RISIS

RESEARCH INFRASTRUCTURE FOR SCIENCE AND INNOVATION POLICY STUDIES

This project is funded by the European Union under Horizon2020 Research and Innovation Programme Grant Agreement n°824091

# RISIS TRAINING CALL FOR SUBMISSION

POLITECNICO MILANO 1863

## Panel Data Methods and Applications

Politecnico di Milano, Department of Management, Economics and Industrial Engineering, Via Lambruschini 4/b, 20156 Milano. March 5th 6th, 2020

## COURSE PRESENTATION

Panel data (a.k.a. longitudinal or cross-sectional time-series data) are repeated measures on the same entities over time. The entities could be, e.g., countries, companies, universities or individuals. The use of panel data allows for richer models and estimation methods as well as the identification of causal effects under weaker assumptions compared to cross-sectional data.

In RISIS, a number of dataset are characterized by a panel data structure (e.g., the firm level datasets, CWTS on publications, ETER on universities), therefore a better understanding on the main issues related to the analysis of this kind of data could be of interest of internal RISIS users, as well as policy makers and external researchers that might be interested in using the RISIS infrastructure.

### OBJECTIVES:

The course objective is to introduce the main features of panel data econometric models and present use cases and examples based on the VICO dataset.

Topics covered in the course include specification, estimation, and inference in the context of models that take into account unobserved heterogeneity and individual effects (e.g. fixed-effects vs. random-effects models).

### EXPECTED OUTCOMES:

The course will cover the following topics:

- Conceptual bases on panel data methods
- Overview of the empirical literature that employed panel data methods
- Training on panel data analysis in STATA
- Practical computer session

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After the course, students are expected to be able to apply panel data regression techniques and to interpret the results from panel-data regression estimates.

### TARGET AUDIENCE:

Target audience include PhD students, early career researchers, policy analysts. We expect 15 participants.

Course prerequisites: participant should be already familiar with applications of econometric models and they should have at least a basic knowledge about statistical tools (STATA).

## PROGRAM OF COURSE

Day 1

10:00-10:30 Introduction to panel data

10:30-12:15 Main panel data estimators

12:15-13:00 Examples of applications based on VICO

13:00-14:00 Lunch

14:00-16:00 Panel data analysis with STATA (I)

16:00-16:30 Break

16:30-17:30 Panel data analysis with STATA (II)

17.30-18.00 Introduction to workgroup

Day 2

09:00-12:30 Workgroup

12:30-13:30 Lunch

13:30-15:00 Group presentations

15:00-16:00 Closing Remarks and Recap

## CONDITIONS FOR PARTICIPATION

### SELECTION CRITERIA:

Research track-record, with a preference for quantitative studies.

Basic knowledge of econometrics.

Knowledge of STATA.

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## ORGANISATIONAL DETAILS:

No fees to be paid by European participants

Venues of the trainees (travel and accommodation) will be covered only in case of researchers, early researchers and PhD coming from European countries

No costs are covered for people not involved in research activities (i.e. people from intermediaries or policy level)

Each participant has to bring his/her own computer for running the practical parts of the training (with STATA installed)

Before the beginning of the course, we will provide participants with a list of scientific articles and additional materials introducing the topic

## HOW TO APPLY:

Please fill the courses format application and send it to francesca.tenca@polimi.it.

The deadline for application is February 15th, 2020.

## ORGANISING COMMITTEE AND CONTACT DETAILS

Massimo G. Colombo, Politecnico di Milano

Massimiliano Guerini, Politecnico di Milano

Francesca Tenca, Politecnico di Milano, francesca.tenca@polimi.it