Essays on n-Nonlinear Panel Time Series Models

Mesters, G.

2015

tinbergen institute

Geert Mesters

Essays on Nonliear Panel Time Series Model

VU University Amsterdam

Essays on Nonliear Panel Time Series Model

Geert Mesters

602

This thesis develops methods for conducting inference on nonlinear panel data models in the presence of latent stochastic variables. We focus on developing likelihood-based methods that enable the efficient estimation of the deterministic model parameters and allow for the extraction of conditional estimates for the latent stochastic variables. The new estimation methods are based on either simulation methods, such as importance sampling, or on iterative optimization methods, such as the expectation-maximization algorithm. The methodology is illustrated using panel data from different fields of research including macroeconomics, microeconomics, finance and sociology.

Geert Mesters is an Assistant Professor in the Department of Economics and Business at the Universitat Pompeu Fabra in Barcelona and affiliated to the Barcelona GSE and The Netherlands Institute for the Study of Crime and Law Enforcement (NSCR). Between 2010 and 2014 he was a PhD student in econometrics and criminology at the VU University Amsterdam, Tinbergen Institute and the NSCR. He holds an M.Sc. in Econometrics from the VU University Amsterdam (cum laude).