

# Panel Data Trinity Term 2008

## Course Outline

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The course will focus on the analysis of data that are both cross-sectional (a survey of individuals, characteristics of firms, or aggregate data on cities) and dynamic (we observe these individuals or firms or cities at multiple time points).

## Outline for the Course

- Week 1 - Panel Data
  - What is panel data?
  - Data Analysis and Multi-level Models.
  - Multi-level modeling approach to Panel Data.
  - Readings
    - \* Gellman, Andrew and Jennifer Hill. 2007. Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press, Chapter 11 and 12
  
    - \* Stata 10.0 Manual Longitudinal/Panel Data, xtmixed
  
    - \* Rabe-Hesketh, Sophia and Anders Skrondal. 2005. Multilevel and Longitudinal Modeling Using Stata. Stata Press, Chapter 2
  
- Week 2 - Random Coefficients Model (RCM).
  
- Readings
  - Gellman, Andrew and Jennifer Hill. 2007. Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press, Chapter 13 and 14
  
  - Stata 10.0 Manual Longitudinal/Panel Data, xtmixed, xtreg, xtregar
  
  - Rabe-Hesketh, Sophia and Anders Skrondal. 2005. Multilevel and Longitudinal Modeling Using Stata. Stata Press, Chapter 3 and 4
  
  - Bartels, Larry. 1997. "Pooling Disparate Observations." American Journal of Political Science 40:905-42
  
  - Skrondal, Anders and Sophia Rabe-Hesketh. 2008. "Multilevel and Related Models for Longitudinal Data" In Jan de Leeus and Erik Meijer, eds. Handbook of Multilevel Analysis. Springer.

- Week 3 - Dynamic Panel Data Estimation.
  - Stata 10.0 Manual Longitudinal/Panel Data, xtabond, xtabond postestimation, xtdpdsys, xtivreg
  - Green, Donald P. and David H. Yoon. 2002. "Reconciling Individual and Aggregate Evidence Concerning Partisan Stability: Applying Time-Series Models to Panel Survey Data." *Political Analysis* 10:1-24.
  - Wawro, Gregory. 2002. "Estimating Dynamic Panel Data Models in Political Science." *Political Analysis* 10:25-48.
  - Halaby, Charles N. 2004. "Panel Models in Sociological Research: Theory into Practice." *Annual Review of Sociology*. 30:507-44.
  
- Week 4 - RCM and Time Series Cross-sectional Data
  - Beck, Nathaniel and Jonathan N. Katz. 2007. "Random Coefficient Models for Time-Series-Cross-Section Data: Monte Carlo Experiments." *Political Analysis*. 15: 182-195.
  - Wilson, Sven E. and Daniel M. Butler. 2007. "A Lot More to Do: The Sensitivity of Time-Series Cross-Section Analyses to Simple Alternative Specifications." *Political Analysis*. 15:101-123.
  - Plumper, Thomas and Vera E. Troeger. 2007. "Efficient Estimation of Time-Invariant and Rarely Changing Variables in Finite Sample Panel Analyses with Unit Fixed Effects." *Political Analysis* 15:124-139.
  - Shor, Boris, Joseph Bafumi, Luke Keele and David Park. 2007. "A Bayesian Multilevel Modeling Approach to Time-Series Cross-Sectional Data." *Political Analysis*. 15:165-181.