2/18/2010 36-402/608 ADA-II H. Seltman

Handout #11: Models with Serial Correlation

1. The usual formulas for standard errors underestimate them in the presence of positive serial correlation and overestimate them in the presence of negative serial correlation.

2. Easy correction factor formula for AR1 models with autocorrelation r:

$$\text{SE} = \text{SE} * \sqrt{\frac{1+r}{1-r}}$$

3. In R, we can let `arima()` calculate corrected standard errors using the `xreg=` parameter to combine regression with estimation of an ARMA model.

4. Breakout and Discussion

5. If time permits, some review of experimental design