Structural Vector Autoregressions and Asymptotic Theory for Time Series Econometrics
2009
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1 Structural Vector Autoregressions

1.1 SVARs (Session 1)

The A-Model

The B-Model

The AB-Model

Blanchard-Quah Model

Literature: Lütkepohl (2005, Chapter 9), Breitung, Brüggemann and Lütkepohl (2004), Blanchard and Quah (1989), Christiano, Eichenbaum and Evans (1999), Amisano and Giannini (1997)

1.2 Structural Vector Error Correction Models (Session 2)

Literature: Lütkepohl (2005, Chapter 9), Breitung et al. (2004), King, Plosser, Stock and Watson (1991)

1.3 Further Issues (Session 3)

Factor Augmented Models

Sign Restrictions

Identification via Statistical Data Properties

Literature: Bernanke, Boivin and Eliasz (2005), Faust (1998), Canova and De Nicoló (2002), Canova (2007), Uhlig (2005), Rigobon (2003), Lanne and Lütkepohl (2008), Lanne and Lütkepohl (2009), Lanne, Lütkepohl and Maciejowska (2009)

2 Asymptotic Theory for Time Series Econometrics

2.1 Review of Basic Definitions and Results (Session 4)

Multivariate Normal and Related Distributions

Concepts of Stochastic Convergence

Order in Probability

Infinite Sums of Random Variables

Literature: Lütkepohl (2005, Appendix B, C.1, C.2, C.3)

2.2 Laws of Large Numbers and Central Limit Theorems (Session 5)

Literature: Lütkepohl (2005, Appendix C.4)

2.3 Estimation and Testing (Session 6)

Maximum Likelihood Estimation

Testing Principles

GMM Estimation

Literature: Lütkepohl (2005, Appendix C.5, C.6, C.7), Hamilton (1994, Chapter 14)

2.4 Unit Root Asymptotics (Session 7)

Literature: Literature: Lütkepohl (2005, Appendix C.8.1), Hamilton (1994, Chapter 17)

2.5 Multivariate Unit Root Asymptotics (Session 8)

Literature: Literature: Lütkepohl (2005, Appendix C.8.2), Hamilton (1994, Chapter 18)

2.6 OLS Estimation of Cointegrated VAR(1) (Session 9)

Literature: Lütkepohl (2005, Chapter 7)

2.7 Other Estimators of Cointegrated VAR(1) (Session 10)

Literature: Lütkepohl (2005, Chapter 7)

Course Requirements

The grade for the course will be based on a SVAR project and homework assignments for the asymptotic theory part.

References

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King, R. G., Plosser, C. I., Stock, J. H. and Watson, M. W. (1991). Stochastic trends and economic fluctuations, *American Economic Review* **81**: 819–840.

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Uhlig, H. (2005). What are the effects of monetary policy on output? Results from an agnostic identification procedure, *Journal of Monetary Economics* **52**: 381–419.