Response Variance Estimation in Personal Interview Surveys with Several Interviewer Allocation Schemes

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Linear and multiplicative models have been used to explain the factors effecting nonsampling errors, which naturally includes response error models. The response error models are generally evaluated as simple response errors while some others evaluated as correlated response errors. They naturally take the interaction between the interviewer and the respondent into account. In this work, the optimum interviewer allocation settings have been investigated by using different experimental design plans including nested, nested and factorial factors and split plot designs to study the sources of both types of errors. The proposed designs consider several stages of an interactive process.

Keywords: survey design; response error; experimental design, face to face interviewing