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MEI

This course is part of the second term of **MEI**. Its focus is time series econometrics.

The following textbooks are useful references.

- J. D. Hamilton, *Time Series Analysis* (TSA)

- W. H. Greene, *Econometric Analysis*, 6th Edition (EA)

- J. Johnston and J. Dinardo, *Econometric Methods*, 4th Edition (EM)

The course covers three principal topics:

1   Regression with autocorrelated disturbances

(a) Reminder. Basic regression. Properties

(b) Extensions. Orthogonality condition. HAC consistent covariance estimator

(c) Stationarity. ARMA processes. Moving average representations. Innovations

(d) Lagged dependent variables

(e) Examples: Durbin procedure. Cochrane-Orcutt procedure

References: TSA 8.1–8.2, pp. 225–226, 3.1–3.6; EA 19.1–19.5, 19.9, 21.2.1–21.2.3, D.2. [Optional: TSA Ch. 7]

2   Unit roots and cointegration

(a) Trends and stochastic trends

(b) Brownian motion

(c) Cointegrating vector. Error correction models. Common stochastic trends

References: TSA 15.1–15.4, 16.1–16.2, 17.1–17.6, 19.1; EA 22.2–22.3; EM 9.3

3   Vector autoregressions

(a) Cointegration as restricted vector autoregression

(b) Vector moving average representation

(c) Identification

(d) Innovation accounting

References: TSA 19.1 (again), 10.1–10.3, 11.4–11.5; EA 20.6; EM 9.1–9.2, Appendix 9.2