Issues in Panel Data Model Selection: the Case of Empirical Analysis of Demand for Reinsurance

Augusto Carneiro*
School of Actuarial Studies
Faculty of Commerce & Economics
University of New South Wales
Sydney, Australia
e-mail: la.carneiro@student.unsw.edu.au

and

Michael Sherris
School of Actuarial Studies
Faculty of Commerce & Economics
University of New South Wales
Sydney, Australia
e-mail: m.sherris@unsw.edu.au

Many recent econometric studies in different areas have used panel (longitudinal) data econometrics, which has been substantially developed since the last decade. The reason for this is based on the potential advantages of panel data models when compared to cross section models. However, the advantages of panel data models come sometimes at the cost of strong assumptions on the model’s error structure. In this presentation we show the importance of data diagnostics in panel data model selection. Specifically, we discuss model selection issues in data set that presents group-wise heteroscedasticity, correlation across panels and serial correlation. Finally, we show the effects of model selection on the empirical results of the demand for reinsurance in Australia. The presentation is based on the paper “Demand for Reinsurance: Evidence from Australian Insurers”, L.A. Carneiro and M. Sherris (2005), Working Paper Series, Actuarial Studies, UNSW.

* Presenter.