

Book Reviews

Kendall's Library of Statistics 6: Statistical Regression with Measurement Error

CHI-LUN CHENG & JOHN W. VAN NESS, 1999

London, Arnold

pp. xiv + 262, £35.00

ISBN 0 340 61461 7

This book forms the sixth part of 'Kendall's Library of Statistics' which is a major expansion of Kendall's 'Advanced Theory of Statistics', incorporating new monographs on specialised statistical topics. This particular contribution is aimed at providing a review of measurement error models. In particular it discusses three main types of models, the structural model, the functional model and the ultrastructural model. Some of the topics covered by the book include identifiability of the models, estimating parameters and calculating confidence intervals, finite sample theory and asymptotic theory, non-normal models, and robust methods.

The book is aimed at readers who have taken a course in probability and theoretical statistics, although I feel that to fully comprehend the topics discussed in the text, this course would have to be at an advanced level. The authors aim to emphasise the ideas and practical implementation of the theory without much emphasis on the theorem-proof environment. To this end, they somewhat achieve this aim although occasionally you feel that more data examples would further help ones understanding of the theory.

The book contains eight chapters and one appendix. Most chapters conclude with a set of bibliographic notes, discussion and some exercises. In addition certain chapters have an additional section on research problems. In general the chapters are well arranged with a clear development of the theory and the exercises nicely complement the theory covered in the chapter. The book clearly demonstrates that ignoring the effect of measurement error in any study can produce the wrong answers and that accounting for measurement error can, in some cases, be quite a simple task.

I would recommend that this is an essential book for any library and for anyone with a interest in the theory of measurement error modelling, however it is not clear that it would be as useful for an applied statistician (although it would be a useful reference source).

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Sampling of Populations: Methods and Applications

P. S. LEVY & S. LAMESHOW, 1999

John Wiley & Sons,

pp. xxxi + 525, £70.00

ISBN 0 471 15576 6

Sampling techniques play a crucial role in many areas of research. The third edition of this popular textbook provides practical treatment of the subject with the latest work being done in this area. The expanded and updated edition includes the latest methods of multistage sampling, analysis of sample survey data, telephone sampling and interviewing techniques, and also discusses some of the software available in this area. Lots of Examples are given in each chapter illustrating key statistical issues with data sets available for downloading over the internet.