

## One Day Graduate course on the Estimation of Scale Economies in Education

The Top Institute for Evidence Based Education Research at Maastricht University organizes a one day graduate course on advanced empirical modeling. During the course, participants will explore the relationship between school (district) size, cost per student, student outcomes, and the organization of school districts. To disentangle scale economies due to class, school, and district size, we apply a flexible model, controlling for a wide range of socioeconomic characteristics. We show that assumptions on the functional form (e.g. Cobb-Douglas, Fourier) strongly affect the estimated scale economies and offer two possible extensions to allow for more flexibility in the estimation method. Besides an introduction on the empirical models, the course foresees in a hands-on training by the use of Stata.

### Topic and approach

1. Introduction to the literature and theory, illustrated by two case studies.
  - a. Flanders: “Scale economies and the optimal size of school districts. A flexible form estimation.” (Schiltz & De Witte, 2015)
  - b. Hungary: “Using multilevel TREES to disentangle class, school, and district size effects on student outcomes.” (Schiltz, Horn, & Masci, 2016)
2. Hands-on session aimed at replicating the Flanders study. Students estimate different structural models to understand the sensitivity of policy implications with respect to assumptions on the functional form. Flexible approaches are offered as alternative estimation methods and implemented using Stata.

### Requirements

Both Master and PhD students are eligible. Working knowledge of Stata and basic econometrics is required. An understanding of basis statistics (F-statistic, AIC, BIC,...) is recommended. Knowledge of the literature regarding scale economies in education, and the corresponding estimation methods, is not necessary and will be extensively documented in the first part of the seminar.

### Date

Tuesday December 13, 2016 from 10am till 4pm.

### Venue

Top Institute for Evidence Based Education Research  
Kapoenstraat 2  
Maastricht University

### Price

Free for participants from the TIER Graduate program, Universities in the EdEN program (Maastricht University, Politecnico di Milano, University of Leuven and CERSHAS Hungary). Other participants can enroll by sending an email to [k.dewitte@maastrichtuniversity.nl](mailto:k.dewitte@maastrichtuniversity.nl). The fee of 150 euro covers lunch and course materials.

### Guest lecturer

The course will be taught by Fritz Schiltz. He is a researcher at the University of Leuven and working in the EDEN Project.