

# Stata Class 5

---

*Alexander C. Lembcke*

## Exercise 1

Start a new do-file and add the commands to reproduce the following exercises. Open the data set we created last week.

- a) Regress log sales on log materials, log employment and log capital.
- b) Predict the residual and replace the variable with the residual squared.
- c) Regress the squared residuals on the three regressors, their squares and all possible interactions.
- d) Test whether the variables are jointly significant.
- e) Repeat the regression from a), this time instrumenting employment with wages and capital with its lagged value (hint: use ivregress).
- f) Test whether you can reject endogeneity of the regressors.

## Exercise 2

Keep using the same do-file and add the commands to reproduce the following exercises.

- a) Declare your data as panel data and run a fixed effects regression of log sales on log materials, log employment, log capital and the management score
- b) Rerun the estimation from a) using dummies for each company. Is the coefficient on management identified?
- c) Create a loop that reports the number of negative observations for each variable.
- d) Run a regression of log sales on log material, log employment, log capital and management score for each country in the sample separately (using a loop).
- e) If the coefficient on management is statistically significant, test whether it is equal to .03. If it is not significant, test whether it is equal to -.03.