

Course Goals and content

The objective of this course is to serve as a practical guide for trade policy analysis with the gravity model offering a balanced approach between trade theory and econometrics. We will discuss recent developments in the economic foundation of gravity models and describe best practices for quantifying the general equilibrium impact of changes in trade barriers and, especially, trade policies.

The course is organized in three modules. Module A concentrates on recent contributions from trade theory that motivate gravity models and form the basis of policy trade policy analysis. The second module will take a closer look at the econometric issues of the estimation of gravity models and of performing policy simulations. Starting point is the econometric literature on high-dimensional non-linear panel models and the implementations in Stata. Lastly, there will be lab sessions, where applications in Stata will be discussed and important applied work published in refereed journals will be replicated.

Lecturer



Michael Pfaffermayr is Professor of International Economics at the University of Innsbruck, Austria and senior researcher at the Austrian Institute of Economic Research. His research interests comprise empirical international trade and applied econometrics, in recent years especially the methodology and application of gravity models for trade policy analysis.

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Course Content

A Trade Theory and the Gravity-Model

1. The Anderson and van Wincoop and the Krugman Model
2. The Eaton and Kortum Model
3. Trade with Heterogeneous Firms
4. Zero Trade and the Helpman-Melitz-Rubinstein Model
5. Measuring the Gains from Trade
6. Universal Gravity

B The Econometrics of Gravity Models of Trade

1. Estimation of Linear High-dimensional Fixed Effects models
2. The Incidental Parameter Problem
3. The Log of Gravity and the PPML - estimator
3. Time-invariant Variables and Unilateral Trade Barrier Indicators in Gravity models
3. Constrained PPML-estimation
4. Nonlinear Panel models I: Probit
5. Nonlinear Panel models II: Two-part and Sample Selection

C Lab-Sessions

1. Estimating the Trade and Welfare Effects of Brexit
2. Estimating Structural Gravity Models with STATA
3. Counterfactual Predictions and Quantification of Structural Gravity Models using STATA

Literature

Besides the standard references on gravity models the course literature includes

"Universal Gravity", C. Arkolakis, T. Allen, and Y. Takahashi, 2019 NBER WP 20787. Forthcoming in Journal of Political Economy.

"New Trade Models, Same Old Gains?" C. Arkolakis, A. Costinot and A. Rodriguez-Clare, 2012. American Economic Review 102(1), 94-130, NBER WP 15628.

"The Log of Gravity", Santos Silva, J.M.C. and S. Tenreyro, 2006. Review of Economics and Statistics 88(4), 641-658.

"Fixed Effects Estimation of Large-t Panel Data Models", Fernández-Val, I., and M. Weidner, 2018. Annual Review of Economics 10, 109-138.

Grading

Class participation (20 %); take-home exam (80 %). Participants taking this course for credit must attend all lectures and complete the take home exam.

Organization

The course is intended for PhD students. A limited number of people with relevant professional or academic interest may be also admitted.

Lecture hours: 24 ECTS : 4

Timetable and Registration

The course takes place from Monday to Friday in the Silva Casa at the World Trade Institute, University of Bern, Hallerstrasse 6, 3012 Bern.

Timetable:

Monday: 13.30 – 16.00 and 17.00 – 19.30
 Tuesday: 9.30 – 12.00 and 13.30 – 16.00
 Wednesday: 9.30 – 12.00 and 13.30 – 16.00
 Thursday: 9.30 – 12.00 and 13.30 – 16.00
 Friday: 9.30 – 12.00 and 13.30 – 16.00

This is an intensive course. Please try to complete some of the readings from the suggested bibliography before the course begins.

Tuition fee: 500 CHF.

Available course outlines and reading material can be found under the course listing on the Doctoral Programme webpage.

<https://www.wti.org/education/doctoral-programme/#open-84640-phd-courses-and-summer-school>

Registration:

Send your application to:
phd.applications@wti.org

This course is organized in the context of the *Doktoratsprogramme universitäre Hochschulen 2017–2020*.