



Improving the Efficiency in Interviewer Call Scheduling: Analysing Final Outcome and Length of Call Sequences

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For interviewer administered surveys many survey agencies nowadays routinely collect call record data. Examples of such data are recordings of the day, time and outcome of each call or visit and, for face-to-face surveys, information collected by the interviewer such as physical and social characteristics of the selected housing unit and neighbourhood. Researchers have increasingly become interested in how best to use and analyse such information. It is hoped that a better understanding of the calling patterns and the mechanisms leading to particular call sequences will help to improve data collection.

More specifically, for statistical agencies, investigating time and effort into repeated calls and follow-ups is very resource-intensive. From a survey management perspective, it seems desirable to avoid long unsuccessful call sequences to improve efficiency. The aim then is to identify early on in the data collection process cases prone to long and unsuccessful call sequences.

This paper models call record data predicting final call outcome and length of a call sequence early on in the data collection process. Separate binary logistic and joint multinomial models for the two outcomes are considered, where the models account for the clustering of sample cases within interviewers. Of particular interest is to identify good explanatory variables that predict final outcome and length of a call sequence, in particular characterising long unsuccessful call sequences. Further research questions that we aim to address in this study are: how can call record predictors best be incorporated into the model(s): as summary statistics or as individual outcomes?; how predictive are the models?; does their ability to predict improve once interviewer observation variables and more and more call records are available?

The study uses data from a large-scale longitudinal survey in the UK, Understanding Society. Implications for survey practice and fieldwork procedures are discussed. The results indicate that modelling outcome and length of a call sequence jointly improves the fit of the model. Outcomes of previous calls, in particular from the most recent call, are highly predictive. The timing of calls and interviewer observation variables, although significant in the models, only slightly improve the predictive