Working with EViews

EViews is a simple but flexible econometric software package which runs on both Windows machines and Macintoshes. It is primarily designed to work with time series data, but can also be used for cross-section data. The primary function of EViews is to enable the user to perform time series regressions and the associated hypothesis tests and correction procedures. This handout introduces some basic uses for EViews.

Starting EViews

Double-click on the EViews icon to launch the program. If you cannot find it on the desk-top, use the find command to search the x:/ drive.

The first thing to do is to create a **workfile**. Click on File/New. Select Workfile and click OK. Select a periodicity among Annual, Semi-annual, Quarterly, Monthly, Weekly, Daily, or Undated. Then set a sample start and end date. For example if you plan to use a quarterly series that began in the first quarter of 1948 and ended in the fourth quarter of 1995, you would choose quarterly, starting date 1948:1, ending date 1995:4. if you choose undated, you need only indicate the number of observations in the ending date window.

Save the workfile by clicking on Save As... and typing in a filename in the appropriate box. It is helpful to occasionally save the workfile by clicking on Save to protect your work against system crashes. The saved file will have .wf1 extension.

Online help can be reached by clicking the Help button at the right-hand end of the menu bar. Select "search" and type in a word or phrase; a relevant list of help topics will pop up, and you can click on the one that seems most relevant and then click on "Go To."

Ways to get data into EViews

You can type data directly into EViews (not recommended except for very small problems), read data in from a text file or spreadsheet, or use data from the accompanying DRI database.

Note that variables names cannot contain spaces and can have no more than sixteen characters.

Data can be combined in a single workfile from a variety of sources, so long as they have compatible periodicities. If the data are noncompatible (e.g., trying to put quarterly data in a weekly file, or weekly data in a quarterly file), there are ways to handle this as discussed below.

Typing in data
Click on Quick/Empty Group. This sets up an empty worksheet. Each column of the worksheet represents a variable. Start by typing the new variable name on top of the column and hit the enter key. Then type in the data, proceeding down the column using the down arrow, and taking care to put the data in at the correct date.

Importing Excel and text files
Click on File/Import/ Read Text-Lotus-Excel. Then enter the name of the appropriate file in the File Name space. The program will prompt you in the case of a spreadsheet to tell it the cell reference where it should begin reading in the data (the default is cell B2, which allows you to have row A and column1 in the spreadsheet for typing in reminders of what exactly the data are). It will also ask whether to read the data in as columns (the default setting) or rows. You also need to type variable names in, separated by spaces if you are reading in more than one variable, in the appropriate space.

Retrieving DRI data
EViews comes equipped with a database (compiled by the economic forecasting company DRI) that contains many series of macroeconomic and financial data for the U.S. In the workfile window, click on Procs/DRI Basic Economics Database (or click on File/Import/DRI Basic Economics Database in the main menu). In the box type in some variable names of the desired variables, using the names selected from the DRI manual (on reserve). In this case let's select "gcq gydq fypr fspcom pzunew". Click OK. The data series need not exactly match the time frame used to set up the workfile.

Checking to make sure the data in a worksheet looks right
Double-click on the desired variable. To look at two or more variables, single-click on the desired variables while holding down the Ctrl key. Then double-click on one of the variables, and a worksheet of all of the variables will appear. Note that if you only select one series, it will be displayed by five-column row rather than in a column.

Now that you have the data …

EViews has numerous built-in functions to help you manipulate and analyze your data.

To generate new variables
Variables can be transformed by clicking on the Genr button and typing the appropriate equation into the Genr box. The usual computer arithmetic symbols are used. Examples:

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lgdpq = log(gdpq)
xsq = x^2
realsp = 100*sp500/cpi
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In addition, EViews can create new variables that are lead or lag versions of other variables. For example:

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gdplag = gdp(-1)
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creates a new variable, gdplag, that is the gdp series shifted back one period. This will cause there to be as many missing observations in the new series as you have set the lag (or lead) to be. To see how this works, look at gdp and gdplag together.

To adjust the sample
Sometimes you will only want to work with a subset of your data. Click on Sample and type the appropriate begin and end dates in the box, and/or put any relevant mathematical conditions in the If box.

To calculate various statistics
Choose the variables desired as above by double-clicking or Ctrl-clicking. When comparing different variables, choose the desired statistics by clicking on View/Descriptive, View/Correlations, View/Correlogram, View/Unit Root Test, etc. When focusing on one variable, click View/Histogram and Stats, View/Correlogram, etc.

To graph variables
Double-click on the desired variable/s and then choose View/Line Graph; or View/Graph or View/Multiple Graphs (if you have more than one column of data). The graph/s will appear. Note that one can move the label around by using the click-and-drag function of the mouse. To modify the graph, simply double click on the graph itself. The resultant menu allows one to insert grid

lines, modify the print options, or change the scaling. If one has two series, a scatter diagram can be created with the same menu, and a linear regression line can be superimposed on the scatter. To insert text into the graph, one must first Freeze the graph by clicking on Freeze. Then click on Add Text to get to the appropriate menu. It is advisable to Name the graph in order to save it. Save the workfile before printing.

To run a regression
Click on Quick/Estimate Equation, and type the desired specification in the box. The specification should include a "c" for the constant term of the regression. Example: "gcq c gydq fypr" regresses consumption on disposable income and the prime interest rate. The residuals can be viewed by clicking on View/Actual, Fitted, Residual/Graph. Diagnostic statistics can be computed by clicking on View/Coefficient Tests, Residual Tests, or Stability Tests. The regression may be saved by Naming it, and resaving the workfile.

In order to run ARMA models, you would add the desired autoregressive (AR) and/or moving average terms (MA), with specified lags, in the box, e.g.

gcq c gydq fypr ar(1) ar(2) ma(1)

The default estimation procedure is OLS, but other estimation procedures can be selected instead by clicking on the appropriate choice.

Ways to get output from EViews

Now that you've done some stuff in EViews, how do you get it back out again, in either computer-readable or printed form?

To print
Use the Print button on the spreadsheet to print out your data. Or you can select File/Print to print out your graph.

Copying and pasting into other applications
If you want to place your graph or other output into, for example, a Word document, click the Edit/Copy option on the menu bar, which will load the item onto the clipboard. Then switch over to Word, open a document, and paste the clipboard with the paste button (or Ctrl-V on a Windows machine).

Saving data in other formats
You can save your data as an Excel spreadsheet or text file by going to File/Export/Write Text-Lotus-Excel. Type a file name with extension .xls if you want the output file to be an Excel spreadsheet; type a file name with extension .txt if you want the output file to be a text file. Then EViews will prompt you for the names of the series to be written to the file. It will also output the names of the series as the first row in the file, and in the case of Excel will also output the dates as the first column in the spreadsheet.