Quantitative Methods in Political Science

Recitation

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New York University

October 28, 2013

Review from Last Week's Lab Session

- Bivariate Regressions

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- Pairwise Correlation using *pwcorr* command
- Depicting correlations using *graph matrix* command
- Multiple regression
  - Reading output
  - Interpreting results using templates

This Week...

- Creating and using .do files

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- Creating and using log files

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- Creating and using .do files
- Creating and using log files
- Go over a practice exercise for the lab project

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- You may also want to have access to the Przeworski dataset to follow my example do and log file

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  - Log files contain both the commands and everything that appears in the Results Window
  - Log files will allow you to save and keep track of everything you have done

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- For today, we are going to use the pre-made template and one that I created to list everything we have done with the Przeworski dataset.

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  - You can also use the dropdown menu again: File $\rightarrow$ Log $\rightarrow$ Close

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- Always title and save your do files so that you can refer back to them

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- If you have opened a log file (which you should have) then all the commands from the do file, comments and results will be saved into your log
- Both do files and log files are important to keep record of what you have done. Also we will require do files and log files to be uploaded for your project.

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- The do file lists all the commands we have used and brief explanations. Additionally, there are examples that we have done

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- Open it up and take a look at what a do file may look like. Do the same for the log file.

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- The do file lists all the commands we have used and brief explanations. Additionally, there are examples that we have done
- Open it up and take a look at what a do file may look like. Do the same for the log file.
- Now if I run my do file, Stata will perform all of the commands that we have done this semester in just a few seconds.

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You can run it yourself in Stata:

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- Now in the do file and click "Do"

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- Download both the do file and the Przeworski dataset to the desktop.
- Save your do file with a new name (maybe something like Mai's Example)
- You can keep my name in there if you wish just to note that it's for reference
- Now in the do file and click "Do"
- All of the commands should run and a new log file will be created on the desktop

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Let's take a look at the Persson and Tabellini Dataset:

- We will be using two variables: *cgexp* and *lyp*

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Let's take a look at the Persson and Tabellini Dataset:

- We will be using two variables: *cgexp* and *lyp*
  - cgexp: central government expenditures as a percentage of GDP (p.2)
  - lyp: natural log of per capital real GDP (p.7)
- We will run a few commands in Stata as usual, but this time open up a new do file (from template) and record everything you do.

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Create a do file (you may use the template that we downloaded):

- Replace the surname portion of the log command (put your last name there)

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Create a do file (you may use the template that we downloaded):

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Create a do file (you may use the template that we downloaded):

- Replace the surname portion of the log command (put your last name there)
- Replace the Nameofthedataset portion of the use command (put in persson_cross.dta)
- In between the “use” command line and “log close” command line, you can input your code and comments

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Create a do file (you may use the template that we downloaded):

- Replace the surname portion of the log command (put your last name there)
- Replace the Nameofthedataset portion of the use command (put in persson_cross.dta)
- In between the “use” command line and “log close” command line, you can input your code and comments
- Notice that because we have “log using” and “log close” within the do file, when you execute the do file a corresponding log file will automatically be created

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- Summarize the variables

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- Build the regression line and interpret the slope
- Save the do file. Now execute it and take a look at the log file.

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- Save the do file. Now execute it and take a look at the log file.
- Follow along as I show you how to do it

Practice Exercise Using Persson and Tabellini

```
capture log close
log using "C:\Users\NYU User\Desktop\Nguyen.log", text replace

/*      Project:            Persson & Tabellini
        Purpose:            Creating do/log files
        Author:             Mai Nguyen
        Date:               October 23, 2013
        Notes:              We are creating a do and log file of basic commands using
                            the Persson and Tabellini dataset
*/

clear
use "C:\Users\NYU User\Desktop\persson_cross.dta"

*Summarize the variables
sum cgexp, detail
sum lyp, detail

*Recode the variables
recode cgexp -1=.
recode lyp -1=.

*Summarize the variables again
sum cgexp, detail
sum lyp, detail
*Notice the summary statistics changed.

*Run a bivariate regression of Central Government Expenditures on the log of Income per capita
regress cgexp lyp

*build the regression line and interpret the slope*
*cgexp= a + b(lyp) + e
*We can interpret the slope as....

log close
```

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- Once you have done this, make sure you have saved both the do file and log file
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- Any questions?