

## **A Guide to Econometrics**

The sixth edition of *A Guide to Econometrics* was published in 2008 by Wiley Blackwell. This book is unique in that it is a supplement to econometrics books (at all levels) rather than being a textbook itself. Check the reviews on amazon.com for commentary.

I have tried hard to make each new edition incorporate sufficient new material to make it worthwhile for users of the book to update to the new edition.

New in the sixth edition are chapters on instrumental variable estimation and on computational considerations.

New in the fifth edition were chapters on panel data and on applied econometrics, the latter being particularly innovative.

New in all editions is extensive updating and rewriting of existing chapters.

For those unfamiliar with this book, here is the preface to the sixth edition.

### **Sixth Edition Preface**

Upper-level undergraduate and beginning graduate econometrics students have found the previous editions of this book to be of immense value to their understanding of econometrics. And judging by sales, more and more instructors of econometrics have come to recognize this, so that students are as likely to learn about this book from a course outline as from word of mouth, the phenomenon that made the early editions of this book so successful.

What is it about this book that students have found to be of such value? This book supplements econometrics texts, at all levels, by providing an overview of the subject and an intuitive feel for its concepts and techniques, without the usual clutter of notation and technical detail that necessarily characterize an econometrics textbook. It is often said of econometrics textbooks that their readers miss the forest for the trees. This is inevitable - the terminology and techniques that must be taught do not allow the text to convey a proper intuitive sense of "What's it all about?" and "How does it all fit together?" All econometrics textbooks fail to provide this overview. This is not from lack of trying - most textbooks have excellent passages containing the relevant insights and interpretations. They make good sense to instructors, but they do not make the expected impact on the students. Why? Because these insights and interpretations are broken up, appearing throughout the book, mixed with the technical details. In their struggle to keep up with notation and to learn these technical details, students miss the overview so essential to a real understanding of those details. This book provides students with a perspective from which it is possible to assimilate more easily the details of these textbooks.

Although the changes from the fifth edition are numerous, the basic structure and flavor of the book remain unchanged. Following an introductory chapter, the second chapter discusses at some length the criteria for choosing estimators, and in doing so develops many of the basic concepts upon which econometrics is built. The third chapter provides an overview of the subject matter, presenting the five assumptions of the classical linear regression model and explaining how most problems encountered in econometrics can be interpreted as a violation of one of these assumptions. The fourth chapter exposit some concepts of inference to provide a foundation for later chapters. Chapter 5 discusses

general approaches to the specification of an econometric model, setting the stage for the next seven chapters, each of which deals with violations of an assumption of the classical linear regression model, describes their implications, discusses relevant tests, and suggests means of resolving resulting estimation problems. The remaining eleven chapters and appendices A, B, and C address selected topics. Appendix D provides some student exercises and Appendix E offers suggested answers to the even-numbered exercises. A glossary explains common econometric terms not found in the body of the book. A set of suggested answers to odd-numbered questions is available from the publisher upon request to instructors adopting this book for classroom use.

This edition is a major revision, primarily because of two new chapters, on instrumental variable estimation (chapter 9) and on computational considerations (chapter 23). The former was added because instrumental variable estimation has become so widespread, and so controversial; the latter was added because innovations in computational methods have dramatically altered the face of advanced econometrics. Both chapters retain the flavor of the book, being concise and intuitive, with essential technical details isolated in a technical notes section. Several other chapters have had extensive general revision to improve exposition, most notably the non-spherical errors chapter to upgrade the GMM presentation, the Bayesian chapter to contrast more fully the frequentist and Bayesian views, the qualitative dependent variables chapter to improve the discussion of polychotomous dependent variables and to upgrade the discussion of count data, the limited dependent variable chapter to enhance the presentation of duration model estimation, the time series chapter to discuss wavelets, and the robust estimation chapter to improve the exposition of nonparametric estimation. Innumerable additions and changes, major and minor, have been made throughout to update results and references, and to improve exposition.

To minimize readers' distractions, there are no footnotes. All references, peripheral points and details worthy of comment are relegated to a section at the end of each chapter entitled "General Notes." The technical material that appears in the book is placed in end-of-chapter sections entitled "Technical Notes." This technical material continues to be presented in a way that supplements rather than duplicates the contents of traditional textbooks. Students should find that this material provides a useful introductory bridge to the more sophisticated presentations found in their main text. As in earlier editions, I have tried to cite references which are readable for non-specialists; the goal of the book and its references is to provide readers with a means of becoming comfortable with a topic before turning to the advanced literature.

Errors in or shortcomings of this book are my responsibility, but for improvements I owe many debts, mainly to scores of students, both graduate and undergraduate, whose comments and reactions have played a prominent role in shaping this sixth edition. Several anonymous referees reviewed this edition, many of them providing detailed suggestions for improvement, some of which, but not all, were incorporated. I continue to be grateful to students throughout the world who have expressed thanks to me for writing this book; I hope this sixth edition continues to be of value to students both during and after their formal course-work.