Eco 499 Homework #1
due Friday, January 31, by noon

Instructions: This homework requires you to find and interpret US crime data from the FBI's Uniform Crime Report (available online at fbi.gov). Please turn in a printed copy of your assignment to me either in person, to my mailbox, or under my office door by the time indicated.

Problem 1 This question asks you to run a regression to study the effect of police manpower on the crime rate in Kentucky.

a. Compile a spreadsheet containing the following, for the 20 largest cities by population in Kentucky:

- population in 2012

- number of reported violent crimes in 2012

- number of reported property crimes in 2012

- number of law enforcement officers in 2012

b. Create the following new variables in your spreadsheet:

- 2012 violent crime rate

- 2012 property crime rate

- 2012 police officers per capita

c. Using the variation across the cities in your sample, run the following regressions:

- violent crime rate on police officers per capita

- property crime rate on police officers per capita

d. Turn into me the following:

- Two pages of regression output, for the regressions in part c

- Your interpretation of what your regressions do and do not tell us about the relationship between crime and police manpower in Kentucky. Be sure to interpret the coefficient estimates in your regressions. What are the problems with your data analysis? How could they be improved?