

2. Teaching guide

- **Introduction**

As a continuation of “Topics in Macroeconomics V: International Trade and Geography,” this course has the goal of introducing students to further 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**

We continue studying the spatial distribution of economic activity in a world in which goods and labor are mobile across locations. First, we examine how increasing returns and transport costs can give rise to agglomeration, and how access to markets matters for the spatial distribution of economic activity. Next, we turn our attention specifically to cities and the geographic patterns and determinants of economic growth and environmental degradation. Looking at cities, we will study the problem of workers' choices of their residential and workplace locations. We will also study structural quantitative models of growth across space, as well as the sorting of different skill groups across cities and over time. Finally, we will argue that cities act as engines of economic growth by hosting the accumulation of human capital, innovation and entrepreneurship.

- **Assessment and Grading System**

The system of grading is the same as in “Topics in Macroeconomics V.” That is, 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- d. Referee reports on two important articles, preferably unpublished.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.

Increasing Returns, Transport Costs and Market Access (D. Nagy)

- * Allen, T. and Arkolakis, C. (2014): Trade and the topography of the spatial economy. *Quarterly Journal of Economics* 129(3), 1085-1140.
- * 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. (2016): Goods trade, factor mobility and welfare. *Journal of International Economics* 101, 148-167.
- * Redding, S. and Sturm, D. (2008): The costs of remoteness: Evidence from German division and reunification. *American Economic Review* 98(5), 1766-1797.
- Allen, T., Arkolakis, C. and Li, X. (2023): On the equilibrium properties of spatial models. *American Economic Review: Insights*, forthcoming.
- 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.
- 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 (G. Ponzetto)

- * Bartik, Timothy J., and Randall W. Eberts. 2006. Urban labor markets. In R.J. Arnott and D.P. McMillen, eds., *A Companion to Urban Economics*, 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): 1137–1160.
- * 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): 1287–1315.
- * 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.
- Diamond, Charles A., and Curtis J. Simon. 1990. Industrial Specialization and the Returns to Labor. *Journal of Labor Economics* 8(2): 175–201.
- Moretti, Enrico. 2011. Local Labor Markets. In D. Card and O. Ashenfelter, eds., *Handbook of Labor Economics*, edited by, 1237–1313. Amsterdam: Elsevier.
- Rosenthal, Stuart S., and William C. Strange. 2008. Agglomeration and Hours Worked. *Review of Economics and Statistics* 90(1): 105–118.
- Simon, Curtis J. 1988. Frictional Unemployment and the Role of Industrial Diversity, *Quarterly Journal of Economics* 103(4): 715–728.

Residential and Workplace Choice in Cities (D. Nagy)

* Ahlfeldt, G., Redding, S., Sturm, D. and Wolf, N. (2015): The economics of density: Evidence from the Berlin Wall. *Econometrica* 83(6), 2127-2189.

Allen, T., Arkolakis, C. and Li, X. (2015): Optimal city structure. Mimeo.

Heblich, S., Redding, S. and Sturm, D. (2020): The making of the modern metropolis: Evidence from London. *Quarterly Journal of Economics* 135(4), 2059-2133.

Lucas, R. and Rossi-Hansberg, E. (2002): On the internal structure of cities. *Econometrica* 70(4), 1445-1476.

Monte, F., Redding, S. and Rossi-Hansberg, E. (2018): Commuting, migration and local employment elasticities. *American Economic Review* 108(12), 3855-3890.

Tsivanidis, N. (2023): Evaluating the impact of urban transit infrastructure: Evidence from Bogotá's TransMilenio. Mimeo.

Spatial Equilibrium Models and Economic Geography (E. Giannone)

* Roback, Jennifer, "Wages, Rents, and the Quality of Life," *Journal of Political Economy*, 1982, 90 (6), 1257–1278.

* Rosen, Sherwin, "Wages-based Indexes of Urban Quality of Life," *Current Issues in Urban Economics*, 1979.

*Diamond, Rebecca, "The Determinants and Welfare Implications of US Workers' Diverging Location Choices by Skill: 1980-2000," *American Economic Review*, March 2016, 106(3), 479–524.

Ganong, Peter and Daniel Shoag, "Why Has Regional Convergence in the U.S. Stopped?," *Journal of Urban Economics*, June 2017, 102, 76–90.

Giannone, Elisa. "Skilled-biased technical change and regional convergence." University of Chicago. Unpublished manuscript (2017).

Fajgelbaum, Pablo and Cecile Gaubert, "Optimal Spatial Policies, Geography and Sorting," Working Paper 24632, National Bureau of Economic Research May 2018.

* Redding, Stephen J., and Esteban Rossi-Hansberg. "Quantitative spatial economics." *Annual Review of Economics* 9 (2017): 21-58.

Place-based Policies (E. Giannone)

* Kline, Patrick, and Enrico Moretti. "Place based policies with unemployment." *American Economic Review* 103.3 (2013): 238-43.

* Duranton, Gilles, and Anthony J. Venables. Place-based policies for development. No. w24562. National Bureau of Economic Research, 2018.

* Kline, Patrick. "Place based policies, heterogeneity, and agglomeration." *American Economic Review* 100.2 (2010): 383-87.

* Austin, Benjamin A., Edward L. Glaeser, and Lawrence H. Summers. Jobs for the Heartland: Place-based policies in 21st century America. No. w24548. National Bureau of Economic Research, 2018.

Neumark, David, and Helen Simpson. "Place-based policies." *Handbook of regional and urban economics*. Vol. 5. Elsevier, 2015. 1197-1287.

Partridge, Mark D., and Dan S. Rickman. The geography of American poverty: Is there a need for place-based policies?. WE Upjohn Institute, 2006.

Trade, Geography, and the Environment (B. Conte)

- Grossman, G.M. and Krueger, A.B., 1991. Environmental impacts of a North American free trade agreement. NBER WP 3941.
- Grossman, G.M. and Krueger, A.B., 1995. Economic growth and the environment. *The Quarterly Journal of Economics*, 110(2), pp.353-377.
- Copeland, B.R. and Taylor, M.S., 2004. Trade, growth, and the environment. *Journal of Economic Literature*, 42(1), pp.7-71.
- * Desmet, K. and Rossi-Hansberg, E., 2015. On the spatial economic impact of global warming. *Journal of Urban Economics*, 88, pp.16-37.
- Shapiro, J.S., 2016. Trade costs, CO₂, and the environment. *American Economic Journal: Economic Policy*, 8(4), pp.220-254.
- * Shapiro, J.S. and Walker, R., 2018. Why is pollution from US manufacturing declining? The roles of environmental regulation, productivity, and trade. *American Economic Review*.
- * Shapiro, J.S., 2021. The environmental bias of trade policy. *The Quarterly Journal of Economics*, 136(2), pp.831-886.
- Copeland, B.R., Shapiro, J.S. and Taylor, M.S., 2022. Globalization and the environment. In *Handbook of International Economics*.
- Conte, B., Desmet, K., Nagy, D.K. and Rossi-Hansberg, E., 2021. Local sectoral specialization in a warming world. *Journal of Economic Geography*.
- Nath, I.B., 2024. The food problem and the aggregate productivity consequences of climate change. *Forthcoming Journal of Political Economy*.
- Cruz, J.L. and Rossi-Hansberg, E., 2024. The economic geography of global warming. *Review of Economic Studies*, 91(2), pp.899-939.
- *Desmet, K. and Rossi-Hansberg, E., 2024. Climate change economics over time and space. *Annual Review of Economics*, 16.