

## **COVARIANCE STRUCTURE MODELLING WITH COMPLEX SURVEY DATA**

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### **ABSTRACT**

A wide class of models of interest in social and economic research can be represented by specifying a parametric structure for the covariances of observed variables. The availability of software, such as LISREL (Jöreskog and Sörbom, 1988) and EQS (Bentler, 1995), has enabled these models to be fitted to survey data in many applications. In this paper we consider approaches to inference about such models using survey data derived by complex sampling schemes. We consider evidence of finite sample biases in parameter estimation and ways to reduce such biases (Altonji and Segal, 1996) and associated issues of efficiency of estimation, standard error estimation and testing. We use longitudinal data from the British Household Panel Survey for illustration. These data are subject to attrition and we also consider the issue of how to use non-response weights in the modelling.

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