ECONOMETRICS II, FALL 2017

Homework 9. Due MONday November 20.

1. Verify formula (3) in Moulton's article for the simple case of m=3 (I used T instead of m in class). Assume the matrix of regressors is

$$X = \begin{pmatrix} x_1 \\ x_1 \\ x_1 \\ x_2 \\ x_2 \\ x_2 \end{pmatrix},$$

and the error variance matrix is

$$V = \sigma^2 \begin{pmatrix} 1 & \rho & \rho & 0 & 0 & 0 \\ \rho & 1 & \rho & 0 & 0 & 0 \\ \rho & \rho & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & \rho & \rho \\ 0 & 0 & 0 & \rho & 1 & \rho \\ 0 & 0 & 0 & \rho & \rho & 1 \end{pmatrix}.$$

2. Use the updated Matlab panel data program that I have posted and run it with clustered standard errors.

3. Now assume that the errors are clustered by time (year), rather than by state. Modify the program and run it again.