17.871
Review
Social science goals?

• Cumulate knowledge by testing causal claims about socially important questions
• How do we test causal claims?
  – Controlled comparisons
• What’s the best way of making controlled comparisons?
  1. Field experiments
  2. Natural experiments
  3. Observational studies
• Rigorous assessments of certainty
Best approaches to data analysis

• Do your analysis graphically (when possible)!
  – Conveys much more information about your data than statistical models
  – Requires fewer assumptions
  – Easy to understand

• Confirm your graphical findings with statistical models
  – Allow you to make more carefully controlled comparisons by holding variables constant
  – Allow you to assess certainty through standard errors and p-values
Regression review

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Standard errors in parentheses
Regression review

• Focus on substantive effect
  – E.g., what’s the benefit of the policy? Does the death penalty discriminate?
  – Focus on what actors would want to know in their decision making
  – Do your best to ignore difficult-to-interpret statistics such as $R^2$ (variance explained)
    • If you’re trying to avoid the death penalty, the coefficient for wv is much more relevant than $R^2$
Creating regression tables

reg death bd
    outreg2 using table.txt, se bdec(2,2,2,2) noaster e(rmse) replace

reg death wv
    outreg2 using table.txt, se bdec(2,2,2,2) noaster e(rmse) append

reg death ac
    outreg2 using table.txt, se bdec(2,2,2,2) noaster e(rmse) append

reg death bd wv ac
    outreg2 using table.txt, se bdec(2,2,2,2) noaster e(rmse) append

g wvXac= ac*wv

reg death wv ac wvXac
    outreg2 using table.txt, se bdec(2,2,2,2) noaster e(rmse) append

Then convert the text file (table.txt) to a nicely formatted table. (In Word, use Convert and Table menu. Paste into PowerPoint as image.)
For your final presentations

• Answer these questions
  1. What’s the most threatening alternative explanation? (What are you most afraid of?)
  2. How sure are you about your findings?
     • Consider more than just your p-value
  3. If you had more time or money or both, what research design would give you a better controlled comparison?

• Keep presentations to 10 minutes
• Practice, practice, practice