

Smart surveys: How active should respondents be in passive sensor data collection?

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Abstract

Smartphones and sensors can be used to extend traditional data collection. Smart surveys combine primary and secondary data collection, and are a hybrid form between traditional (e.g. survey data) and new forms of data (e.g. sensor data or big data). Smart surveys aim at easing the response task, decreasing the respondent burden and/or improving data measurement accuracy. Smart surveys face an important question in designing and analyzing the combination of survey questions and sensor measurements though: To what extent should respondents be actively involved in sensor data collection? We face a trade-off between respondent burden and data quality here: Sensor data may namely also face measurement errors, and we would like our respondents to adapt those inaccuracies.

Last year, a large-scale field test has been conducted with a Household Budget Survey App at Statistics Netherlands, testing various user interface design choices and motivation strategies. This app combines passive (scan receipts) and active (manual data entry and in-app editing) data collection. In this presentation, we show how respondents interact with the app, how active or passive respondents are, and how the (smart features of) apps influence data quality. This discussion is essential to bring our research apps to a higher level.