

Spatial economics and new economic geography

Minterm I (September 1, 2008 – October 17, 2008)

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Course Objective:

The goal of the course is to make students familiar with recent developments in spatial economics and new economic geography. The emphasis will be given to practical tools designed to analyze spatial processes – e.g. MATA programming language - and empirical work in spatial economics and new economic geography. In the end of the course students should be able to model and analyze economic problems related to the spatial distribution of economic activities.

Course outline

A. Programming in Stata and Mata (2 lectures)

User-defined routines in Stata

Mata: Manipulation with matrices, utilities, and programming

Communication between Stata and Mata

Useful tips and tricks

Readings

Stata Manual and help files

B. Spatial econometrics (5 lectures)

Statistical background
Taxonomy of spatial models

Readings

Anselin, Luc. 1988. *Spatial econometrics: Methods and models*, Studies in Operational Regional Science series Norwell, Mass.; London and Dordrecht: Kluwer Academic.

Estimation of spatial models

Maximum likelihood

GMM

Readings

Kelejjan, Harry H., and Ingmar R. Prucha. 1999. "A Generalized Moments Estimator for the Autoregressive Parameter in a Spatial Model." *International Economic Review*, 40(2): 509-33.

Lee, L.F., Asymptotic Distributions of Maximum Likelihood Estimators for Spatial Autoregressive Models. *Econometrica* 72 (2004), 1899-1925.

Spatial modeling of panel data

Readings

Kapoor, Mudit, Harry H. Kelejian, and Ingmar R. Prucha. 2007. "Panel Data Models with Spatially Correlated Error Components." *Journal of Econometrics*, 140(1): 97-130.

Calculating emanating effects and predictions

Kelejian, Harry H., Murrell, Peter and Shepotylo, Oleksandr, "Spatial Spillovers in the Development of Institutions" (November 22, 2007). Available at SSRN:

<http://ssrn.com/abstract=1031974>

C. Applications (1 lecture)

Spatial modeling of housing prices

Readings

Kelejian, Harry H., Murrell, Peter and Shepotylo, Oleksandr, "Spatial Spillovers in the Development of Institutions" (November 22, 2007). Available at SSRN:

<http://ssrn.com/abstract=1031974>

D. New economic geography (5 lectures)

Monopolistic competition model

Gravity equation

Readings

Feenstra "Advanced International Trade," Chapter 5 and 11

Anderson, J.E. and Wincoop, E., 2003, "Gravity with Gravitas: A Solution to the Border Puzzle," *American Economic Review*, 93 (1), 170-92.

Baldwin, Richard and Daria Taglioni, 2006, "Gravity for dummies and dummies for gravity equations," NBER Working paper #12516

Heterogeneous firms, trade, and FDI

Readings

Helpman, Elhanan, Melitz, Marc J. and Rubinstein, Yona, "Estimating Trade Flows: Trading Partners and Trading Volumes" (February 2007). NBER Working Paper No. W12927 Available at SSRN: <http://ssrn.com/abstract=964890>

Helpman, Elhanan, Marc Melitz and Stephen Yeaple (2004). "Export versus FDI with heterogeneous firms," American Economic Review, 94, 1, pp. 300-317.

Agglomeration and MNE location

Readings

Bruce A. Blonigen, Ronald B. Davies, Glen R. Waddell, Helen T. Naughton "FDI in space: Spatial autoregressive relationships in foreign direct investment" European Economic Review 51 (2007) 1303–1325

Head, K., Mayer, T., 2004, "Market potential and the location of Japanese investment in the European Union," Review of Economics and Statistics 86 (4), 959–972.

Office Hours:

This year the schedule is not stable and it is very hard to set office hours at some specific time. As a general rule, I will make myself available for one hour after each lecture or by email appointment. Please feel free to send me an email indicating when you would like to stop by.

Problem sets (PS):

The course is a mixture of theory and empirics. I will give you two theoretical and two empirical problem sets.

Exams:

There will be a mid-term exam and a final exam. **The final exam will be cumulative.** Each student is expected to take both exams.

Grading:

Your grade for the course is based on the weighted average of point for the problem sets, mid-term exam, and final exam. The weights are:

Mid-term 30%

Final Exam 40%

Problem sets 30%

Course Attendance:

You are expected to attend classes regularly. If you are absent when an exam is given or homework is due, it will reflect negatively on your grade. Moreover, there is the KSE policy on class attendance.

Finally...

This syllabus is not meant to be exhaustive. It is just a set of guidelines to give you an idea of how we would like the course to proceed, and address some commonly asked questions. Any changes in this syllabus, if made, will be announced in class reasonably in advance.