Course II: Analysis of Educational Policies using Large Scale International Assessments
Syllabus

Álvaro Choi

Department of Economics, University of Barcelona
Barcelona Institute of Economics

Content

The development of large-scale international assessments (LSIA) has constituted a revolution for policy makers and researchers. The aim of this course is to introduce the use of LSIA such as PISA, PIRLS or TIMSS for the analysis of educational policies. The course is aimed at researchers and policy makers with basic statistical skills who are interested in LSIA but have not really used LSIA data.

Participants will overview the evolution, applications [and limitations] of LSIA and understand some of the most relevant methodological issues needed to use these databases. Hands-on sessions will give participants the chance to get familiar with the Stata commands needed to start performing analyses of their own.

Session 1: LSIA: recent developments

The importance of LSIA in the educational field can be seen in countries such as Germany, Japan or Spain, which have modified their educational systems as a consequence of the so-called “PISA shock”. At the same time, the number of papers using LSIA data has surged since the 2000 decade. In this session we will draw a map of the existing LSIA and their past evolution. We will also discuss some of their strengths and weaknesses.

References


http://www.oecd.org/skills/skills-matter-9789264258051-en.htm


Session 2: LSIA: applications for the analysis of educational policies

LSIA have been used intensively during the last two decades for assessing educational policies. In this session we will review applications of LSIA for analysing educational policies. We will present different methodological approaches and discuss their usefulness and limitations.

References


Session 3: LSIA: an introduction to methodological issues

LSIA are complex surveys. They gather information at the student, family and school level. At the same time results are provided using plausible values and replicate weights must be applied. In this session we will overview the survey design, including national exclusions, response rate requirements. Understanding these issues will allow us to move to sessions 4 and 5.
References

PISA 2015

PIRLS 2016

TIMSS 2015
- Mullis, I.V.S. & Martin, M.O. [Eds.](2013). TIMSS 2015 Assessment Frameworks

Sessions 4 and 5: Introduction to the analysis of LSIA databases. Computer sessions

In these two hands-on sessions participants will be introduced to the use of plausible values and how they can be incorporated into the Stata repset command, which estimates statistics taking into account the complex design of surveys such as PISA, TIMSS, PIRLS, TALIS or PIAAC. We will perform analyses using microdata from the 2015 round of the Programme for International Student Assessment [PISA] and learn how to test if differences across countries are statistically significant. Step-by-step examples of linear and non-linear models will be provided. Participants will be provided with databases, do-files and exercises [and their answer sheets].