

Wages regression exercise

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For Monday, September 14. It's time I collected in some work from you so I'm asking you to submit your answers in the form of a PDF file via Canvas: look under Assignments for "Wage Regression". Include excerpts from gretl output as you think fit.

The data file:

<http://ricardo.ecn.wfu.edu/~cottrell/ecn215/eurowages.gdt>

or

<http://ricardo.ecn.wfu.edu/~cottrell/ecn215/eurowages.csv>

contains these variables from a sample of 1,472 individuals:

wage	gross hourly wage rate in euros
educ	education level from 1 [low] to 5 [high]
exper	years of experience
male	dummy: = 1 for males, 0 for females

1. Estimate a linear model with wage as dependent variable and educ, exper, male as independent (also include an intercept).
2. Add the square of exper to the dataset and re-estimate the model with this variable included. Does including the square improve the model? Justify your answer.
3. Add the log of wage to the dataset¹ and re-estimate the model with the dependent variable in log form (and the regressors as at step 2). Which form do you think works better, level of wage or log of wage? Justify your answer.
4. Using the model estimated at step 3: (a) determine the value of exper at which the marginal effect on the log wage is maximized, (b) interpret the coefficient on male, and (c) draw up a 95% confidence interval for the male effect.
5. Append a script which will produce answers to the questions above. Remember that in gretl you can access a script version of commands executed via point-and-click via the Command log entry under the Tools menu.

¹Remember, that's under the Add menu in the main gretl window.