PROBLEM SET THREE (PS3)
(Due on October 28, Monday)

Chapter 4: Linear Regression with One Regressor

Part One:
Exercises: 4.1, 4.5, 4.9 and 4.14

Part Two:
Empirical Exericse:

The data file **CPS04** on Canvas contains data for full-time, full-year workers, age 25–34, with a high school diploma or B.A./B.S. as their highest degree. A detailed description is given in **CPS04_Description**. In this exercise, you will investigate the relationship between a worker's age and earnings. (Generally, older workers have more job experience, leading to higher productivity and earnings.)

a. Run a regression of average hourly earnings (*AHE*) on age (*Age*). What is the estimated intercept? What is the estimated slope? Use the estimated regression to answer this question: How much do earnings increase as workers age by 1 year?

b. Bob is a 26-year-old worker. Predict Bob's earnings using the estimated regression. Alexis is a 30-year-old worker. Predict Alexis's earnings using the estimated regression.

c. Does age account for a large fraction of the variance in earnings across individuals? Explain.

For this question, you need to submit your Stata outputs by printing out the regression outputs directly. Then you need to answer all the questions one by one. You can aslo use any other software. Please also print out the direct output from the software you are using.

Stata:
You can use Stata in two ways:

1. Computer Lab G021 in LSK has Stata installed. The lab is not always avaible. It may be occupied by some classes.

2. You can access Stata in your own computer using "Virtual Barn" by following the links below:

(1). install the software:
http://itsc.ust.hk/services/academic-teaching-support/facilities/virtual-barn/installation/
(2). connect the server:
http://itsc.ust.hk/services/academic-teaching-support/facilities/virtual-barn/user-guide/
(3). choose Academic Software

Please DO NOT wait until the last day to work on Stata, as the lab is not always avaiable.

Submission

We will have a mid-term on the evening of October 28, Monday. Please submit your problem set either before or after the mid-term that day.