

## **Methodological challenges of smart surveys – three case studies**

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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 types of data (e.g. survey data) and new forms of data (e.g. sensor data and other forms of big data). Smart surveys aim at easing the response task, decreasing the respondent burden and/or improving data measurement accuracy. Smart surveys incorporate one or more of the following features: mobile device intelligence, mobile device sensors, linkage to external sensor systems, inclusion of public online data, inclusion of personal online data and linkage consent to already available data.

In this talk, we will discuss the methodology and potential of smart surveys following three use-cases that employ a subset of the smart features: a smart household budget survey, a physical activity tracker, and a smart travel survey. More specifically, the three different use-cases we will discuss are:

- Household Budget Survey: an app-assisted survey that allows respondents to scan receipts and for which bank transactions data are explored.
- Physical activity tracker: a fitness tracker, activPAL, used to measure respondents' physical activities and sedentary behaviour over a specified period.
- Travel survey: an app-assisted survey that uses location data to derive stops, travelled distances, means of transportation and travel purposes.