

# References and links for Statistics and Analysis of Survey Data

## Analysis of survey data

- UN Department of Economic and Social Affairs: Household Sample Surveys in Developing and Transition Countries
  - Section E: Analysis of Survey Data
- <http://unstats.un.org/unsd/hhsurveys/>
  - An up-to-date account with examples, written by leading experts.
- Lohr, S. J. (1999) *Sampling: Design and Analysis*. Duxbury Press.
  - Textbook on sampling theory with excellent examples.
- Chambers, R., and Skinner, C. J. (eds) (2003) *The Analysis of Survey Data*. Wiley.
  - Papers by leading experts.
- <http://www.napier.ac.uk/depts/fhls/peas/>
  - A website with examples of survey analysis using several software packages.
- <http://www.hcp.med.harvard.edu/statistics/survey-soft/>
  - The website on survey software for the Survey Research Methods Section of the American Statistical Association
- Brisebois, F. and Bédard, M. Population Health Surveys Bootstrap Hands-on Workshop
  - [http://data.library.ubc.ca/rdc/other/0702Hands\\_on.ppt](http://data.library.ubc.ca/rdc/other/0702Hands_on.ppt)
  - Statistics Canada powerpoint presentation, effective use of graphics and animation.
- [http://prod.library.utoronto.ca:8090/datalib/codebooks/utm/jcush/2003/bootstrap/sas/bootdoc\\_eng.pdf](http://prod.library.utoronto.ca:8090/datalib/codebooks/utm/jcush/2003/bootstrap/sas/bootdoc_eng.pdf)
  - A guide to the use of bootstrap weights from the University of Toronto Research Data Centre.
- Rao, J. N. K. and Wu, C. F. J. (1988) Resampling inference with complex survey data *Journal of the American Statistical Association* 83, 231-241.
  - The paper on which bootstrap methods for complex surveys are based.
- Grilli, L. and Pratesi, M. (2004) Weighted estimation in multilevel ordinal and binary models in the presence of informative sampling designs. *Survey Methodology* 30, 93-103.
  - Heavily cited paper. One feature is the use of SAS PROC NL MIXED with a bootstrap procedure for the models described in the title.

## General methodology

- <http://methodology.psu.edu/>
  - A site with sections on missing data, latent transition analysis, intensive longitudinal data, adaptive treatment strategies, the multiphase optimization strategy (MOST), variable selection.
- <http://www.statmodel.com/>
  - Website for software Mplus; this site has links to educational material and research articles.
- Greenland, S. and Brumback, B. (2002). An overview of relations among causal modeling methods. *International Journal of Epidemiology* 31, 1030-1037.
  - This paper provides a brief overview of four types of causal models for health sciences research: Graphical models (causal diagrams), potential outcome (counterfactual) models, sufficient-component cause models, and structural equations models. The examples are very interesting.

## Generalized Estimating Equations, or GEE

- Hanley, J.A., Negassa, A., deB Edwardes, M., Forrester, J.E. (2003). Statistical Analysis of Correlated Data Using Generalized Estimating Equations: An Orientation. *American Journal of Epidemiology* 157, 364–375.

## Multilevel modeling

- <http://multilevel.ioe.ac.uk/>
  - A comprehensive website on theory and applications of multilevel models
- Hox, Joop (2002) *Multilevel Analysis: Techniques and Applications*. Lawrence Erlbaum Associates.
- <http://www.fss.uu.nl/ms/jh/mlbook/leabook.htm>
  - Book and associated website with applications and useful links.
- Singer, Judith D. (1998) Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models. *Journal of Educational and Behavioral Statistics* 24, 323-355. Available from Judith Singer's website.
  - An expository article with many examples of SAS code.

## Small area methods

- <http://www.hsph.harvard.edu/thegeocodingproject/webpage/monograph/>
  - Monograph for geo-coding project with discussion of analytical features
- Rao, J.N.K. (2003) *Small Area Estimation*. Wiley

- Authoritative treatment, aimed at statisticians. (There is no textbook yet aimed at non-statisticians.)

### **Structural equation modelling**

- Bollen, K. (2004) An Overview of Structural Equation Modelling (tutorial)
- <http://www.samsi.info/200405/socsci/opening/lvss-opening-talks.html>