

Computer Instructions for Problem Set #9
POS 5737
Fall 2001

For this assignment, you will need two data files, World95.dta, and arms.dta. You should have a copy of the first data set because we used this in problem set #8. You can obtain a copy of arms.dta on my webpage at <http://sara.icow.org>. Each of my examples below involves analysis of this second data set. All STATA commands are in italics.

1) Estimating the regression model

For both questions, you will begin by estimating a regression model. For example, in Question #2 you will estimate two models (Dr. Gun's and Dr. Butter's models). To estimate Dr. Gun's model, type the following STATA command:

regress usarms ussrarms

You will see the regression output after typing this command. Next, you want to save your predicted values from this model. You can do this by typing:

predict predict1

This will create a new variable of the predicted values (Y_p). To create a variable for the residuals, type the following command (this is just $Y - Y_p$):

Gen resid1=usarms-predict1

Now you can run the second model, using these same commands, but name these news variables *predict2* and *resid2*.

2) Plotting the residuals

In this assignment, I ask you to plot the residuals of your regression model against other variables. For example, in Question #2, you are asked to plot the residuals of both models (which you have named *resid1* and *resid2*) against time (year) and the independent variable for threat (*ussrarms*). As an example, let's plot the residuals for Dr. Gun's model against time.

plot resid1 year

Next, you would plot the residuals against *ussrarms*:

plot resid1 ussrarms

Whatever variable you list first will appear on the y-axis (you always want your residuals to appear on the y-axis).

As before, copy your output into your word processing program (such as MS Word), or print it and attach it to your assignment.

