Quantitative Methods in Political Science
Recitation

Mai Nguyen

New York University

November 6, 2013

Getting Started

- Open up your do file from last week (you should have saved it somewhere accessible or sent it to yourself)
- Again make sure the dataset you are using is on the desktop along with your do file
- This week you will need to finish up whatever you did not get done from week 1 and get started on week 2 questions
  - Remember if you cannot remember specific commands or how to do something, look at old slides that I have posted or the do file I made with all the commands we learned this semester

```stata
*question 4b: creating some descriptive graphs
histogram cgexp, title(Histogram of Central Government Expenditures)
*creates histogram of cgexp...

********
*Week 2*                                    Note that you are working on week 2 questions.
********
*Question 2: Correlation Coefficient
corr cgexp lyp
*The correlation coefficient is...
*The relationship is strong (moderate, weak, etc.)

*Question 3: Regression Equation
*yhat = a + bx
*y = a + bx + e

*Question 4: Regression
regress cgexp lyp
*The intercept is...
*The slope is...
*The number of observations is...
*The R-squared is...

*Question 5: Estimated regression line
*cgexp_hat = 23.33 + 0.41x
*cgexp = 23.33 + 0.41x + e

*Question 6: Interpretation of slope and the R-squared
*For each [unit] increase in [x], y is expected to [increase/decrease] on average by [the slope].
*So [XXX] % of the variability in y is explained by x (or by the model).

*Question 7: Scatterplot
twoway (scatter cgexp lyp) (lfit cgexp lyp), title(Scatterplot) ytitle(Government Expenditure) xtitle(Per Capita Real GDP)
*creates a scatterplot of government expenditure and natural log of per capita real GDP

log close
```

```
*question 4b: creating some descriptive graphs
histogram cgexp, title(Histogram of Central Government Expenditures)
*creates histogram of cgexp...

********
*Week 2*
********
*Question 2: Correlation Coefficient
corr cgexp lyp
*The correlation coefficient is...
*The relationship is strong (moderate, weak, etc.)

*Question 3: Regression Equation
*yhat = a + bx
*y = a + bx + e

*Question 4: Regression
regress cgexp lyp
*The intercept is...
*The slope is...
*The number of observations is...
*The R-squared is...

*Question 5: Estimated regression line
*cgexp_hat = 23.33 + 0.41x
*cgexp = 23.33 + 0.41x + e

*Question 6: Interpretation of slope and the R-squared
*For each [unit] increase in [x], y is expected to [increase/decrease] on average by [the slope].
*So [XXX] % of the variability in y is explained by x (or by the model).

*Question 7: Scatterplot
twoway (scatter cgexp lyp) (lfit cgexp lyp), title(Scatterplot) ytitle(Government Expenditure) xtitle(Per Capita Real GDP)
*creates a scatterplot of government expenditure and natural log of per capita real GDP

log close
```
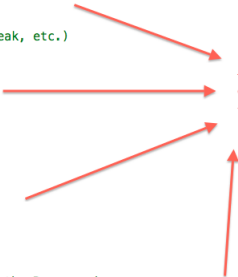
Answer the questions. Make sure you note which question you are working on, the code in Stata you used to get the answer and, of course, the answer!

Do file

```
*question 4b: Creating some descriptive graphs
histogram cgexp, title(Histogram of Central Government Expenditures)
*creates histogram of cgexp...

********
*Week 2*
********
*Question 2: Correlation Coefficient
corr cgexp lyp
*The correlation coefficient is...
*The relationship is strong (moderate, weak, etc.)

*Question 3: Regression Equation
*yhat = a + bx
*y = a + bx + e

*Question 4: Regression
regress cgexp lyp
*The intercept is...
*The slope is...
*The number of observations is...
*The R-squared is...

*Question 5: Estimated regression line
*cgexp_hat = 23.33 + 0.41x
*cgexp = 23.33 + 0.41x + e

*Question 6: Interpretation of slope and the R-squared
*For each [unit] increase in [x], y is expected to [increase/decrease] on average by [the slope].
*So [XXX] % of the variability in y is explained by x (or by the model).

*Question 7: Scatterplot
twoway (scatter cgexp lyp) (lfit cgexp lyp), title(Scatterplot) ytitle(Government Expenditure) xtitle(Per Capita Real GDP)
*creates a scatterplot of government expenditure and natural log of per capita real GDP

log close        Make sure you have "log close" at the end, this will replace any existing log files
```

Last thing

- Remember at the end save your do file and re-run everything
- Your new log file with everything you did today will automatically be saved to the desktop under your surname
- Upload to NYU classes
- E-mail everything to yourself!