Università della Svizzera Italiana   Faculty of Economics

PhD Program 2017/18

Econometrics
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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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