Introduction to Eviews

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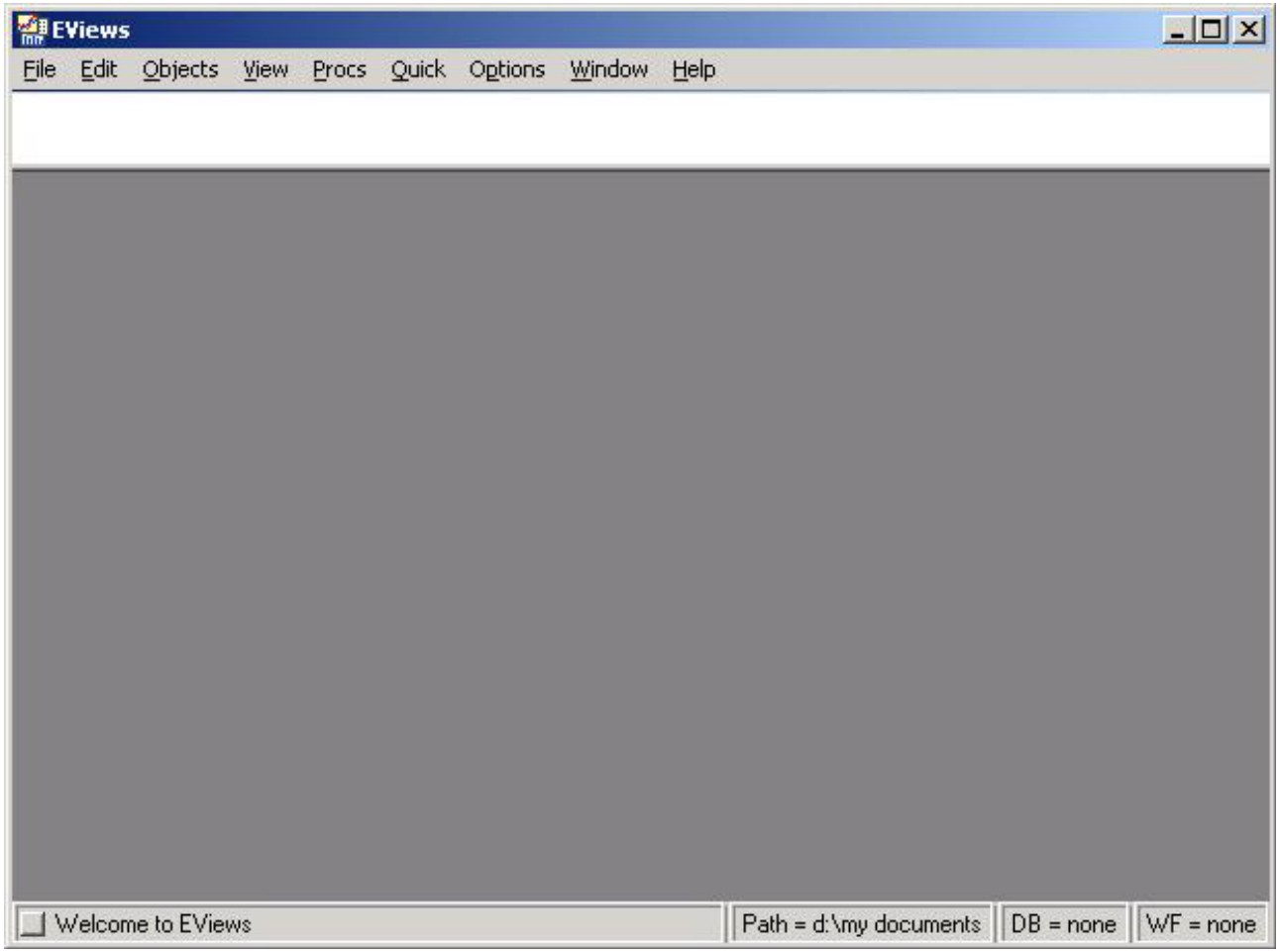
- EViews is one of the most popular econometric packages around. As well as containing a host of uptodate econometric features, it is incredibly easy to use. In addition to the menudriven objectoriented user interface, it is also possible to write simple programs in EViews programming language, without having to invest too much effort in the programming.
- For a full product description and overview see:

  http://www.eviews.com/eviews6/eviews6/eviews6.html

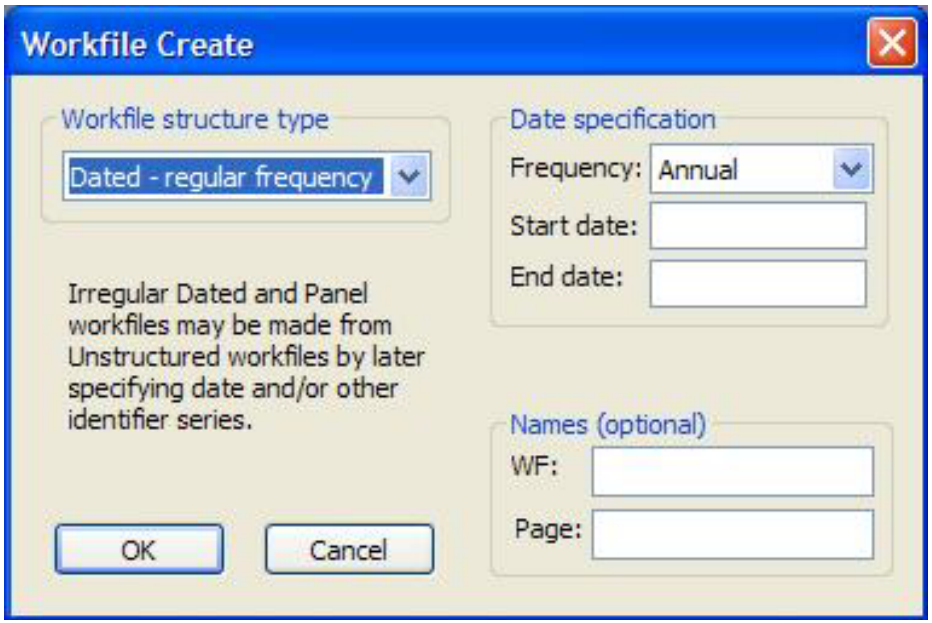
Eviews Start



- There are two important things to note about this view:
  - The white bar beneath the command menu is called the command line. You can either use the command line or the drop down menus to carry out tasks in EViews, and as some actions are quite common, and therefore are repeated quite often, you might find it easier to type a short command in the command line. Once you learn the "EViews language" for these commands, it can actually be quicker than using the menus.
  - For additional information, open the EViews program and select Help/EViews Help Topics... and a list of help categories is revealed. The Help system is often more use than the manual because it contains updates to the documentation that were made after the manuals went to press. You can search for everything you want to do in EViews and you will find detailed explanations and answers.

- The most important object in EViews is the workfile and your first step in any project will be to create a new workfile or to load an existing workfile into memory. Workfiles are the workhorses of EViews. They store your data and results of your analysis. While each workfile will contain several data series, each data series is stored as its own object. For example, suppose one wished to create a new workfile with the potential to hold a sample of crosssectional data with 20 observations in the crosssection.

- Select File/New/Workfile on the EViews main menu bar. You will be faced with the following window:



- Select the type of your data: **cross-section/time series/panel**
- To save your workfile, select Save on the workfile menu bar or File/Save on the main menu bar.
- See See Help/Eviews Help Topics/Users Guide/EViews Fundamentals/Workfile
  Basics for more information about creating and using workfiles in EViews.

Data Input

- Once you have a workfile opened, you can type data into EViews. Using the menu items Quick/Empty Group (Edit Series) will give you a spreadsheet window. At the top of the window you will see an Edit+/button.This locks or unlocks the spreadsheet for editing. Once unlocked for editing you simply type in the data.
- As Excel is commonly used for data storage, it is useful to know how to import data from an Excel worksheet into EViews. The most straightforward way of doing this is using Copy and Paste. To begin with, you will be working relatively small datasets comprising only a few series and a few observations, so cut and paste will be the fastest way to load data into EViews.

- Alternatively you can click on Procs/Import/Read TextLotusExcel... You will see a standard File dialog box asking you to specify the type and name of the file. Select a file type, navigate to the directory containing the file, and double click on the name. Alternatively, type in the name of the file that you wish to read (with full path information, if appropriate); if possible, EViews will automatically set the file type, otherwise it will treat the file as an ASCII file. Click on Open. EViews will open a dialog prompting you for additional information about the import procedure. The dialog will differ greatly depending on whether the source file is a spreadsheet or an ASCII file.

- The calculation of economic statistics provides a way to condense and synthesise information on a range of economic variables such as national account variables, wages and prices, interest rates, exchange rates etc. There are two ways to describe data:
  - Graphical – plot the data using plots such as line plots, scatterplots, histograms and plots of the empirical distribution of the data.
  - Statistical – compute descriptive statistics of the distribution such as the mean, variance, skewness and kurtosis etc.

Transforming and plotting data

- In analysing any economic data, time series or crosssectional data, it is necessary to plot the series so as to:
  - identify any incorrectly recorded data points;
  - reveal the key characteristics of the data (trends, outliers, seasonality etc.) .
- In some situations it is useful also to graph one series against another. This is known as a scatter plot. The advantage of this is that it will help to identify the degree of association between two economic series.
- For some problems it is of interest to compare an empirical distribution with a theoretical distribution, such as a normal distribution. An empirical distribution can be constructed by using a histogram. More formal empirical distributions based on nonparametric kernels can be computed in EViews.

- Often it is necessary to transform or filter the data before computing descriptive statistics or plotting. A number of important filtering procedures are now described, it's possible to write the following equation in **genr** section of workifile menu:
  - Logarithm –> Y=log(X)
  - Firt Difference –> deltaX=X-X(-1)
  - Seasonal Difference –> Y=X-X(-12) (or with different seasonaly)
  - Moving Average –> Y=(X(-1)+X+X(+1))/3
  - Growth Rates –> Y=log(X)-log(X(-1))
- Note that NA observation are those lost in doing the trasformation required by the filters.

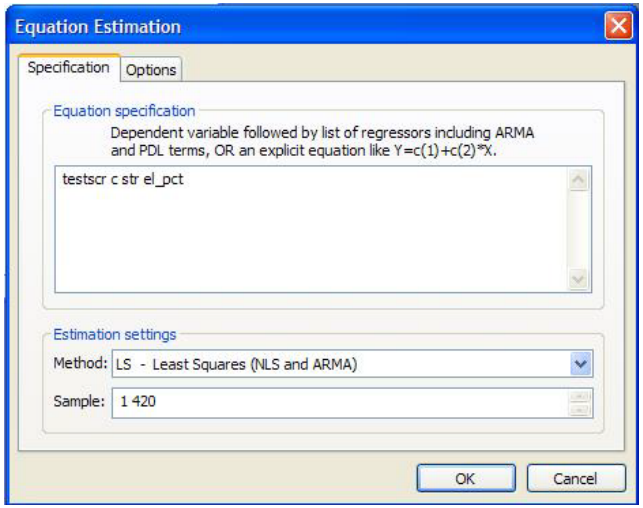
Graph

- In order to plot the series on the same graph click on the View menu and then Graph and Line on the subsequent drop down menus.

Descriptive Statistics

- Given sets of timeseries or crosssection data it is customary to summarize its characteristics by considering (i) a measure of the central tendency or location of the data, (ii) a measure of the spread, dispersion or scale of the data, and (iii) measures of association between different sets of data:
  - Mean
  - Median
  - Std. Dev.
- All the relevant descriptive statistics for this variable are now easily computed. Click on the View menu in this window and on the drop down menus click on Descriptive Stats/Histogram and Stats.

- Using the Quick/Estimate Equation option on the main menu bar will yield the following dialogue box:



- The variables are entered as a "list". This format follows the regression equation at the top of the page. The first variable is "y", which is the dependent variable (or the Y), followed by the constant term "c", and the two independent variables (or the Xs).

Exercize

- Import file dataset "Lab2":
  - Quarterly data from 1953:2 to 2001:2
  - y output gap
  - pi inflation
  - ff interest rate
- Estimate this model with OLS:

$$
\begin{aligned}
ff_t &= \beta_1 ff_{t-1} + \beta_2 \pi_{t-1} + \beta_3 \log(y_t) + u_t \\
and &: \\
dff_t &= \alpha_1 ff_{t-1} + \alpha_2 \pi_{t-1} + \alpha_3 \log(y_t) + u_t \\
where &: dff_t = ff_t - ff_{t-1}
\end{aligned}
$$