as a classic text.

Mohamed Afzal Norat
London

A Handbook of Statistical Analyses using SPSS
S. LANDAU AND B. S. EVERITT, 2004
Boca Raton, CRC
xii + 354 pp., £24.99
ISBN 1-58488-369-3

This soft-back book has 12 chapters with numerous displays and several tables. The displays show various SPSS menus, dialogue boxes, spreadsheets or analysis output boxes. The authors are academic biostatisticians, but even the novice will find this book easy to read. The book's aim is to provide instruction in the use of SPSS and to assist in the interpretation of SPSS output. Some basic theoretical statistical background is discussed, but the emphasis is on application of the techniques used for univariate and multivariate analyses.

Chapter One provides an introduction to SPSS and Chapters Two and Three cover simple statistical inference. Chapters Two–Twelve conclude with exercises for practising SPSS and statistical skills, and a Web site address listed by the authors provides data sets and answers to the exercises. Chapters Four–Twelve cover multiple linear regression, analysis of variance including one-way designs, factorial designs, and repeated measures, linear mixed effects models for longitudinal data, logistic regression, survival analysis including Kaplan–Meier and Cox's regression models, factor analysis, principal components analysis and the two major types of classification, cluster analysis and discriminant function analysis.

What I like best about this book is that, like SPSS, it is easy to use. It is valuable to both new students and experienced researchers in need of a practical approach to using SPSS. There are four complete pages of references, and an 18-page index.

I highly recommend this book for library purchase, and for individuals using SPSS, for either studying statistics or analysing data.

Mark A. Best
St Matthew's University
Grand Cayman

Changes in Private Consumption Expenditure in India, 1900-01 to 1950-51
B. ROY, 2003
Kolkata, KLM
xvi + 188 pp., 400 rupees
ISBN 81-7102-103-4

This book shows the main descriptive statistical aspects of private consumption in India during the first half of the 20th century. The relevant economic changes in the life of Indian people are described: the food that they consumed, the education and medical aid that they received, their clothing, houses and means of transport, etc. The actual standard of living is worked out by applying statistical and survey methods, but they do not relate to the period that was chosen for this study. The complementary study by Desai (1948) covered the standard of living of the population residing in both India and Pakistan before independence.

Chapter II describes the statistical methods and sources of data for the study; Chapters III and IV cover past and present estimates of consumer expenditure. The conclusions are presented in Chapter V; the sources of data are given in the bibliography. There are three appendices and numerous tables, figures and graphics. One conclusion of the study is that the degree of monetization, which is closely linked to the overall growth of the Indian national economy, is steadily increasing.

The author seeks to show that the relationships between consumption habits and production are basic materials for regional planning. Further, in lower and middle income households, their size determines the standard of living. There are wide disparities between the states, and between urban and rural areas, in such vital matters as per capita expenditure on education and medicine. Suggestions for supplementary studies are made.

Some minor *errata* appear in the text, but the book's historic interest and its detailed contents are sufficient to recommend it.

Reference
Desai, R. C. (1948) Consumption expenditure in India, 1931–32 to 1940–41. *J. R. Statist. Soc.* A, **111**, 261–298.

Mariano Ruiz Espejo
Universidad Nacional
de Educación a Distancia
Madrid

Semiparametric Regression
D. RUPPERT, M. P. WAND AND R. J. CARROLL, 2003
Cambridge, Cambridge University Press
xvi + 386 pp., £29.95
ISBN 0-521-78516-2

This book forms part of a series on all aspects of stochastic applicable mathematics, which

> 'contains clear presentations of new developments in the field and also the state of the art in classical methods'.

The authors describe their aim for this particular text as being to guide researchers needing to incorporate non-linear relationships into their regression analysis flexibly. It is intended for students and working scientists with only a moderate background in regression (but familiarity with matrix and linear algebra) and for statistically oriented scientists who have a good working knowledge of linear models. The authors also provide

'enough new material to be of interest even to experts on smoothing'.

Nonparametric modelling (additive and semi-parametric models) seems to be a growth area in applied statistics at present, and so this book is extremely timely. Most scientists will be familiar with classic parametric regression modelling, and its extensions; fewer will be familiar with nonparametric regression. This book will help to broaden the appeal of these nonparametric techniques.

It has 19 chapters (some of them fairly short) and two appendices (technical complements and computational issues). Chapter 2 presents parametric regression, including non-linear models and the use of transformations. Chapter 3 introduces scatter-plot smoothing, continuing this theme through to Chapter 5. Chapter 6 deals with inference, confidence bands and tests of adequacy of parametric models and of no effect. Chapter 7 introduces the simple semiparametric models, followed by chapters on additive models and semiparametric mixed models. Chapters 10 and 11 cover generalized parametric and additive models. Chapter 12 deals with interaction models. There then follow chapters on bivariate smoothing, Bayesian semiparametric regression and spatially adaptive smoothing. Two remaining chapters deal with variance function estimation and measurement error.

The last but one chapter covers different analyses, with seven case-studies in total, and the final chapter touches on some omitted topics (robustness, quantile regression, non-quadratic penalties, highly adaptive smoothing, missing data, functional data analysis, survival analysis, single-index models, statistical learning, constrained smoothing and smoothing geographical count data).

I found it an easily readable book; its coverage of material was extensive and well explained and well illustrated. Starting the book with a series of applications that are followed up throughout the text and in the last chapter makes the book flow. I found the 'summary of formulae' sections at the end of various chapters very helpful. I also much appreciated the emphasis on 'model selection', which is a theme which recurs in many of the chapters. I came to the book with some knowledge of the subject, so I fit potentially into the third category of reader. I found the material useful and I recommend it strongly to anyone who is interested in modern nonparametric methods, whether they are expert or not.

Marian Scott
University of Glasgow

Handbook of Parametric and Nonparametric Statistical Procedures, 3rd edn
D. J. Sheshin, 2004
Boca Raton, Chapman and Hall–CRC
xxxiv + 1194 pp., £93.00
ISBN 1-58488-440-1

This immense book is principally a reference work on classical hypothesis tests for one or two variables. The second edition was reviewed by Kemp (2003). The third edition is over 200 pages longer—fortunately it is impressively well bound.

The introduction alone has almost trebled in length to 105 pages. The new sections here include visual methods for displaying data, a history and critique of the classical hypothesis testing model, experimental design, sampling methodologies and the principles of probability. Some new statistical procedures have been added, including the Jonckheere–Terpstra and Page tests for ordered alternatives (for which tables are given for use with small samples), the Stuart–Maxwell test of marginal homogeneity and the Gart test for order effects. There is also a new 50-page section on Bayesian statistics, although this does not mention the Markov chain Monte Carlo method that has enabled the recent explosion of this field.

The author does venture beyond hypothesis tests, particularly in the last five chapters on measures of association and correlation, but the book's focus is on testing rather than estimation. His background in the social sciences has clearly influenced the choice of material—for example there is no mention of statistical process control, and the section on meta-analysis ignores the methods that are most used in medical applications. The book does not cover tests for time-to-event or circular data, Mantel–Haenszel methods or sequential tests. Although there is an overview of computer-intensive procedures the emphasis throughout is on methods for handling one or two variables that could feasibly be applied without a computer, so there is little on multiple regression (linear or otherwise), or on multivariate analysis.

This book could be useful to those wanting a single-volume reference on classical hypothesis tests, particularly to those with some previous exposure to statistics short of a higher degree who like plenty of examples of how to do calculations. I feel that the attempt to extend the book to provide a single-