

Econometrics 1 - Homework 2
Spring 2018

The due date for this assignment is Thursday Feb 15.

From Hansen do the following: 2.16, 3.6, 3.8, 3.10, 3.12.

Empirical Exercises Using the data in cps09mar.dta do the following:

- (a) For white hispanic males regress log wage on education, experience and experience squared. Save the residuals from this regression.
- (b) Show (numerically) that the residuals are exactly (up to numerical rounding error) mean zero and that they are (essentially) perfectly orthogonal to the regressors in the model.
- (c) Regress log wage on experience and its square and save the residuals from this regression. Are the residuals orthogonal to education? Explain.
- (d) Regress education on experience and its square and save the residuals. Are these residuals orthogonal to education – answer this numerically and then provide a theoretical proof which allows you to say whether the average of the product of education and the residual has a particular sign or else is zero.
- (e) Regress the residuals from c. on the residuals from d. and compare the coefficient on the education residual with the coefficient on education in a. They should be essentially the same value.
- (f) The intercept in e. is basically zero (at least it should be). Why is this the case?