

## Brief contents

### Part I General information

- 1 Introduction
- 2 Introduction to Stata
- 3 Estimation, testing, and fit
- 4 Methods of interpretation

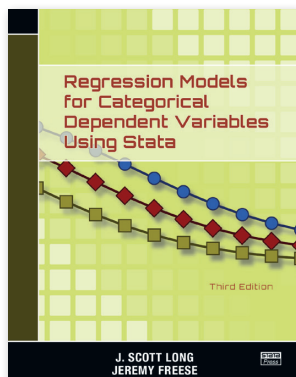
### Part II Models for specific kinds of outcomes

- 5 Models for binary outcomes: Estimation, testing, and fit
- 6 Models for binary outcomes: Interpretation
- 7 Models for ordinal outcomes
- 8 Models for nominal outcomes
- 9 Models for count outcomes

## What's new in this edition

- New chapter covering methods of interpretation
- New chapter devoted to interpretation of binary outcomes
  - » Latent-variable interpretation of coefficients
  - » Substantially expanded discussion of marginal effects, including a new discussion of interactions
  - » Subgroup analysis
- Expanded coverage of interpretation in ordinal, nominal, and count outcomes chapters
- Illustration of calculating marginal effects with Stata's **margins** command
- Updated syntax for commands, including use of factor-variable syntax
- Transformations of predictions to test advanced hypotheses
  - » Plots of predictions using **marginsplot**
  - » Updated suite of authors' popular **SPost** commands

## Regression Models for Categorical Dependent Variables Using Stata, Third Edition



By J. Scott Long  
and Jeremy Freese

Publisher: Stata Press

Copyright: 2014

ISBN-13: 978-1-59718-111-2

Pages: 589; paperback

Price: \$64.00



For more details or to order, visit us online at  
[stata-press.com/books/regression-models-categorical-dependent-variables](http://stata-press.com/books/regression-models-categorical-dependent-variables).



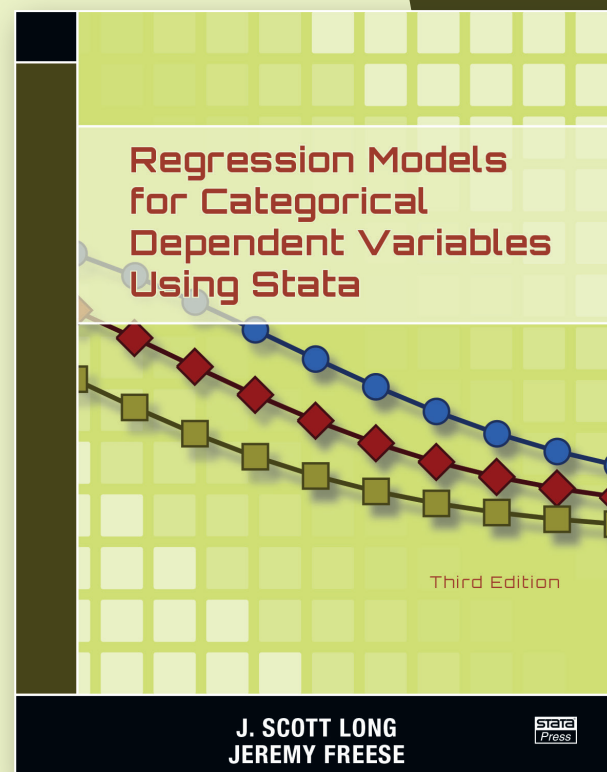
### How to contact us

Stata Press  
4905 Lakeway Drive  
College Station, TX 77845-4512  
USA

800-782-8272 (USA)  
800-248-8272 (Canada)  
979-696-4600 (Worldwide)

[service@stata-press.com](mailto:service@stata-press.com)  
[stata-press.com](http://stata-press.com)

# Stata Press presents



## About the authors

Scott Long is Distinguished Professor of Sociology and Statistics at Indiana University–Bloomington. He has contributed articles to many journals, including the *American Sociological Review*, *American Journal of Sociology*, *American Statistician*, and *Sociological Methods and Research*. Dr. Long has authored or edited seven previous books on statistics, including the highly acclaimed *Regression Models for Categorical and Limited Dependent Variables* and *The Workflow of Data Analysis Using Stata*. In 2001, he received the Paul Lazarsfeld Memorial Award for Distinguished Contributions to Sociological Methodology. He is an elected Fellow of the American Statistical Association and a member of the Sociological Research Association.

Jeremy Freese is Ethel and John Lindgren Professor of Sociology and Faculty Fellow of the Institute for Policy Research at Northwestern University. He has previously been a faculty member at the University of Wisconsin–Madison and a Robert Wood Johnson Scholar in Health Policy Research at Harvard University. He has published numerous research articles in journals, including the *American Sociological Review*, *American Journal of Sociology*, and *Public Opinion Quarterly*. He has also taught categorical data analysis at the ICPSR Summer Program in Quantitative Methods and at El Colegio de México.

## About the book

The goal of *Regression Models for Categorical Dependent Variables Using Stata, Third Edition* is to make it easier to interpret regression models for categorical outcomes. Because the models are nonlinear, they are more complex to interpret. The authors provide an outstanding introduction to interpreting these models and to using Stata to obtain the numerical and graphical results. The authors provide many complete examples using Stata's **margins** command and the authors' new suite of user-written commands.

## Comment from the Stata technical group

*Regression Models for Categorical Dependent Variables Using Stata, Third Edition*, by J. Scott Long and Jeremy Freese, is an essential reference for those who use Stata to fit and interpret regression models for categorical data. Although regression models for categorical dependent variables are common, few texts explain how to interpret such models; this text decisively fills the void.

The third edition is divided into two parts. Part I begins with an excellent introduction to Stata and follows with general treatments of the estimation, testing, fitting, and interpretation of models for categorical dependent variables. The book is thus accessible to new users of Stata and those who are new to categorical data analysis. Part II is devoted to a comprehensive treatment of estimation and interpretation for binary, ordinal, nominal, and count outcomes.

Readers familiar with previous editions will find many changes in the third edition. An entire chapter is now devoted to interpretation of regression models using predictions. This concept is explored in greater depth in Part II. The authors also discuss how many improvements made to Stata in recent years—factor variables, marginal effects with **margins**, plotting predictions using **marginsplot**—facilitate analysis of categorical data.

The authors advocate a variety of new methods that use predictions to interpret the effect of variables in regression models. Readers will find all discussion of statistical concepts firmly grounded in concrete examples. All the examples, datasets, and author-written commands are available on the authors' website, so readers can easily replicate the examples with Stata.

Examples in the new edition also illustrate changes to the authors' popular **SPost** commands after a recent rewrite inspired by the authors' evolving views on interpretation. Readers will note that **SPost** now takes full advantage of the power of the **margins** command and the flexibility of factor-variable notation. Long and Freese also provide a suite of new commands, including **mchange**, **mtable**,

**mgen**, and **mllincom**. These commands complement **margins**, aiding model interpretation, hypothesis testing, and model diagnostics. They offer the same syntactical convenience features that users of Stata expect, for example including powers or interactions of covariates in regression models and seamlessly working with complex survey data. The authors also discuss how to use these commands to estimate marginal effects, either averaged over the sample or evaluated at fixed values of the regressors.

The third edition of *Regression Models for Categorical Dependent Variables Using Stata* continues to provide the same high-quality, practical tutorials of previous editions. It also offers significant improvements over previous editions—new content, updated information about Stata, and updates to the authors' own commands. This book should be on the bookshelf of every applied researcher analyzing categorical data and is an invaluable learning resource for students and others who are new to categorical data analysis.

## The book's audience

This book will appeal to

- applied researchers in social, behavioral, and health sciences
- students in social, behavioral, and health sciences wanting to learn methods for analyzing binary, nominal, ordinal, and count data
- instructors who teach statistics, econometrics, social science statistics, or biostatistics
  - » an ideal companion book
  - » a great resource with practical examples
- Stata users wanting additional information about commands for categorical data