such a framework is easily constructed, as one may focus directly on minimizing method effects on a single survey variable. One would still need to have estimates of the method effects for different subpopulations, but the optimization problem is one-dimensional. For a survey with multiple and diverse key variables, such a framework is not easily constructed, because the optimization problem is multi-dimensional. In such settings, it has been suggested to adapt the design to forms of mode-specific answering behaviour that lead to measurement error on many survey variables simultaneously, i.e. to response styles. Response styles are deficiencies in the answering process that persist throughout a significant part of the questionnaire. In the literature there is a vast amount of papers that investigate one or more response styles. Most of them relate the response styles to the cognitive steps in the answering process and many relate them to the survey mode.

Before an adaptive survey design framework can be developed that employs mode-specific response styles, it has to be established to what extent response styles can be predicted from characteristics of the survey questionnaire and the respondent. In the paper, I discuss the design of an experimental study linked to the Dutch Labour Force Survey and to the Dutch LISS-panel. With the experiment, the utility of paradata (time measurements, audit trails, interviewer observations) is investigated in identifying mode-specific response styles and the deduction of respondent and questionnaire profiles. The results from the experiment form the input to research on adaptive survey design.