PANEL DATA ANALYSIS IN STATA
Frankfurt am Main, 20-22 June 2018

Panel data contains information on many cross-sectional units, which are observed at regular intervals across time. Panel data, by its very nature, can be highly informative regarding dynamic effects across different units and thus they are increasingly used in econometrics, financial analysis, medicine and the social sciences. This introductory course offers participants the opportunity to acquire the necessary theoretical background and the applied skills to enable them to: i) independently employ 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 course focuses on the techniques adopted for the analysis of stationary panel data sets, including fixed and random effects models; hypothesis testing; the violations of the basic assumptions of regression analysis; unbalanced panels; instrumental variable estimation techniques and non-linear panel data models.

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 workshop, theoretical sessions are reinforced by case study examples, in which the course tutor discusses and highlights potential pitfalls and the advantages of individual techniques.

TARGET AUDIENCE

The Panel data workshop 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.

REQUISITES

Participants are required to have a good working knowledge of the OLS regression model and the statistical software Stata.

WORKSHOP CODE

D-EF10

DATE AND LOCATION

Frankfurt am Main, 20-22 June 2018

https://www.tstattraining.eu/training/panel-data-analysis-stata/

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PROGRAM

SESSION I: **INTRODUCTION**	1. Panel data: definition 2. Panel data: benefits for estimation and inference

SESSION II:
LINEAR PANEL
DATA MODELS WITH
EXOGENOUS VARIABLES

1. One-way and two-way fixed effect estimators: ***xtreg, fe***
2. Random Effects Estimators: ***xtreg, re; xtmixed***

SESSION III:
LINEAR PANEL
DATA MODELS WITH
EXOGENOUS VARIABLES:
ROBUST INFERENCE

1. Robust covariance estimators
2. The first-difference estimator
3. Testing for non *i.i.d.* errors
4. Testing Random Effects against Fixed Effects: ***hausman***

SESSION IV:
LINEAR PANEL
DATA MODELS WITH
EXOGENOUS VARIABLES

1. General aspects of IV and GMM
2. Estimators with strictly exogenous IV
   - Fixed and Random Effect IV Estimators: ***xtivreg***
   - Hausman and Taylor's estimator: ***xthtaylor***
3. Dynamic panel data estimators: ***xtabond***

SESSION V:
NON-LINEAR
PANEL DATA MODELS

1. The incidental parameter problem in non-linear models
2. Probit panel data models: ***probit, xtprobit***
   - Random-effect models
   - Correlated effects modelled as group means
   - Partial effects
3. Logit panel data models: ***logit, xtlogit***
4. Random effects
5. Correlated effects (conditional logit)
6. Poisson panel data models: ***poisson, xtpoisson***
   - Random effects
   - Correlated effects (conditional poisson)

USEFUL TEXTS

- Panel Data Econometrics Advanced Texts in Econometrics (2003) di M. Arellano, Oxford University Press
- 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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REGISTRATION FEES

Students*: € 735.00
Academic: € 1225.00
Non-Profit/Public Research Centres: € 1513.00
Commercial: € 1800.00

*To be eligible for student prices, participants must provide proof of their full-time student status for the current academic year.

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.

Please note that a *non-refundable deposit* of €100.00 for students and €200.00 for Academic, Non-Profit/Public Research Centres and Commercial participants, is required to secure a place and is payable upon registration. The number of participants is limited to 15. Places will be allocated on a first come, first serve basis.

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

To maximize the usefulness of this workshop, we strongly recommend that participants bring their own laptops with them, to enable them to actively participate in the empirical sessions.

REGISTRATION DEADLINE

Individuals interested in attending this workshop must return their completed registration forms either by email (training@tstat.eu) or by fax (+39 0864 206014) to TStat by the 1st of June 2018.

CONTACTS

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