Solution Test 5

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1 Take the first diffierence

$$\Delta \log(scrap_{it}) = \delta_0 + \beta_1 \Delta hrsemp_{it} + \Delta u_{it}.$$

Run the OLS (or the IV) regression on the above equation and get the estimate for β_1.

2 (i) Consider the equation

$$y_t = \alpha + \delta t + \rho y_{t-1} + u_t.$$

Subtract y_{t-1} from the above equation and get

$$\Delta y_t = \alpha + \delta t + \theta y_{t-1} + u_t$$

where $\theta = 1 - \rho$. Run the regression of Δy_t on $1, t, y_{t-1}$.

(ii) The null hypothesis is $H_0 : \theta = 0$ and the alternative is $H_1 : \theta < 0$.