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Module #5: EViews I

TOPIC	Due Dates: Basic	Advanced
Econometrics (EViews)	April 9th	April 9th

Before attempting this exercise you must carefully study the March 19th "How to Use EViews" handout.

BASIC LEVEL:

Step 1: Load file ClassDat.XLS into Excel. This file, which you used for E270 Problem Set #7, contains the student-parent height data for our class, including a dummy variable called Gender (it is coded 1 if the student is a women, zero otherwise).

You are to use the procedure described in EViews Handout for copy/pasting the data on student, mother and father heights and gender from Excel into EViews. Before copying into EViews you must clean up the data: make sure that the names of all your variables are legal variable names in EViews (Eviews does not give a clear error message when the variable names are not legal). Also, you might as well delete at this stage any observations for which the data is incomplete.

Step 2: Processing the height data in EViews.

1. Once you have transferred the data into a new group in EViews, you should click on Name in the Group menu bar and call your unnamed group HEIGHTDATA.
2. Now you should save your work on the H: drive in a file, which you could call HEIGHTS
3. Next click on the HEIGHTDATA icon to select it and then click on QUICK/GroupStatistics/Descriptive Statistics/Common Sample to calculate the means and standard deviations and other descriptive statistics for your variables. Click on Name and call your output HeightStats
4. Save the output of these calculations by copy/pasting into a Word Document to hand in. Copy/Paste the subsequent output into the same Word Document as you go along
5. Lets get a matrix of correlation coefficients with the command QUICK/GroupStatistics/Correlations. Use the EViews generate procedure to create the new variable AveParent = (Mother+Father)/2

Step 3 Now run the following regressions:

R#1 $S_i = b_o + b_1 FATHER_i + e_i$

R#2 $S_i = b_o + b_1 FATHER_i + b_2 MOTHER + e_i$

R#3 $S_i = b_o + b_1 FATHER_i + b_2 MOTHER + b_3 GENDER + e_i$

R#4 $S_i = b_o + b_1 FATHER_i + b_2 AVEPARENT + b_3 GENDER\ e_i$

Copy/Paste the EViews output into a Word Document.

Thought Questions for Further Discussion: (Key your tentative answers into your Word Document)

- #1: Is student height more closely related to mother's height or to father's height?
- #2: Compare the two estimates of the effect of Gender on student height. The difference in means in the Group Stats calculations and regression coefficient b_3 in regression $#3. Which to you think is the better estimate of the effect of Gender? Why?
- #3 Compare the t stats for β_1 in R#3 and R#4. Are they testing different hypotheses?

Step 4 Start a new workfile in EViews running from 1945:1 to 1999:4

Load the following variables from the DRI Data Bank:

LHUR, GCQ, GC, GMYDQ, GDPQ, GIMQ, and GMYD

Double click on each variable to get a listing; note the precise definition of each variable at the top of the table.

Step 5

Letting Y ≡ United States GDP and M = United States Imports, both adjusted for price changes, run the following regressions using appropriate data from Step 4:

R#5 $M = b_0 + b_1Y + e$

R#6 $M = b_0 + b_1Y + b_2M_{t-1} + e$

R#7 $M = b_0 + b_1Y + b_2M_{t-1} + e$

R#8 $M - M_{-1} = b_0 + b_1Y + b_2M_{-1} + e$

R#9 $(M/Y) = b_0 + b_1(1/Y) + e$

Copy/Paste the regressions into your Word Document. Carefully explain the meaning of each variable.

We will discuss the distinguishing features of these different regressions in E270-02.

Step 6:

Show that you know how to present regressions in term paper quality format by entering your regression results for R#6 in the same format as the HHSNTR regression at the bottom of the last page of the "How to Use Eviews" handout. [Hint use the `Courier New` font because it does not complicate the layout with proportional spacing.]

Step 7: Advanced

Consider regression #1. Test to see if the Durbin-Watson test deviates significantly from 2.0; explain the procedure carefully. Now run the following first order auto regressive correction procedure:

R#10 $M = b_0 + b_1Y + AR(1) + e$

Did this first order autocorrelation procedure resolve the problem of autocorrelated error terms? Now consider the moving average correction:

R#11 $M = b_0 + b_1Y + MA(1) + e$