

HW 2 (Due June 6, Friday)

Download a data file called “tsls.txt” from Dr. Ahn’s website. The data contains 4 variables: y, x, z1 and z2. The number of observations is 100. The regression model you wish to estimate is given:

$$y = \beta_1 + \beta_2x + \varepsilon.$$

Make a gauss program that can do the followings. Report both your program and output files.

- Q1. (10 pts.) Estimate the above model by OLS. Report variable names, estimates, standard errors, and t-statistics. Also, report R^2 .
- Q2. (10 pts.) Estimate the above model by 2SLS using (1,z1,z2) as instruments. Report variable names, estimates, standard errors, and t-statistics. Also, report R^2 .
- Q3. (5 pts.) At 5% of significance level, test whether your instruments are exogenous or not. [Hint: You can obtain the p-value of your χ^2 statistic by the command, `cdfchic(s,d)`, where s is your statistic and d is the degrees of freedom.]
- Q4. (5 pts.) At 5% of significance level, test whether x is exogenous or not.