THE STATA NEWS

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What's new in Stata 9

Have you updated your Stata 9 lately? Here are some of the new features:

- New command prefix `nestreg`: performs nested-model estimation. `nestreg` sequentially adds blocks of variables to the model and reports comparison tests between nested models.

```
. nestreg, quietly: regress mpg (gear turn) (weight length)

Block  1: gear_ratio turn
Block  2: weight length

  +-------------------------------------------------------------+
  |       |        Block  Residual                      Change  |
  | Block |      F     df        df   Pr > F        R2    in R2  |
  |-------+-----------------------------------------------------|
  |     1 |  43.09      2        71   0.0000    0.5483          |
  |     2 |  11.62      2        69   0.0000    0.6621   0.1138  |
  +-------------------------------------------------------------+
```

A regression of `mpg` on `gear` and `turn` resulted in an R^2 of 0.5483. Adding `weight` and `length` to the model increased the R^2 by 0.1138, and that change was statistically significant ($F(2,69) = 11.62, p < 0.0001$).

- `nl` now supports the `vce()` option, allowing you to obtain bootstrap, jackknife, robust, and three heteroskedasticity- and autocorrelation-consistent (HAC) variance estimators, including Newey and West's.

  `mfx` now works after `nl`. Getting marginal effects after fitting an arbitrary nonlinear regression is easy.

- New command `adoupdate` makes keeping user-written commands you have downloaded up to date as easy as keeping official Stata up to date. `adoupdate` compares the versions of user-written commands you have installed with the latest versions available from the *Stata Journal*, *Stata Technical Bulletin*, Boston College SSC, and other download sites, and optionally updates any outdated packages it finds.
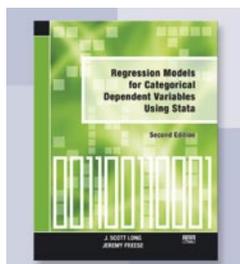
  To learn more, `update` your Stata, and then type

  ```
  . help adoupdate
  ```

NEW BOOKS FROM STATA PRESS

Title: *Regression Models for Categorical Dependent Variables Using Stata, 2nd Edition*
Authors: J. Scott Long, Jeremy Freese
Publisher: Stata Press
Copyright: 2006
ISBN: 1-59718-011-4
Pages: 527; paperback
Price: $58.00

Regression Models for Categorical Dependent Variables Using Stata, 2nd Edition

Regression Models for Categorical Dependent Variables Using Stata, 2nd Edition, by J. Scott Long and Jeremy Freese, shows how to fit and interpret regression models for categorical data with Stata. Nearly 50% longer than the previous edition, the book covers new topics for fitting and interpretating models included in Stata 9, such as

THE STATA NEWS is published four times a year and is free to all registered users of Stata.
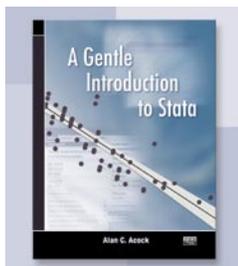
multinomial probit (MNP) models, the stereotype logistic model, and zero-truncated count models. Many of the interpretation techniques have been updated to include interval as well as point estimates.

Although regression models for categorical dependent variables are common, few texts explain how to interpret such models. *Regression Models for Categorical Dependent Variables Using Stata, 2nd Edition*, fills this void, showing how to fit and interpret regression models for categorical data with Stata. The authors also provide a suite of commands for hypothesis testing and model diagnostics to accompany the book.

The book begins with an excellent introduction to Stata and then provides a general treatment of estimation, testing, fit, and interpretation in this class of models. Binary, ordinal, nominal, and count outcomes are covered in detail in separate chapters. The final chapter discusses how to fit and interpret models with special characteristics, such as ordinal and nominal independent variables, interaction, and nonlinear terms. One appendix discusses the syntax of the author-written commands, and a second gives details of the datasets used by the authors in the book.

This book is filled with concrete examples. Because all the examples, datasets, and author-written commands are available from the authors' web site, readers can easily replicate the examples using Stata. This book is ideal for students or applied researchers who want to know how to fit and interpret models for categorical data.

The table of contents, as well as online ordering information, can be found at **http://www.stata-press.com/books/regmodcdvs.html**. You may also order using the enclosed bookstore order form.

Title:	*A Gentle Introduction to Stata*
Author:	Alan C. Acock
Publisher:	Stata Press
Copyright:	2006
ISBN:	1-59718-009-2
Pages:	289; paperback
Price:	$42.00

A Gentle Introduction to Stata

Alan C. Acock's *A Gentle Introduction to Stata* is an ideal book for students and for those with experience with other software packages but new to Stata. For the reader who is just learning social statistics and has never used a statistics package before, Acock leads the way, first explaining how to use the Stata GUI, use dialog boxes, and load Stata datasets before moving on to statistical analysis. Users who are familiar with other statistical software will be able to move quickly through the book and become fluent in Stata with ease.

Acock emphasizes using dialog boxes when starting out to help you find options easier and see the Stata commands that will accomplish the same thing. This approach is particularly useful when learning the graphics system.
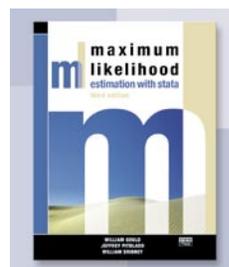
The book relies on real datasets, such as the *General Social Survey for 2002* and the *National Survey of Youth, 1997*, to illustrate the real-world application of statistics instead of using small, artificially created ones. Exercises at the end of each chapter use these datasets. The examples and exercises will appeal to anyone in the social sciences, including economists, sociologists, and psychologists.

The first four chapters are geared toward the mechanics of using Stata: navigating the user interface, loading data into Stata, creating value and variable labels, and saving results and logging commands. The rest of the book follows the outline of a typical introductory statistics course, beginning with descriptive statistics and graphs for a single variable, such as pie graphs and histograms, and then moving to bivariate analysis of two categorical variables, including tables and chi-squared tests. One- and two-sample t tests are covered, as well as nonparametric alternatives like the rank-sum test and the median test. A chapter is devoted to bivariate analysis of continuous variables, including simple correlation, regression, Spearman's rho, Cronbach's alpha, and the kappa statistic of interrater agreement. One- and two-way ANOVA and repeated-measure designs are then covered, followed by a chapter on multiple regression and diagnostics. The final chapter on statistics is devoted to logistic regression.

Acock's *A Gentle Introduction to Stata* is an excellent first book for people new to Stata. The book would be particularly useful as a supplementary textbook for an introductory statistics course, allowing students to learn Stata on their own while course time is spent on statistics.

The table of contents, as well as online ordering information, can be found at **http://www.stata-press.com/books/acock.html**. You may also order using the enclosed bookstore order form.

Title:	*Maximum Likelihood Estimation with Stata, 3rd Edition*
Authors:	William Gould, Jeffrey Pitblado, William Sribney
Publisher:	Stata Press
Copyright:	2006
ISBN:	1-59718-012-2
Pages:	290; paperback
Price:	$43.00

Maximum Likelihood Estimation with Stata, 3rd Edition

Maximum Likelihood Estimation with Stata, 3rd Edition, by William Gould, Jeffrey Pitblado, and William Sribney, is written for researchers in all disciplines who need to fit models using maximum likelihood estimation. Updated for Stata 9, the third edition includes new features, such as the `vce()` option for selecting OIM, OPG, and robust covariance matrices, as well as a chapter on making your estimator support all of Stata 9's new survey-data techniques.
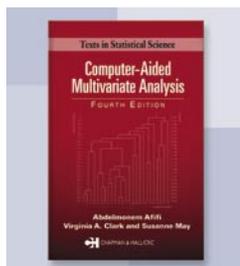
Using a learning-by-doing approach, the book provides many examples, beginning with simple estimators, such as logit and probit for cross-sectional data, and proceeding to more challenging estimators, such as the Cox proportional hazards model, random-effects regression, and seemingly unrelated regression.

The book presumes that the reader is familiar with Stata, but no special programming skills are required for most of the book. The first chapter contains an overview of the theory of maximum likelihood and numerical optimization, with an emphasis on practical implications for applied work. The middle chapters detail, step by step, how to use Stata to maximize your likelihood function, including many examples and sample programs. The final chapters cover survey data and writing your own `ml`-based estimation commands.

Maximum Likelihood Estimation with Stata, 3rd Edition, is a must-have for anyone who wants to do maximum likelihood estimation with Stata.

The table of contents, as well as online ordering information, can be found at **http://www.stata-press.com/books/ml.html**. You may also order using the enclosed bookstore order form.

FROM THE STATA BOOKSTORE

Title: *Computer-Aided Multivariate Analysis, 4th Edition*
Authors: Abdelmonem Afifi, Virginia A. Clark, and Susanne May
Publisher: Chapman & Hall/CRC
Copyright: 2004
ISBN: 1-58488-308-1
Pages: 489; hardcover
Price: $71.75

Computer-Aided Multivariate Analysis, 4th Edition

The fourth edition of *Computer-Aided Multivariate Analysis* by Abdelmonem Afifi, Virginia Clark, and Susanne May, provides an applied introduction to the analysis of multivariate data. Written in a highly approachable style, the book can be used as a text in an applied course in multivariate statistics or as a self-guided training manual. The material will appeal to a broad range of behavioral and biomedical scientists, as well as to industrial and academic researchers.
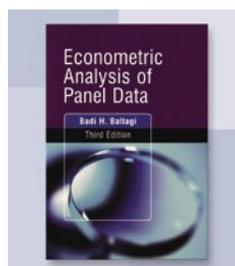
The book is divided into three sections. Section 1 reviews the basics of the different types of data, and how to prepare your data, transform data, and select appropriate statistical techniques. Section 2 covers linear regression techniques, including estimation and inferences, an entire chapter on variable selection, and a chapter of special topics, including missing values, dummy variables, constrained estimation, multicollinearity, and ridge regression. Section 3, the second half of the book, covers the core material of multivariate analysis, including canonical correlations, discriminant analysis, logistic regression, survival analysis, principal components, factor analysis, cluster analysis, and log-linear models.

Each chapter includes subsections that contain an outline of the material, discussions of when a particular technique is used and with what type of data, a review of the basic concepts, an overview of

computer programs that implement a given technique, and caveats for using the technique. Each chapter also contains problems and references to the literature.

The wealth of examples from a wide variety of disciplines, engaging writing style, and broad array of techniques covered make *Computer-Aided Multivariate Analysis* an excellent resource both for those learning multivariate analysis for the first time and those who want a refresher.

The table of contents, as well as online ordering information, can be found at **http://www.stata.com/bookstore/cama.html**. You may also order using the enclosed bookstore order form.

Title: *Econometric Analysis of Panel Data, 3rd Edition*
Author: Badi H. Baltagi
Publisher: Wiley
Copyright: 2005
ISBN: 0-470-01456-3
Pages: 314; paperback
Price: $74.00

Econometric Analysis of Panel Data, 3rd Edition

If you need to know how to perform estimation and inference on panel data from an econometric standpoint, then *Econometric Analysis of Panel Data* is the book to read. Besides being a leading graduate textbook, this book is the standard reference because it contains all the details you need to understand and implement all the leading panel-data models. It also provides a very good introduction to newer, more advanced techniques.

This book provides an excellent introduction for the student or the applied researcher because of its attention to detail and its use of examples, many of which use Stata. The detail is especially useful in the many sections that grow out of Baltagi's own work. In these sections, readers gain a deep enough understanding of the models to implement them in a programming language like Stata. In other sections, such as the chapter on limited dependent variables, Baltagi combines a good introduction to the mechanics with an excellent introduction to the literature, which readers can follow up on if more details are required.

This third edition updates the coverage of recent theoretical developments. The sections on methods for dynamic models, limited-dependent variables models, and nonstationary models have been expanded. Also, this edition includes many more examples than previous editions.

The table of contents, as well as online ordering information, can be found at **http://www.stata.com/bookstore/eapd.html**. You may also order using the enclosed bookstore order form.

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NC-101. Introduction to Stata
Syllabus: http://www.stata.com/netcourse/nc101.html

Prerequisites
Stata 9
Dates offered
January 20–March 3, 2006
Course Leaders
Kevin Crow, Kerry Kammire, and Derek Wagner
Enrollment deadlines
January 19
Price
$95

NC-151. Introduction to Stata programming
Syllabus: http://www.stata.com/netcourse/nc151.html

Prerequisites
Stata 9; basic knowledge of using Stata interactively
Dates offered
January 20–March 3, 2006
Course Leaders
Kevin Crow, Kerry Kammire, and Derek Wagner
Enrollment deadlines
January 19
Price
$125

NC-152. Advanced Stata programming
Syllabus: http://www.stata.com/netcourse/nc152.html

Prerequisites
Stata 9; NC-151 or equivalent knowledge
Dates offered
January 20–March 10, 2006
Course Leaders
Kevin Crow, Kerry Kammire, and Derek Wagner
Enrollment deadlines
January 19
Price
$150

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