Università Roma 2—EIEF, Graduate Program

Time Series Econometrics

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1. **Time series.** Stationary stochastic processes. Autocovariance function. White noise processes. Moving averages. Infinite moving averages. Prediction. Wold Representation Theorem. ARMA processes. Estimation and testing of ARMA processes.

2. **Vector time series.** Extension of the standard definitions to the n-dimensional case: stationarity, autocovariance function, etc. Wold Representation Theorem. VARMA processes. State space representation for VARMA processes. Estimation and testing of VARMA processes. Cointegration.

References

Hamilton, J. D. (1994). *Time Series Analysis*, Princeton: Princeton University Press.

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

Brockwell, P. J. and R. D. Davis (1996). *Introduction to Time Series and Forecasting*, Berlin: Springer.

Brockwell, P. J. and R. D. Davis (1991). *Time Series: Theory and methods*, Berlin: Springer.

Enders, W. (2010). *Applied Econometric Time Series*, New York: Wiley.