1 Ex: Estimation, post-estimation and reporting

Exercise

In the dataset -bwght.dta-, consider the model

$$\ln bwght = \beta_0 + \beta_1 male + \beta_2 parity + \beta_3 \ln faminc + \beta_4 packs + u$$

1. estimate the model using the OLS-command - regress -
2. tabulate the results using - estimates table -, then using - esttab -
3. use the stored coefficients and SE's to test $H_0 : \beta_1 = 0$

We now use -cigprice- as an instrument for -packs-.

1. Estimate the first stage and the reduced form of this model, i.e.

$$\ln bwght = \pi_0^r + \pi_1^r male + \pi_2^r parity + \pi_3^r \ln faminc + \pi_4^r cigprice + u$$
$$packs = \pi_0 + \pi_1 male + \pi_2 parity + \pi_3 \ln faminc + \pi_z cigprice + v$$

2. Calculate the IV-estimate of β_4 by using the fact that $\beta_4^{IV} = \pi_4^r / \pi_z$.
3. Estimate the IV-model by predicting -packs- from the FS, and then running the original model with this variable in place of -packs- .
4. Estimate the IV-model using -ivreg-
5. Tabulate the models (OLS, IV, RF, FS) using -esttab-
   - Note that you can store regression results by using -estimates store-
   - (Alternatively, use -eststo- from the estout-package)