

## Exercise Sheet 5

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1. Explain the meaning of a coefficient in a multiple regression model.
2. Use the first order conditions to derive the coefficients in a regression model with a constant and two regressors. State clearly the assumptions for OLS to be BLUE.
3. Using the pssobh.dta data set (data=3 subset – BHPS) regress hours of work on : the log hourly wage, age, union and public. Union is a variable taking the value 1 if the person is a union member and zero otherwise. Public is a variable that takes the value 1 if the person works for the public sector and zero otherwise.
  - a. What is the elasticity of hours of work with respect to the wage that is implied by your results.
  - b. Interpret the other coefficients you obtain
  - c. Test the hypothesis that hours of work change linearly with age.
  - d. Test the hypothesis that years of education can be excluded from the labour supply equation. What do you conclude?
  - e. Report the R-squared. What do you conclude from this reported value?