



## **ERSA Advanced Panel Data Econometrics Online Course 14 July – 15 August 2020**

### Description

The objective of this course is to discuss the salient issues in the econometric analysis of panel data, with emphasis on the practical applications.

The course is broken down into two parts. The first part of the course will focus on the pooled model, the fixed effects model and the random effects model with emphasis on specification, estimation and testing issues as well as the interpretation of the results. Also, issues surrounding heteroscedasticity, autocorrelation and cross-section dependence in panels will be discussed. This will be followed by the analysis of dynamic panels using bias-adjusted, instrumental variable and Generalized Method of Moments (GMM) estimators. The first part will conclude with the analysis of pseudo panels (i.e., cohort analysis and impact evaluation analysis using differences-in-differences). The second part of the course will focus on issues surrounding panel unit roots and panel cointegration in homogeneous and heterogeneous panels which are highly relevant for panel datasets with long time dimensions, the so-called macro panels. Also accounting for panel cointegration using panel error correction models, Dynamic OLS (DOLS) and Fully Modified OLS (FMOLS) will be discussed. The second part will conclude with a discussion of panel vector autoregressions, panel models for limited dependent variables (e.g. panel probit, panel logit, panel count data models, etc.) and flexible panel models such as semiparametric fixed effects models.

Understanding practical applications of panel data analysis can be aided by theory. Hence, in the theoretical setup, model formulation, estimation and hypothesis testing issues and the associated challenges will be introduced in cases where such introduction helps in elucidating the practical applications.

### Instructor

Tomson Ogwang is a professor in the Department of Economics at Brock University, Canada. His research interests include econometrics (especially nonparametric and semiparametric econometrics and panel data econometrics) and development economics. Professor Ogwang has several publications in these areas. He has previously facilitated panel data analysis training for academics and practitioners in several settings, including the African Economic Research Consortium (AERC), universities and central banks. Professor Ogwang continues to serve as a Resource Person for AERC's biannual workshops.

### Format and schedule

This advanced course in panel data econometrics will be taught over 5 weeks (14 July – 15 August 2020) and comprise both lectures and practical sessions. The course will be delivered via Zoom at the following times:

- Tuesdays and Thursdays 5-8pm (SAST)
- Saturdays 2-8pm (SAST)

### Application process

Interested applicants are requested to fill out [this form](#) by Monday, 29 June and application decisions will be communicated by Friday, 3 July. Please note that access to Stata and a stable internet connection are prerequisites for attending this course.