

## Some of the Topics Covered After Midterm

### Chapter 6

Omitted variable bias

Multiple regression model

OLS estimator in multiple regression (properties and interpretation)

OLS assumptions

Adjusted R-squared

Multicollinearity and the dummy variable trap

### Chapter 7

F-test

- why not two t-tests?
- interpreting the F-test statistic formula in various ways (especially through restricted and unrestricted models)
- calculating the F statistic from regression output
- using the F-test to select between models (model specification)
- the “overall” F-test

Reading regression tables (like the one you created in assignment 3)

### Chapter 8

Non-linear regression (why the linear model might not work)

Quadratic regression model (and higher order polynomials)

Logarithmic regression models:

- Lin-Log
- Log-Lin
- Log-Log

Interaction terms:

- dummy-continuous
- dummy-dummy
- continuous-continuous

Model selection using F-tests, t-tests, and adjusted R-square

### Chapter 9

Heteroskedasticity vs. homoscedasticity:

- What are they?
- What problem does heteroskedasticity cause / how is the problem fixed?