Topics in Macroeconomics IV: Agglomeration and Economic Geography

2021-22 Academic Year
Master of Research in Economics, Finance and Management

1. Description of the subject

- Topics in Macroeconomics IV — Code: 32083
- Total credits: 3 ECTS — Workload: 75 hours
  Term: 2nd
- Type of subject: Optative
- Department of Economics and Business
- Teaching team: Dávid Nagy and Giacomo Ponzetto

2. Teaching guide

- **Introduction**

  The objective of the course is to introduce the students to active research areas in economic geography. We will study a set of models and tools that are commonly used in the field, and we will cover recent papers, both theoretical and empirical. The assignments for the course are intended to foster engagement with the current research frontier and to stimulate creative thinking about the students' own research projects.

- **Contents**

  Economic geography studies the spatial distribution of economic activity when labor is mobile across locations. Our fundamental tool will be the notion of a spatial equilibrium in which not only final goods but also factors of production can move across space and choose their optimal location. To understand why population and production are heavily concentrated in a few dense regions and cities, we will focus on agglomeration economies: the advantages that result from eliminating the distance between people. We will consider how density facilitates the transportation of goods, the sharing of inputs and the matching between workers and employers.

- **Assessment and Grading System**

  There will be no final exam. Instead, one week after the last class, each student must submit a final project. The project should be around 6 and no more than 10 pages long and can be any of the following:

  a. The proposal for an original paper.

  b. A sufficiently challenging extension of an existing model or replication of an existing empirical analysis, which might become the basis of a paper.

  c. A critical survey of the literature on a specific topic that was not extensively covered in class.

  d. Referee reports on two important articles, preferably unpublished.

  Any of the projects must be discussed beforehand with the teachers. Grading will take into account that projects belonging to types (a) and (b) are more challenging than those of types (c) and (d).

3. Programme of activities

The following outline sketches the topics covered in the course. Required readings are marked by a star. The reading list is subject to changes before and during the class.

Measuring Agglomeration (Ponzetto)

* Ciccone, Antonio, and Robert E. Hall. 1996. "Productivity and the Density of Economic Activity." *American Economic Review* 86(1): 54-70.

* Duranton, Gilles, and Henry G. Overman. 2005. "Testing for Localization Using Micro-Geographic Data." *Review of Economic Studies* 72(4): 1077-106.

* Ellison, Glenn, and Edward L. Glaeser. 1997. "Geographic Concentration in U.S. Manufacturing Industries: A Dartboard Approach." *Journal of Political Economy* 105(5): 889-927.

* Glaeser, Edward L., and David C. Maré. 2001. "Cities and Skills." *Journal of Labor Economics* 19(2): 316-42.

* Greenstone, Michael, Richard Hornbeck, and Enrico Moretti. 2010. "Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plants Openings."*Journal of Political Economy* 118(3): 536-98.

Combes, Pierre-Philippe, Gilles Duranton, Laurent Gobillon, Diego Puga and Sébastien Roux. 2012."The Productivity Advantages of Large Cities: Distinguishing Agglomeration from Firm Selection. "*Econometrica* 80(6): 2543–94.

Henderson, J. Vernon. 2003. "Marshall's Scale Economies." Journal of Urban Economics 55(1):1–28.

Quantitative Spatial Economics (Nagy)

* Allen, T. and Arkolakis, C. (2014): Trade and the topography of the spatial economy. *Quarterly Journal of Economics* 129(3), 1085-1140.

* Redding, S. (2016): Goods trade, factor mobility and welfare. *Journal of International Economics* 101, 148-167.

Allen, T., Arkolakis, C. and Li, X. (2020): On the equilibrium properties of network models with heterogeneous agents. Mimeo.

Helpman, E. (1998): The size of regions. In: *Topics in public economics: Theoretical and applied analysis*, ed. Pines, D., Sadka, E. and Zilcha, I. 33-54. Cambridge University Press.

Krugman, P. (1991): Increasing returns and economic geography. *Journal of Political Economy* 99(3), 483-499.

Redding, S. and Rossi-Hansberg, E. (2017): Quantitative spatial economics. *Annual Review of Economics* 9, 21-58.

How Important is Market Access? (Nagy)

* Donaldson, D. and Hornbeck, R. (2016): Railroads and American economic growth: A "market access" approach. *Quarterly Journal of Economics* 131(2), 799-858.

* Redding, S. and Sturm, D. (2008): The costs of remoteness: Evidence from German division and reunification. *American Economic Review* 98(5), 1766-1797.

Armenter, R., Koren, M. and Nagy, D. (2014): Bridges. Mimeo.

Brülhart, Marius, Céline Carrère, and Federico Trionfetti (2012): How wages and employment adjust to trade liberalization: Quasi-experimental evidence from Austria. *Journal of International Economics* 86(1), 68-81.

Campante, F. and Yanagizawa-Drott, D. (2018): Long-range growth: Economic development in the global network of air links. *Quarterly Journal of Economics* 133(3), 1395-1458.

Coşar, K. and Fajgelbaum, P. (2016): Internal geography, international trade, and regional specialization. *American Economic Journal: Microeconomics* 8(1), 24-56.

Donaldson, D. (2018): Railroads of the Raj: Estimating the impact of transportation infrastructure. *American Economic Review* 108(4-5), 899-934.

Ducruet, C., Juhász, R., Nagy, D. and Steinwender, C. (2021): All aboard: The effects of port development. Mimeo.

Fajgelbaum, P. and Redding, S. (2021): Trade, structural transformation and development: Evidence from Argentina 1869-1914. Mimeo.

Hanson, G. (2005): Market potential, increasing returns, and geographic concentration. *Journal of International Economics* 67, 1-24.

Nagy, D. (2021): Hinterlands, city formation and growth: Evidence from the U.S. westward expansion. Mimeo.

Redding, S. and Turner, M. (2015): Transportation costs and the spatial organization of economic activity. In: *Handbook of Urban and Regional Economics*, vol. 5, ed. Duranton, G., Henderson, V. and Strange, W. chapter 20, 1339-1398.

Input Sharing, Matching and Systems of Cities (Ponzetto)

* Bartik, Timothy J., and Randall W. Eberts. 2006. "Urban labor markets." In *A Companion to Urban Economics*, edited by Richard J. Arnott and Daniel P. McMillen, 389-403. Oxford: Blackwell.

* Becker, Gary S., and Kevin M. Murphy. 1992. "The Division of Labor, Coordination Costs, and Knowledge." *Quarterly Journal of Economics* 107(4): 1137-60.

* Costa, Dora, and Matthew E. Kahn. 2000. “Power Couples: Changes in the Locational Choice of the College Educated, 1940--1990.” *Quarterly Journal of Economics* 115(4): 1287-315.

* Helsley, Robert W., and William C. Strange. 1990. “Matching and Agglomeration Economies in a System of Cities.” *Regional Science and Urban Economics* 20: 189-212.

* Rosenthal, Stuart S., and William C. Strange. 2008. “Agglomeration and Hours Worked.” *Review of Economics and Statistics* 90(1): 105-18.

Diamond, Charles A., and Curtis J. Simon. 1990. “Industrial Specialization and the Returns to Labor.” *Journal of Labor Economics* 8(2): 175-201.

Simon, Curtis J. 1988. “Frictional Unemployment and the Role of Industrial Diversity,” *Quarterly Journal of Economics* 103(4): 715-28.

Moretti, Enrico. 2011. “Local Labor Markets.” In Handbook of Labor Economics, edited by David Card and Orley Ashenfelter, 1237-1313. Amsterdam: Elsevier.

The Consumer City and Sources of Agglomeration Economies (Ponzetto)

* Cullen, Julie Berry, and Steven Levitt. 1999. “Crime, Urban Flight, and the Consequences for Cities.” *Review of Economics and Statistics* 81(2): 159-69.

* Glaeser, Edward L., Jed Kolko, and Albert Saiz. 2001. “Consumer City.” *Journal of Economic Geography* 1: 27-50.

* Kahn, Matthew E. 1999. “The Silver Lining of Rust Belt Manufacturing Decline.” *Journal of Urban Economics* 46: 360-76.

* Ellison, Glenn, and Edward L. Glaeser. 1999. “Does Natural Advantage Explain Geographic Concentration?” *American Economic Review* 89(2): 311-16.

* Ellison, Glenn, Edward L. Glaeser, and William R. Kerr. 2010. “What Causes Industry Agglomeration? Evidence from Coagglomeration Patterns.” *American Economic Review* 100(3): 1195-213.

* Holmes, Thomas J. 1998. “The Effects of State Policies on the Location of Industry: Evidence from State Borders.” *Journal of Political* Economy 106(4): 667-705.

* ------. 1999. “Localization of Industry and Vertical Disintegration.” *Review of Economics and Statistics* 81(2): 314-25.