

Centre For Health Economics Seminar Series 2018

ESTIMATING STOCHASTIC SURVEY RESPONSE ERRORS USING THE MULTITRAIT- MULTIERROR MODEL



Presenter: Alexandru Cernat, Manchester University
Date: Wednesday, 6th June 2018
Time: 12.00pm - 1.00pm
Venue: RB Scotton Room
Centre for Health Economics

Abstract:

Response errors of different types, including acquiescence, social desirability, and random error, are well-known to be present in surveys simultaneously and to bias substantive results. Nevertheless, most methods developed to estimate and correct for such errors concentrate on a single error type at a time. Consequently, estimation of response errors is inefficient and their relative importance unknown. Furthermore, if multiple potential errors are not evaluated simultaneously, questionnaire pretests may give the wrong answer regarding the best question form. In this paper, we propose a new method to estimate and control for multiple types of errors concurrently, which we call the "multitrait-multierror" (MTME) approach. MTME combines the theory of experimental design with latent variable modeling to efficiently estimate response errors of different types simultaneously and evaluate which are most impactful on a given question. We demonstrate the usefulness of our method using six commonly asked questions on attitudes towards immigrants in a representative UK study. For these questions, method effect (11-point vs. 2-point scales) was one of the largest response errors, impacting both reliability as well as the size of social desirability.

Presenter

Alexandru Cernat joined Social Statistics in July 2016. Prior to this he was a Research Associate at the National Centre for Research Methods. An important part of his research is centred around modelling measurement error in the framework of generalized latent variables (i.e., Structural Equation Modelling, Latent Class and Item Response Theory) with a particular interest in applying these to longitudinal data. These statistical models are often used in the context of survey methodology to investigate topics such as: measurement error, non-response, mixed mode designs, longitudinal surveys, paradata, interviewer effects, surveying sensitive topics, etc.

Another research area of interest is missing data and ways to correct for this. This work focuses especially on missing biomarkers in surveys and is part of the National Centre for Research Methods grant: Accounting for informative item nonresponse in biomarkers collected in longitudinal surveys (WP3).

VISITORS ARE MOST WELCOME

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