Time Series Analysis: A Second Course  
ICPSR Summer Program in Quantitative Methods of Social Research  
July 16th-July 20th, 2012

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Recommended Texts:


TOPICS

1. Analyzing Time Series Data: Fundamentals
   - Stationarity and Nonstationary Processes
   - Unit Roots and Cointegration
   - Software - Stata and Alternatives (R, Eviews, Rats)
   - Simulating Time Series Data

   Reading:
   Asteriou and Hall, chs. 16, 17  
   DeBoef and Keele “Taking Time Seriously: Dynamic Regression Models”
   Enders, chs. 2, 4, 6  
   Kleiber and Zeileis, chs. 1, 2, 3, 6  
   Pfaff, chs. 2, 3, 4, 6

2. Fractional Integration, Fractional Cointegration and Fractional Error Correction

   Reading:
   Baillie and Bollerslev, “Co-integration, Fractional Co-integration, and Exchange Rate Dynamics”
   Barkoulas, Baum and Oguz, “Fractional Dynamics in a System of Long-Term International Interest Rates”
   Box-Steffensmeier and Smith "The Dynamics of Aggregate Partisanship"
   Clarke and Lebo, "Fractional (Co)Integration and Governing Party Support in Britain"
   Enders, ch. 2  
   Pfaff, ch. 1

3. Intervention & Transfer Function Models and Model Comparisons
   - Foundations: The Univariate ARIMA Model
   - Multivariate Models - Specification, Estimation and Diagnostics
- Exogeneity Testing - Weak, Strong and Super Exogeneity
- Comparing Rival Models - Encompassing and Other Model Selection Tests

Reading:
Asteriou and Hall, ch. 13
Charemza and Deadman, ch. 7
Clarke, Mishler and Whiteley, "Recapturing the Falklands"
Enders, ch. 5, pp. 272-297
Hendry, chs. 5, 14

4. ARCH, GARCH and Dynamic Conditional Correlations
- Diagnosing ARCH and GARCH processes
- Multiple Models for Conditional Variances
- Financial Time Series Applications
- Public Opinion Dynamics Applications

Reading:
Asteriou, ch. 14
Clarke et al., 2009: ch. 4, pp. 130-138
Enders, ch. 3.
Lebo and Box-Steffensmeier, "Dynamic Conditional Correlations"

5. State Space Models
- State Space Representations of Time Series Processes
- Bayesian State Space Models with R and Winbugs

Reading:
Commandeur and Koopman, chs. 1-9
Jackman, "Pooling the Polls"
Gelman, "R2Winbugs"
Ntzoufras, chs. 1-4

REFERENCES


