

EViews – An Introduction

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This lab session gives you a short introduction to Eviews. Eviews can be found in the undergrad computer rooms on the 1st floor of McNeil.

- Basic concepts
- Creating/Opening a workfile
- Importing Ascii data
- Plotting data with descriptive statistics
- Scatter plot of two series
- Creating new series from existing series
- Running regressions
- Use on-line help when needed

1 Basic concepts

Eviews is built around the concept of an *object* and binds related data into objects. Objects include *series*, *equations*, *coefficients*, etc. For example a *series* object contains the data for each obs, a *group* object contains a group of series, an *equation* object contains the equation's specification, the coefficient estimate, etc. The objects are held in *workfile*. Each object has its own window with its own menu bar. There is also a main workfile window.

Eviews treat capital letter and lower case letter as they are the same. For example, SALES, sales, and sALes are the same to Eviews. As in other Windows software, you can click on the up-right corner of the object window to reduce it to an icon, double click this icon will expand it to a window.

2 Creating/opening a workfile

The first step in using Eviews is to create a new workfile or load an existing workfile from disk. You will need to open a Workfile for every project you want to do. To do so, you need to know your sample size and frequency. Click **File/Open/Workfile** to load an existing workfile. Click **File/New/Workfile** to create a new workfile. There are basically two types of data to create a workfile: cross section (like household income in Econ 5) and time series (like your yearly income for last 20 years in Econ 6). For cross section data, choose **Undated or irregular** as the workfile frequency and enter 1 in start date and number of observations in end date. For time series data, suppose your data were quarterly from 1947Q1 to 1997Q4, to create a new workfile, select “quarterly”, and then type “47:1” (without the quotation mark) as the start date, and “97:4” (without the quotation mark) as the end date. After you have successfully created a new workfile or loaded an old workfile, you will find yourself in the workfile window. Notice that there are already 2 series there : “c”, and “resid”. they stand for “coefficients” and “residuals”. Every time you estimate something, the coefficients are stored in “c” and the residuals in “resid”.

3 Importing Ascii Data

Ascii files are also known as text files. The extensions we normally see are : .txt, .asc, .dat. Data sets are often arranged in columns, separated by a <Tab>, or a <space> or some other symbol e.g. <,>. Now suppose your data set is called “ps2.txt” (and obviously you need to know what path your data is in). To import, do the following.

1. Select **File/import –/read text-lotus-excel**
2. Select the path and filename of your file (e.g. a:\ps2.txt)
3. You will be looking at a large dialog box with lots of options.
4. *In the top left window*, if your dataset doesn't have series names in it, give names to your series, separated by a space. For this particular dataset ps2.txt, the names (EXPHLTH and INCOME) are already in the data set. So you just need to just key in the number of series you have in the data set, which is 2 in this case.
5. *In the top-middle window*, select the data ordering (usually in columns)

6. *In the top-right window*, select the # of rows and columns to skip. If your data set contains no header rows or columns, then don't skip anything, i.e. leave it as it was.
7. *middle-middle window* : Where it says "*Delimiters*", this is what it means: A Delimiter is a symbol that separates the numbers in a data set. As mentioned above, it's often a comma, a <tab >, a <space>, <colon> etc. You get the idea. Treating multiple delimiters as one means that when you encounter, say, 2 <tab>'s or 2 <space>'s in succession, Eviews will ignore the second one. It is important that you choose correctly because otherwise, Eviews will mess up the columns in your data set, and start importing the data points into the wrong cells. This is potentially important when you have missing observations in your data set. Now this is NOT important if you have data that is neatly arranged in columns, with no missing observations in between (in which case, let the default be "treat multiple delimiters as one"). As you gain experience handling data, you'll soon learn how to examine the data set before handling it. Again, everything is nicely handed to you in the problem set, so you hopefully don't have to worry about these problems.
8. When you're done, click "OK"
9. If you're successful, you should see your series appear in your workfile window. Cross check to make sure you imported correctly. A quick way to do so is to plot the series (See the following section).
10. At this point, save the workfile the file to your floppy disk. The file extension, you should note, is `.wf1`.

4 Plotting Data with descriptive statistics

To plot data and see the descriptive statistics, select the series in your workfile window. (e.g. <income>) and double click it. The series pops up in a new window. In the new window, click **view**, and select the type of graph(say **spreadsheet**) you want. You can also select **view/descriptive statistics/histogram and stats** to see the mean, standard deviation, etc of this series.

5 Scatter plot of two series

In the comand window(the little window below the menu bar of the workfile window) type “group GroupName series1 series 2” to create a group. For example, to create a group named mygroup consisting of *exphlth* and *income*, type “group mygroup income exphlth”. Then you can double click mygroup and a window will popup. In this group window, select **view/scatter/simple scatter** to view the scatter plot of exphlth and income. The scatter plot gives a graphic view of the potential relationship between two series. It can be also be used for more than two series.

6 Creating new series from existing series

You can use formula to generate a new series using existing series by clicking **Genr** button on the *workfile* window’s toolbar or **Proc** menu on the existing *series* window’s toolbar and choosing **Generate by Equation**.

Formulas use ordinary mathematical notation to describe the new series. For example,

$$\loginc = \log(\text{income})$$

describe a new series, loginc, which is the natural logarithm of income.

The most common used operators and functions used in Eviews formula are: +, -, *, /, ^, >, <, =, <=, >=, log(x), exp(x), abs(x), sqrt(x).

7 Running Regressions

Suppose you want to regress exphlth on income and a constant.. To do that, do the following:

1. In the Eviews menu, select **Quick/estimate equation**
2. A dialog box pops up. In the upper field, enter the dependent variable first, followed by the regressors, separated by a space. So enter: **exphlth c income** where c always denotes the constant in Eviews
3. Leave estimation settings as the default (LS-Least Square) and click “OK”, you will see the equation window with regression output appears. Click **Name** on its menu bar to give it a name. From the regression output, you will find the estimated coefficients and their standand error. Note the t-statistics and its P-value corresponds to the default test *coefficient=0* **ONLY**.

4. When you run this regression, you'll note that the residuals have been saved in the "resid" series. If you want to keep the residuals for further analysis later, it would be wise to give the residuals another name.

8 Use on-line help

Experiment a lot on you own and when needed, click **Help** button on the main menu to get on-line help. Use either search or index to find what you want.