

Independent Exercise 4

Week 11

April 13, 2020

Your work on this exercise does not need to be submitted and will not be graded. I can provide feedback and help as needed. You may work on this exercise with others (practicing appropriate social distancing).

1. Use SLEEP75.dta to regress the log of minutes of sleep on age, its square, the good health dummy, marital status, and the young kid dummy.

Test for heteroskedasticity using

- (i) the squared residuals method;
- (ii) the Breusch-Pagan test;
- (iii) the White test.

Compare the results of each.

Reestimate the regression with heteroskedasticity-robust standard errors. Has this changed the initial results?

2. Use FERTIL1.dta to regress a dummy variable for having any number of kids on education, mother's education, father's education, and age. Use a weighted least squares linear probability model.

3. Use MROZ.dta to regress log wages on education age, mother's education, father's education, experience, and the SMSA dummy. Use RESET to determine whether the functional form of this equation would be improved by quadratic and cubed terms.