ECO 341K **Introduction to Econometrics**
University of Texas

Homework Assignment #4 (due February 27, 2:00 p.m.)

Written problems:

1. Wooldridge: Chapter 3, Problem 2

   In addition to the questions in the book, answer the following:

   (iv) If you drop *feduc* from the regression, how would the slope estimate on the *meduc* variable change (i.e., does it increase or decrease)? Explain. (The new regression is *educ* on *sibs* and *meduc*.)

   (v) If you drop *feduc* from the regression, how would R-squared change?

2. Wooldridge: Chapter 3, Problem 4

3. Wooldridge: Chapter 3, Problem 8

Computer problems (show any relevant Stata output):

1. For this problem, use the **stocks.dta** dataset that was used in class (and can be found on the Blackboard website in the "Datasets" section).

   a. You own stock in both General Electric (*ge***)** and IBM (*ibm*) and want to investigate the relationship between their returns. As a first step, run the simple linear regression of *ge* on *ibm*. Interpret the slope estimate. Are the returns positively or negatively correlated?

   b. Your friend looks at your simple linear regression results and suggests that the results may just be picking up a "market effect." To address this issue, run the multiple linear regression of *ge* on *ibm* and *dowjones*.

   c. How does the MLR slope estimate on *ibm* compare to the SLR slope estimate on *ibm*? Explain why this should have been expected (even before running the MLR).

   d. Interpret the R-squared from the multiple linear regression.

2. Wooldridge: Chapter 3, Computer Exercise C4

3. Wooldridge: Chapter 3, Computer Exercise C8