

Econ 312: Problem Set #5

Thursday, May 18

Question.1 Use the data set CPS04.dat to answer following questions.

a. Run a regression of average hourly earning (AHE) on age (Age), gender (Female), and education (Bachelor). If Age increase from 26 to 27, how are earnings expected to change? If Age increase from 34 to 35, how are earnings expected to change?

b. Run a regression of the logarithm average hourly earnings, $\ln(AHE)$, on Age, Female, and Bachelor. If Age increase from 26 to 27, how are earnings expected to change? If Age increase from 34 to 35, how are earnings expected to change?

c. Run a regression of the logarithm average hourly earnings, $\ln(AHE)$, on $\ln(Age)$, Female, and Bachelor. If Age increase from 26 to 27, how are earnings expected to change? If Age increase from 34 to 35, how are earnings expected to change?

d. Run a regression of the logarithm average hourly earning, $\ln(AHE)$ on, Age, Age^2 , Female, and Bachelor. If Age increase from 26 to 27, how are earnings expected to change? If Age increase from 34 to 35, how are earnings expected to change?

e. Do you prefer the regression in (c) to the regression in (b)? Explain.

f. Do you prefer the regression in (d) to the regression in (b)? Explain.

g. Do you prefer the regression in (d) to the regression in (c)? Explain.

h. Run a regression of $\ln(AHE)$, on Age, Age^2 , Female, Bachelor, and the interaction term $Female \times Bachelor$. What does the coefficient on the interaction term measure? Alexis is a 32-year-old female with a bachelor's degree. What does the regression predict for her value of $\ln(AHE)$? Jane is a 32 year old female with a high school degree? What does the regression predict for her value of $\ln(AHE)$? What is the difference between Alexis' and Jane's earning?

k. Is the effect of Age on earnings different for high school graduates than college graduates? Specify and estimate a regression that you can use to answer this question.

l. After running all of these regression (and any others that you want to run), summarize the effect of age on earnings for young workers.