

Statistics II — Marcelo Fernandes

The standard linear regression model

Estimation: Assumptions and the geometry of least squares

Inference: Tests of hypothesis

Asymptotic properties: Assumptions, consistency and normality

Gauss-Newton regression: Residual analyses

Maximum likelihood: Estimation and testing

Extensions to the standard linear regression model

Estimation and inference under heteroskedasticity: Generalized least squares

Estimation and inference under autocorrelation: Introduction to dynamic models

Endogeneity and measurement errors: Instrumental variables

Advanced topics (if there is enough time)

Nonlinear least squares

Binomial response models: Probit and Logit

Simulation-based methods: Monte Carlo and bootstrap

Main reference

Davidson, Russell and James G. MacKinnon (1993) *Estimation and Inference in Econometrics*, Oxford University Press.

Additional references

Davidson, James (2000) *Econometric Theory*, Blackwell Publishers.

Poirier, David J. (1995) *Intermediate Statistics and Econometrics: A Comparative Approach*, MIT Press.