Econometric Methods, WS 2015/16

Part I by Helmut Lütkepohl

1 The Classical Linear Regression Model (Hayashi, Greene)

1.1 Ordinary Least Squares (OLS) Estimation

1.2 Maximum Likelihood (ML) Estimation

1.3 Generalized Least Squares (GLS) Estimation

2 Asymptotic Theory (Hayashi, Lütkepohl Appendix)

2.1 Stochastic Convergence Concepts

2.2 Laws of Large Numbers (LLN) and Central Limit Theorems (CLT)

2.3 Asymptotic Properties of OLS

2.4 Asymptotic Properties of ML

2.5 Asymptotic Properties of GLS

3 Single-Equation Generalized Method of Moments (GMM) Estimation (Hayashi, Greene)

3.1 The Method

3.2 Asymptotic Properties

4 Time Series Methods (Hamilton, Hayashi)

4.1 ARIMA models

4.2 Model specification

4.3 Model Checking

4.4 Forecasting

Suggested Readings

Hayashi, F. (2000) Econometrics, Princeton University Press, Princeton.

Greene, W.H. (2003) Econometric Analysis, Fifth Edition (or higher), Prentice Hall, New Jersey.

Hamilton, J.D. (1994) Time Series Analysis, Princeton University Press, Princeton, New Jersey.

Lütkepohl, H. (2005) New Introduction to Multiple Time Series Analysis, Springer, Berlin