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Review of A Stata Companion to Political Analysis by Pollock

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Abstract. This article reviews *A Stata Companion to Political Analysis* by Philip H. Pollock III.

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1 Introduction

Asking students of introductory methods courses to learn Stata can be challenging for many reasons. Although students are more computer savvy than was the case even a few years ago, Stata can be intimidating. This fact may be true particularly for students who have little experience with command-driven software. Although I use Stata in my undergraduate and graduate methods courses, I have not found a published Stata software instructional text that is easily accessible to students who are less familiar with introductory statistics and less comfortable with command-driven statistical software. Teaching Stata under these circumstances is still preferable to other options but has its challenges. *A Stata Companion to Political Analysis* by Philip H. Pollock III seeks to resolve this issue. Adapted for Stata from an existing text acquainting students with SPSS, *A Stata Companion to Political Analysis* can be used as a standalone instructional guide or as a companion for a statistics text by the same author. This volume is written for courses that introduce students to descriptive statistics and simple techniques for exploring relationships between variables by using Stata. Users will find Pollock's text to be much less technical and sophisticated in the use of the Stata command language than Hamilton (2006) or texts focused upon more advanced modeling techniques such as Long and Freese (2006) or Cleves, Gould, and Gutierrez (2004).

2 Overview

The book is formatted in a fairly user-friendly manner. Each chapter begins with a short discussion of the topics to be covered and a window highlighting key commands featured therein. Procedures and commands are described in simple language, often accompanied by relevant screenshots of output from the Results window or dropdown menus related to graphics commands. Each chapter contains "A Closer Look" features that provide

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more focused discussion of particularly useful statistical concepts or commands. At the end of each chapter are exercises designed for students to practice different commands and gain experience interpreting output. Exercises are based on one of five datasets provided on a CD-ROM that accompanies the text and range in difficulty, asking students to do anything from creating a simple frequency table, to running a `ttest` command, to interpreting interaction terms in regression output.

Chapter topics include an introduction to Stata, discussion of basic descriptive statistics, difference of means, measures of association, correlation, simple regression, and logistic regression. The last chapter provides guidance for starting a research project and entering raw data into Stata. The text provides basic lessons about data manipulation and variable creation, as well as some practical tips for recoding and data management. Most chapters feature basic graphics commands relevant to the material being covered. For example, in the chapter on correlation and regression, students are shown how to produce a scatterplot comparing two variables. Although the book includes three chapters dedicated to correlation, linear regression, and logistic regression, much of the content is focused on basic descriptive statistics and data visualization using histograms and bar charts.

A quick review of chapter 4 highlights the book's approach to teaching Stata. In chapter 4, students are introduced to methods of comparing different variables and testing hypotheses. The chapter begins with a brief discussion of hypothesis testing, highlighting that the proper method for conducting hypothesis tests depends on the nature of one's data. After explaining the logic behind the `tabulate` command, the chapter guides readers through creating a simple cross tabulation. Next readers are shown how to compare means across groups by using `tabulate` *varname1*`, summarize(`*varname2*`)`. The rest of the chapter walks the reader through graphics dropdown windows that recreate this same comparison in the form of a bar chart. Later chapters build upon this basic material by introducing t tests, correlation, and simple regression.

3 Strengths

The book is at its best when guiding the reader through basic descriptive analyses and graphics commands by using the datasets accompanying the text. Pollock explains commands with adequate detail and introduces more complex commands as the reader becomes familiar with Stata. End-of-chapter exercises provide opportunities for students to explore different commands and methods of analysis in depth. Along the way, Pollock points out some of the quirks in the Stata command language that may confuse new users. The text is written for Stata 9, but I found the content and exercises to function properly in Stata 8 as well.

At times the commands are somewhat sophisticated. For example, the reader is asked to create a categorical variable for subsequent exercises, using the following basic `recode` syntax: `recode` *varlist* `(`*rule*`)` [`(`*rule*`) ...`] [`, generate(`*newvar*`)`]. Such instruction is useful not only for the novice but also for the slightly advanced user who may draw upon a small set of commands in daily work or use slightly inefficient command

structures out of habit. Moreover, since descriptive analyses and simple comparisons of variables are the building blocks of more sophisticated analytic techniques, I found the many examples using `tabulate`, `ttest`, and `graph` commands to be helpful for a range of users.

Less related to content, but an important determinant of whether students will use the text: I found the book design fairly functional. The text has a detailed table of contents that is easy to scan for topics of interest. Moreover, the text is printed on three-hole–punched perforated pages, allowing students to incorporate relevant pages with course notes or to submit exercises for grading/review. Screenshots of the Results window ensure that the reader can follow procedures correctly and properly interpret the output produced by particular commands. At times, however, these screenshots are a page or two ahead of the accompanying text, forcing the reader to flip back and forth. Most sample datasets are drawn from topics in American politics, but the datasets are ready for analysis, contain several different variables, and should be intuitive to a wide range of student audiences.

4 Limitations

Because this is an introductory text, the author does not cover topics that might be of interest to advanced Stata users. For example, the text uses many different commands, but there are no exercises or examples involving do-files, nor are there any do-files included on the CD-ROM. Although the author points readers to more documentation or tutorials elsewhere on the web and highlights the ability to convert Review window contents into a do-file, these points are made in footnotes.

More seasoned Stata users may find a few instances where commands are used without adequate detail or discussion of important related commands. For example, the chapter highlighting `ttest` does not discuss the `oneway` command used to compare means across more than two groups. In another instance, the author presents simple `regress` commands, with little mention of important subcommands or postestimation commands other than `test`. Perhaps more important for beginners: the text does not discuss how Stata handles missing values. For instance, the author uses `generate` to sum four dichotomous variables without mentioning that observations with a missing value on any of the four variables will be set to missing for this newly calculated variable. He also does not discuss the usefulness of `egen` in these instances.

Finally, each chapter builds on lessons and analyses from previous chapters. Although of pedagogical value, this format will require students to recreate work from previous lessons if that work was not saved to a new dataset or to a do-file. Readers who do not move through the book from start to finish may have some trouble replicating examples presented in later parts of the book unless they go back through previous chapters.

5 Conclusion

A Stata Companion to Political Analysis is a useful introduction to Stata. The text provides an intuitive orientation to Stata's basic command language and dropdown menus for graphics. Readers should not expect this to serve as a desk reference, however, nor as a replacement for Stata user manuals. It is best suited for undergraduate courses, where students are new to statistics and to Stata. Given its instructional nature, I believe this text would be a helpful resource for courses with computer lab or discussion sections. Instructors may find the book useful in graduate-level courses in introductory statistics or policy analysis, since the text can be easily bundled with other Stata documentation and instructional texts that address more advanced Stata commands. I found the text a welcome addition to the expanding catalog of Stata support documentation available to instructors and researchers.

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