

PhD Program 2013/14

Econometrics

P. Gagliardini

1. Linear Regression Model and Least Squares Methods

- 1.1 Classical linear regression and generalized linear regression
- 1.2 Ordinary Least Squares (OLS) estimation. Finite sample and large sample properties
- 1.3 Endogeneity and inconsistency of OLS
- 1.4 Instrumental variable estimation and Two-stage Least Squares (2SLS)
- 1.5 Test of overidentification
- 1.6 Systems of simultaneous equations

2. Nonlinear Regression Model and Pseudo Maximum Likelihood Estimation

- 2.1 Nonlinear regression and Nonlinear Least Squares (NLS) estimation
- 2.2 Kullback-Leibler discrepancy and pseudo true value
- 2.3 Pseudo Maximum Likelihood (PML) estimation
- 2.4 Asymptotic properties of PML. Theory of M-estimators
- 2.5 PML estimation of order 1
- 2.6 PML estimation of order 2

3. The Generalized Method of Moments

- 3.1 Orthogonality conditions
- 3.2 Generalized Method of Moments (GMM) estimation
- 3.3 Consistency and asymptotic normality of GMM
- 3.4 Best GMM estimator
- 3.5 Testing parametric hypotheses in the GMM framework
- 3.6 GMM test of overidentification

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