Solutions and Applications Manual

Econometric Analysis

Sixth Edition

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Contents and Notation

This book presents solutions to the end of chapter exercises and applications in Econometric Analysis. There are no exercises in the text for Appendices A – E. For the instructor or student who is interested in exercises for this material, I have included a number of them, with solutions, in this book. The various computations in the solutions and exercises are done with the *NLOGIT* Version 4.0 computer package (Econometric Software, Inc., Plainview New York, www.nlogit.com). In order to control the length of this document, only the solutions and not the questions from the exercises and applications are shown here. In some cases, the numerical solutions for the in text examples shown here differ slightly from the values given in the text. This occurs because in general, the derivative computations in the text are done using the digits shown in the text, which are rounded to a few digits, while the results shown here are based on internal computations by the computer that use all digits.

In the solutions, we denote:

- scalar values with italic, lower case letters, as in a,
- column vectors with boldface lower case letters, as in $\mathbf{b}$,
- row vectors as transposed column vectors, as in $\mathbf{b}'$,
- matrices with boldface upper case letters, as in $\mathbf{M}$ or $\mathbf{\Sigma}$,
- single population parameters with Greek letters, as in θ,
- sample estimates of parameters with Roman letters, as in $\mathbf{b}$ as an estimate of $\boldsymbol{\beta}$,
- sample estimates of population parameters with a caret, as in $\hat{\alpha}$ or $\hat{\boldsymbol{\beta}}$,
- cross section observations with subscript i, as in y_i,
  time series observations with subscript t, as in z_t and
  panel data observations with x_{it} or $x_{i,t-1}$ when the comma is needed to remove ambiguity.
  Observations that are vectors are denoted likewise, for example, $\mathbf{x}_{it}$ to denote a column vector of observations.

These are consistent with the notation used in the text.