TRAINING COURSE | ONLINE
NON-LINEAR PANEL DATA MODELS IN STATA
12th -13th July 2021

Panel data analysis is increasingly used in econometrics, financial analysis, public health and social sciences, since it enable researchers to allow for different types of latent heterogeneity between observations. Allowing researchers for example, to control for variables that cannot be directly observed or measured, such as cultural factors or differences in business practices across companies. The use of Panel Data in empirical studies also tends to result in a considerable improvement in the accuracy of the obtained estimates, since panel data sets usually contain more sample variability and higher degrees of freedom. Finally, panel data allows for the estimation of dynamic models, with causal relationships which may not arise instantaneously, but over a period of time.

This course follows on from our Linear Panel Data Models in Stata course to offer the necessary theoretical background and the applied skills to enable participants to: i) independently employ non-linear micro panel data techniques to their own research topics, and ii) to understand and evaluate micro panel data analyses published in the academic literature. The focus is therefore on non-linear estimation techniques (more specifically **Poisson, Probit, Logit** and **Tobit** panel data models) and issues of sample selection and attrition.

In common with TStat's training philosophy, each individual session is composed of both a theoretical component (in which the techniques and underlying principles behind them are explained), and an applied (hands-on) segment, during which participants have the opportunity to implement the techniques using real data under the watchful eye of the course tutor. Throughout the course, theoretical sessions are reinforced by case study examples, in which the course tutor discusses and highlights potential pitfalls and the advantages of individual techniques. The intuition behind the choice and implementation of a specific technique is of the utmost importance. In this manner, the course leader is able to bridge the "often difficult" gap between abstract theoretical methodologies, and the practical issues one encounters when dealing with real data. At the end of the course, participants are expected to be able to autonomously implement the theories and methodologies discussed during the course.

TARGET AUDIENCE

TStat Training's Non-Linear Panel Data training course is of particular interest to Master and Ph.D. Students, researchers in public and private research centres and professionals working in the following fields: Agricultural Economics, Economics, Finance, Management, Public Health, Political Sciences and the Social Sciences seeking to acquire the "introductory" applied and theoretical toolset to enable them to undertake independent empirical research using panel data.

COURSE CODE

D-EF10-B-OL

https://www.tstattraining.eu/training/nonlinear-panel-data-models-stata-ol/

NON-LINEAR PANEL DATA MODELS IN STATA

PREREQUISITES

Participants are required to have a good working knowledge of the OLS regression model, the topics featured in our Linear Panel Data Model in Stata course and the statistical software Stata. Knowledge at the arguments illustrated in TStat's course Analysis Micro Data in Stata will also prove to be a advantage.

PROGRAM

1. The incidental parameter problem in non-linear models

2. Poisson panel data models: *poisson, xtpoisson*
   - Random effects
   - Correlated effects (conditional poisson)

3. Probit panel data models: *probit, xtprobit, oprobit, xtoprobit*
   - Random-effect models
   - Correlated effects modelled as group means (a la Mundlak)

4. Logit panel data models: *logit, xtlogit, ologit, xtologit*
   - Random effects
   - Correlated effects (Conditional Logit)

5. Tobit and interval regression models: *tobit, xttobit, intreg, xtintreg*
   - Random effects
   - Correlated effects modelled as group means (a la Mundlak)

6. Postestimation analysis:
   - Average marginal effects: *margins*
   - Goodness-of-fit measures: *predict*

SUGGESTED READINGS

- Microeconometrics using Stata, Revised Edition, (2010) di A. C. Cameron e P. K. Trivedi, Stata Press
- Econometric Analysis of Cross Section and Panel Data (2010) di J. Wooldridge, MIT Press

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DATE AND LOCATION

Due to the ongoing COVID-19 situation, the 2021 edition of this training course will be offered ONLINE on a part-time basis on the 12th-13th of July 2021 from 10.00 am to 1.30 pm Central European Summer Time (CEST).

REGISTRATION FEES

Full-time students*: € 355.00
PhD Students: € 455.00
Academic: € 505.00
Commercial: € 675.00

*To be eligible for student prices, participants must provide proof of their full-time student status for the current academic year. Our standard policy is to provide all full-time students, be they Undergraduates or Masters students, access to student participation rates. Part-time master and doctoral students who are also currently employed will however, be allocated academic status.

Fees are subject to VAT (applied at the current Italian rate of 22%). Under current EU fiscal regulations, VAT will not however applied to companies, Institutions or Universities providing a valid tax registration number.

The number of participants is limited to 8. Places will be allocated on a first come, first serve basis. The course will be officially confirmed, when at least 5 individuals are enrolled.

Course fees cover: teaching materials (handouts, Stata *do files* and datasets to used during the course) and a temporary licence of Stata valid for 30 days from the beginning of the course.

Individuals interested in attending this course must return their completed registration forms by email (training@tstat.eu) to TStat by the 2nd July 2021.

Further details regarding our registration procedures, including our commercial terms and conditions, can be found at **https://www.tstattraining.eu/nonlinear-panel-data-models-stata-ol/**

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