Introduction to STATA and Do-file

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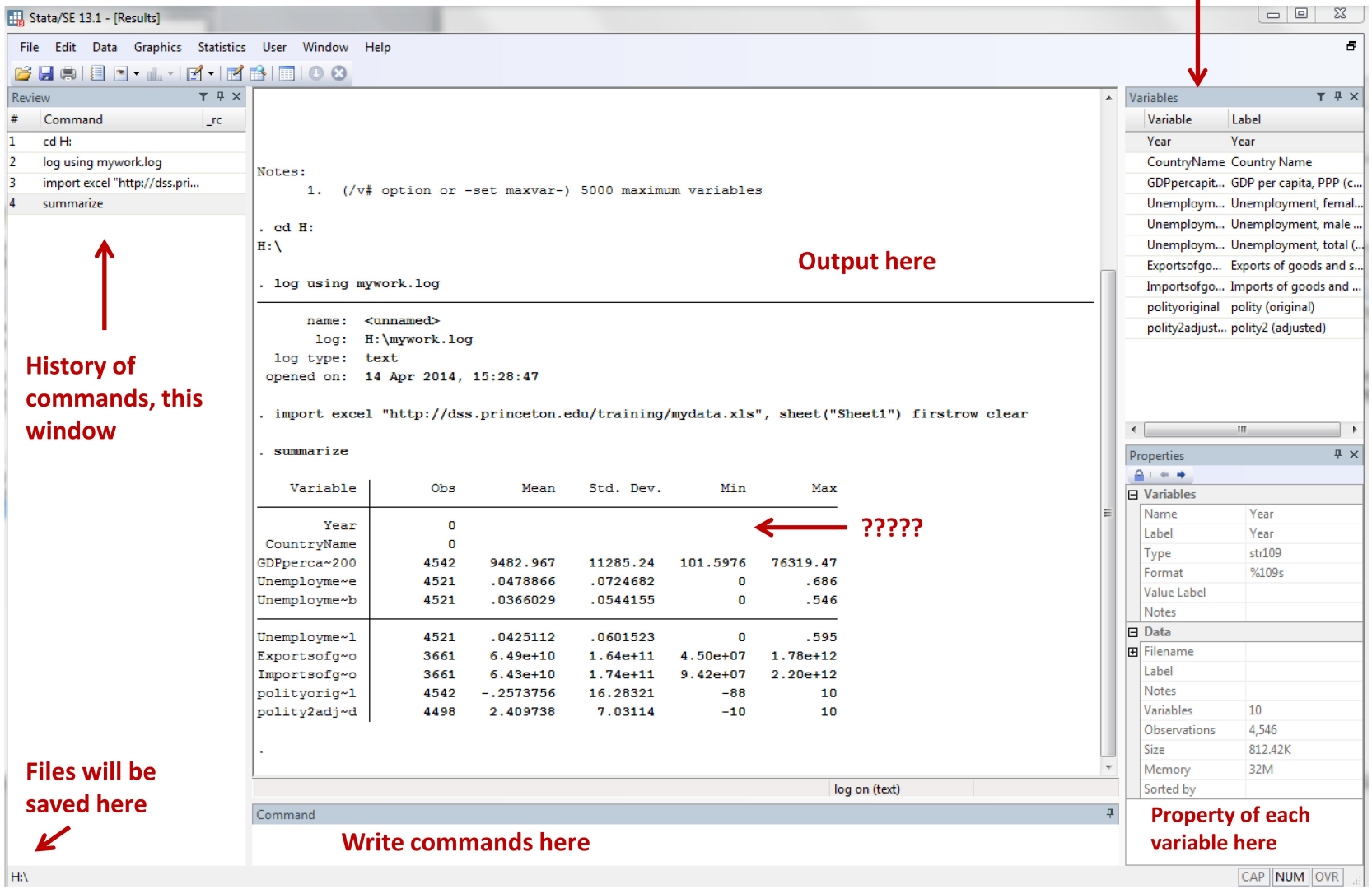
Overview

- Stata is a full-featured statistical programming language for Windows, Mac OS X, Unix and Linux
- Stata is available in several versions: Stata/IC (the standard version), Stata/SE (an extended version) and Stata/MP (for multiprocessing)
- The major difference between the versions is the number of variables allowed in memory, which is limited to 2,047 in standard Stata/IC, but can be much larger in Stata/SE or Stata/MP

Stata's user interface

Stata's user interface

Stata 12/13+ screen



Stata's user interface

- The Toolbar contains icons that allow you to Open and Save files, Print results, control Logs, and manipulate windows
- Some very important tools allow you to open the Do-File Editor, the Data Editor and the Data Browser
- The **Data Editor** and **Data Browser** present you with a spreadsheet-like view of the data, no matter how large your dataset may be
  - Type **Ctrl+8** to call **Data Editor**
- The **Do-File editor** allows you to construct a file of Stata commands
  - Type **Ctrl+9** to call **Do-File editor**

Stata's user interface

- There are four windows in the default interface:
- **Command Review window**:
  - When a command is executed-with or without error-it appears in the Review window
  - You may click on any command in the Review window and it will reappear in the Command window
- **Variables window**:
  - Once you have loaded data into the program, the Variables window will be populated with information on each variable
  - That information includes the variable name, its label (if any), its type and its format

Stata's user interface

- **Results window**: The results of the command (or an error message) appears in the Results window
- **Command window**: You may only enter one command in that window, so you should not try pasting a list of several commands

How to Type Commands: Use do files

Type Commands

- You can enter commands in either of three ways:

1. **Interactively**: you click through the menu on top of the screen
2. **Manually**: you type the first command in the command window and execute it, then the next, and so on
3. **Do-file**: type up a list of commands in a "do-file", essentially a computer programme, and execute the do-file

Do-file

- The vast majority of your work **should use do-files**
- If you have a long list of commands, executing a do-file once is a lot quicker than executing several commands one after another
- Furthermore, the **do-file is a permanent record of all your commands** and the order in which you ran them

Typical Format of a Do-file

```
1 clear
2
3 set more off
4
5 [STATA commands]
```

STATA command: clear

```
1 clear
```

- **clear**: cleam up any previous data, otherwise you can not load new dataset

STATA command: set more off

```
1 set more off
```

- When there are a lot of results in the results window, Stata pauses the do-file to give you a chance to review each page on-screen and you have to press a key to get more
- **set more off** tells Stata to run the entire do-file without pausing.
- You can then review the results in the log file

How to Put Your Notes in Do-file

Put Your Notes in Do-file

- It is good practice to keep extensive notes within your do-file
- Thus, when you look back over it you know what you were trying to achieve with each command or set of commands
- You can insert comments in several different ways

Method 1: Put Your Notes in Do-file

- Stata will ignore a line if it starts with **two consecutive slashes** //, so you can type whatever you like on that line.

```
1 use "$rawdata\acs_2015.dta" // opens 2015 acs
      data
```

- Note, comments are also useful for getting Stata to temporarily ignore commands
- If you decide later to re-insert the command into your do-file, just delete the slashes or the asterisk

Method 2: Put Your Notes in Do-file

- You can place notes after a command by inserting it inside these **pseudo-parentheses /* */**, for example:

```
1 use "$rawdata\acs_2015.dta" /* opens 2015 acs data */
```

- These **pseudo-parentheses** are also useful for temporarily blocking a whole set of commands:
  - Place /* at the beginning of the first command, */ at the end of the last, and Stata will just skip over all of them

Method 3: Put Your Notes in Do-file

- Lastly you can use **three consecutive slashes** /// which will result in the rest of the line being ignored and the next line added at the end of the current line
- This comment is useful for splitting a very long line of code over several lines

Method 3: Put Your Notes in Do-file

```
1 graph twoway (scatter age inctot if year == 2015) ///
      This combines two scatter plots
2 (scatter age incwage if year == 2015)
```