



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

THE STATA JOURNAL

Editor

H. Joseph Newton
Department of Statistics
Texas A&M University
College Station, Texas 77843
979-845-8817; fax 979-845-6077
jnewton@stata-journal.com

Editor

Nicholas J. Cox
Department of Geography
Durham University
South Road
Durham DH1 3LE UK
n.j.cox@stata-journal.com

Associate Editors

Christopher F. Baum
Boston College

Nathaniel Beck
New York University

Rino Bellocco
Karolinska Institutet, Sweden, and
University of Milano-Bicocca, Italy

Maarten L. Buis
Tübingen University, Germany

A. Colin Cameron
University of California–Davis

Mario A. Cleves
Univ. of Arkansas for Medical Sciences

William D. Dupont
Vanderbilt University

David Epstein
Columbia University

Allan Gregory
Queen's University

James Hardin
University of South Carolina

Ben Jann
University of Bern, Switzerland

Stephen Jenkins
London School of Economics and
Political Science

Ulrich Kohler
WZB, Berlin

Frauke Kreuter
University of Maryland–College Park

Peter A. Lachenbruch
Oregon State University

Jens Lauritsen
Odense University Hospital

Stanley Lemeshow
Ohio State University

J. Scott Long
Indiana University

Roger Newson
Imperial College, London

Austin Nichols
Urban Institute, Washington DC

Marcello Pagano
Harvard School of Public Health

Sophia Rabe-Hesketh
University of California–Berkeley

J. Patrick Royston
MRC Clinical Trials Unit, London

Philip Ryan
University of Adelaide

Mark E. Schaffer
Heriot-Watt University, Edinburgh

Jeroen Weesie
Utrecht University

Nicholas J. G. Winter
University of Virginia

Jeffrey Wooldridge
Michigan State University

Stata Press Editorial Manager

Stata Press Copy Editors

Lisa Gilmore

Fred Iacchetti and Deirdre Skaggs

The *Stata Journal* publishes reviewed papers together with shorter notes or comments, regular columns, book reviews, and other material of interest to Stata users. Examples of the types of papers include 1) expository papers that link the use of Stata commands or programs to associated principles, such as those that will serve as tutorials for users first encountering a new field of statistics or a major new technique; 2) papers that go “beyond the Stata manual” in explaining key features or uses of Stata that are of interest to intermediate or advanced users of Stata; 3) papers that discuss new commands or Stata programs of interest either to a wide spectrum of users (e.g., in data management or graphics) or to some large segment of Stata users (e.g., in survey statistics, survival analysis, panel analysis, or limited dependent variable modeling); 4) papers analyzing the statistical properties of new or existing estimators and tests in Stata; 5) papers that could be of interest or usefulness to researchers, especially in fields that are of practical importance but are not often included in texts or other journals, such as the use of Stata in managing datasets, especially large datasets, with advice from hard-won experience; and 6) papers of interest to those who teach, including Stata with topics such as extended examples of techniques and interpretation of results, simulations of statistical concepts, and overviews of subject areas.

For more information on the *Stata Journal*, including information for authors, see the webpage

<http://www.stata-journal.com>

The *Stata Journal* is indexed and abstracted in the following:

- CompuMath Citation Index[®]
- Current Contents/Social and Behavioral Sciences[®]
- RePEc: Research Papers in Economics
- Science Citation Index Expanded (also known as SciSearch[®])
- Scopus[™]
- Social Sciences Citation Index[®]

Copyright Statement: The *Stata Journal* and the contents of the supporting files (programs, datasets, and help files) are copyright © by StataCorp LP. The contents of the supporting files (programs, datasets, and help files) may be copied or reproduced by any means whatsoever, in whole or in part, as long as any copy or reproduction includes attribution to both (1) the author and (2) the *Stata Journal*.

The articles appearing in the *Stata Journal* may be copied or reproduced as printed copies, in whole or in part, as long as any copy or reproduction includes attribution to both (1) the author and (2) the *Stata Journal*.

Written permission must be obtained from StataCorp if you wish to make electronic copies of the insertions. This precludes placing electronic copies of the *Stata Journal*, in whole or in part, on publicly accessible websites, file servers, or other locations where the copy may be accessed by anyone other than the subscriber.

Users of any of the software, ideas, data, or other materials published in the *Stata Journal* or the supporting files understand that such use is made without warranty of any kind, by either the *Stata Journal*, the author, or StataCorp. In particular, there is no warranty of fitness of purpose or merchantability, nor for special, incidental, or consequential damages such as loss of profits. The purpose of the *Stata Journal* is to promote free communication among Stata users.

The *Stata Journal*, electronic version (ISSN 1536-8734) is a publication of Stata Press. Stata, Mata, NetCourse, and Stata Press are registered trademarks of StataCorp LP.

Stata tip 104: Added text and title options

Nicholas J. Cox
Department of Geography
Durham University
Durham, UK
n.j.cox@durham.ac.uk

A frequent desire in graph production is to add explanatory text at appropriate places on a graph. It is a good idea in general to do that sparingly. Similarly, it may be a bad idea in particular to do that at all if a graph is already crowded and likely to prove challenging to readers.

Scatterplots and line plots are the most common examples for which such annotation is wanted. For identifying or commenting on outliers or other particular data points, it is natural to turn to marker labels or added text options, documented in [G-3] *marker_label_options* and [G-3] *added_text_options*. Both kinds of options share the property that they are linked to particular locations specified in terms of the two axes of the graph in the units of the two variables being shown. Sometimes that is exactly the control you need, but it is awkward if what you want is just to put text according to relative position within the data region. Usually, you might want to put the extra text in a corner of the graph. The difficulty then is that Stata's choices of axis limits depend not only on any axis scale options that may be set, but also on the ranges of the variables, what axis labels and ticks have been requested explicitly and implicitly, and so on. Optimizing choices for a single graph can be annoying but is likely to be tolerable. Optimizing choices for several graphs is much more awkward, especially if the aim is to automate a series of graphs though some of the variables' properties are not known exactly in advance.

A point sometimes missed, and the main reason for this tip, is that title and legend options can be moved away from their default positions and placed within the data region. The presumption here is that they are not needed for other purposes. However, there are several title options to choose from, and it is likely that at least one is not currently used. (If you are using all of the options `title()`, `subtitle()`, `note()`, and `caption()`, to say nothing of others that are available, then your graph may be too complicated already.)

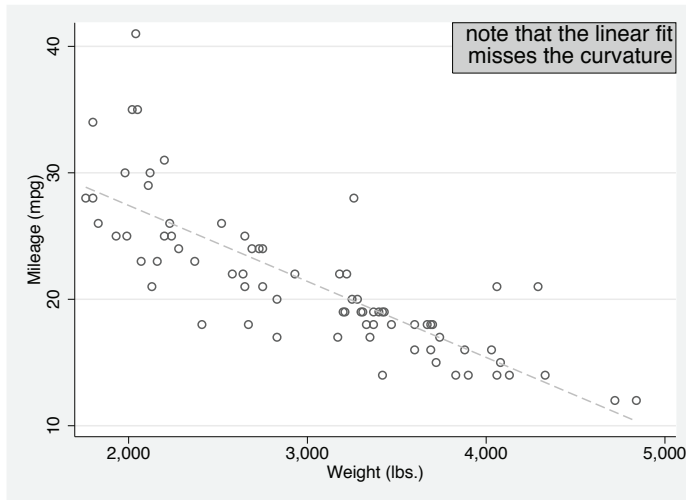
The main idea is very simple. The default positions under the graph scheme are precisely that: default choices, or suggestions that may be altered. If you use one of these options, then other defaults may need to be modified too, but that is generally straightforward.

A single example should be enough to show the idea. Imagine that we want to comment generally on the merits of a fitted line.

```

. sysuse auto
(1978 Automobile Data)
. scatter mpg weight, ms(0h) || lfit mpg weight, lc(gs12)
>   note("note that the linear fit" "misses the curvature", ring(0)
>       pos(1) size(*1.6) box)
>   legend(off) ytitle("`': var label mpg'")

```



Here we used the `note()` option, varying not only where the note is placed (`ring(0)` `pos(1)`) but also its size and whether it is boxed. The example also shows that multiline comments, a common wish, are easy to produce.

With such tricks, automated production of a series of graphs in a uniform style is much easier to achieve. In this example, the overall correlation is negative, and the top right or northeast corner is a natural place for the extra text. When showing (for example) an increasing time series, the top left corner will seem natural, and other such variations will quickly spring to mind.

As mentioned above, legend options may be used too. In fact, surprising though it may seem, the legend need make no references to any of the variables being shown in the graph, as detailed study of the documentation will make clear.

This tip picks no quarrel with users who prefer to keep such extra text outside the data region or confine it to the caption that will usually be composed as part of the text. The idea is just to indicate what choices are available without moralizing too much about choices you must or should make.