Advanced Econometrics
Dissertations

2021-2022

The dissertations must be done by groups of two or three students and should be sent to us by email before May 16. They should not exceed 10 pages, with reasonable font size and margins. We suggest you the following topics but you can choose another one, subject to our approval. You can choose either a topics relative to PART I or to PART II of the course. Before starting to work on a project it must be approved by us. So, please email us (Xavier.dhaultfoeuille@ensae.fr and Thierry.Kamionka@ensae.fr): the names of the participants of the group and three choices in the order of preference. The projects will be then assigned on the bases of first in first out (to avoid that the same project is taken by more than one group). You can use any software for your code. Please attach this code in a separate file in the email.

1 Projects for PART I

Each one of the following articles represents a project. For the following articles, you should briefly explain the theoretical method, then you can either replicate and extend the simulations in the paper (if it contains simulations), or find a real data set and apply the method of the paper to it, or develop a simulation study if the paper does not contain it.

Simulated Likelihood

1. Laroque, G. and Salanié, B. (1993), Simulation-Based Estimation of Models with Lagged Latent Variables, Journal of Applied Econometrics, 8, S119-S133.

2. Hellström, J. (2006), A bivariate Count Data Model for Household Tourism Demand, Journal of Applied Econometrics, 21(2), 213-226.

3. Blevins J.R. (2016), Sequential Monte Carlo Methods for Estimating Dynamic Microeconomic Models, Journal of Applied Econometrics, 31(5), 773-804.

   Simulated EM algorithm

4. Arcidiacono, P. and Miller, A. (2011), Conditional Choice Probability Estimation of Dynamic Discrete-Choice Models With Unobserved Heterogeneity, Econometrica, 79(6), 1823-1867.

   Indirect Inference

5. Sauer, R.M. and Taber, Ch. (2021), Understanding Women's Wage Growth Using Indirect Inference with Importance Sampling, Journal of Applied Econometrics, 36, 453-473.

6. Gourieroux, Ch., Phillips, P.C.B. and Yu, J. (2010), Indirect Inference for Dynamic Panel Models, Journal of Econometrics, 157, 68-77.

   Method of Simulated Moments

7. Newey, W.K. (2001), Flexible Simulated Moment Estimation of Non-Linear Errors-in-Variables Models, The Review of Economics and Statistics, 83(4), 616-627.

2 Projects for PART II

Quantile regressions

8. Chernozhukov, V. and Fernández-Val, I. (2011), Inference for extremal conditional quantile models, with an application to market and birthweight risks, Review of Economic Studies, 78, 559-589.

9. Chernozhukov, V., Hansen, C., and Jansson, M. (2009), Finite sample inference for quantile regression models, Journal of Econometrics, 152, 93–103.

10. Galvao, A., (2011) Quantile regression for dynamic panel data with fixed effects, Journal of Econometrics, 164, 142-157.

11. Koenker, R., and Machado, J. A. (1999). Goodness of fit and related inference processes for quantile regression, Journal of the American Statistical Association, 94, 1296-1310.

Nonstandard inference in regressions

12. DiCiccio, C. J., and Romano, J. P. (2017). Robust permutation tests for correlation and regression coefficients. Journal of the American Statistical Association, 112, 1211-1220.

13. Hansen, B. E., and Lee, S. (2019). Asymptotic theory for clustered samples. Journal of econometrics, 210(2), 268-290.

14. Lei, L., and Bickel, P. J. (2021). An assumption-free exact test for fixed-design linear models with exchangeable errors. Biometrika, 108, 397-412.