

## **CURIOS: A framework to optimize CAPI surveys using paradata**

Antoine Rebecq

Survey Sampling Methodologist – Department of Statistical Methods  
INSEE – Institut National de la Statistique et des Études Économiques  
Paris, France

**&**

Thomas Merly-Alpa

Survey Sampling Methodologist – Department of Statistical Methods  
INSEE – Institut National de la Statistique et des Études Économiques  
Paris, France

### **Abstract**

Nonresponse is one of the main issues in survey sampling. Estimators in use in official statistics institutes all account for nonresponse, but sometimes *ex post* treatment cannot correct for all flaws that are due to the data collection process. This is especially true when survey data is used for small-area or small-domain estimation. For this reason, methods that allow for real-time adjustment on the sample to take into account flaws arising from the data collection process have been imagined and developed. Such methods already exist (for example at Statistics Canada) for CATI surveys. The data they use to adjust the sample is called “paradata”. Unfortunately, the methods that are used in the context of CATI cannot be used for CAPI surveys. This paper develops the CURIOS (Curios Uses Representativity Indicators to Optimize Samples) algorithm, which is a framework that uses paradata and fundamental properties of survey samples to enable sample adjustments for CAPI surveys.