

ECON 7800, Dr. Haimanti Bhattacharya
Assignment 6, Total: 30 points.

1. Use “pension.dta”

Use OLS to explain *pctstck* using *choice age educ female black married finc25 finc35 finc50 finc75 finc100 finc101 wealth89 prftshr*.

Now use ordered logit to explain *pctstck* using *choice age educ female black married finc25 finc35 finc50 finc75 finc100 finc101 wealth89 prftshr*.

Compare results from OLS and Ordered Logit. [5 points]

2. Use “KEANE.dta”

Use OLS to explain *status* using *educ exper expersq black*. Now use multinomial logit to estimate the above model. Compare results from OLS and Multinomial Logit. [5 points]

3. Use “MROZ.dta”

Consider the model where

Explained variable: *hours*

Explanatory variables: *nwifeinc educ exper expersq age kidslt6 kidsge6*

Use OLS to estimate the model.

Now use Tobit to estimate the model (as *hours* = 0 is a corner solution).

Compare the results from OLS and Tobit. [5 points]

4. Use “Recid.dta”

Consider the model where

Explained variable: *ldurat*

Explanatory variables: *workprg priors tserved felon alcohol drugs black married educ age*

Censoring indicator variable: *cens*

Estimate the censored regression and interpret the results. [5 points]

5. Use “MROZ.dta”

Consider the regression where

Explained variable: *lwage*

Explanatory variables: *educ exper expersq*

The decision to participate in labor force (*inlf*) can be explained by the following variables:

nwifeinc educ exper expersq age kidslt6 kidsge6

Estimate the model using OLS as well as the Heckman two-step procedure to account for the selection issue in this model. Compare the results. [5 points]

6. Use “Crime1.dta”

Consider the model where

Explained variable: *narr86*

Explanatory variables: *pcnv avgsgen tottime ptime86 qemp86 inc86 black hispan born60*

Use OLS to estimate the model.

Now use Poisson regression to estimate the model (as number of arrests is a count variable).

Now use Negative binomial regression to estimate the model.

Compare the results from OLS, Poisson and Negative binomial. [5 points]