

## Spatial Economics

Econ 33550, Winter 2026, University of Chicago

Lectures: Mondays and Wednesdays, 8:00 am to 9:20 am, SHFE 203

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TA: Session: Thursdays, 6:30 pm to 7:20 pm, SHFE 247

## Syllabus

**Overview:** This is a second-year graduate Ph.D. course in the Trade and Growth sequence. The course will explore recent advances in spatial modeling and quantification that enable the study of trade, migration, and urban, regional, national, and global growth within a unified spatial general equilibrium framework. These frameworks can be quantified using various data sources to conduct detailed policy counterfactual exercises. Such exercises can help us understand the impacts of trade and migration policies, as well as local and national fiscal policies, transportation policies, and the effects of regional shocks, including those related to climate change.

**Grading:** Your grade for this course will be based on two problem sets and class participation (including a paper presentation if enrollment permits). Please complete the required readings in advance and come to class prepared to discuss the related topics.

## Outline and Readings

- **Quantitative Spatial Economics**

- Required Readings:
  - Redding and Rossi-Hansberg. 2017. “**Quantitative Spatial Economics**,” *Annual Review of Economics*.
- Optional Readings:
  - Allen and Arkolakis. 2025. “**Quantitative Regional Economics**,” Chapter 1 in the *Handbook of Urban and Regional Economics*, Volume 6.
  - Desmet and Henderson. 2015. “**The Geography of Development within Countries**,” Chapter 22 in the *Handbook of Regional and Urban Economics*, Volume 5.
  - Duranton and Puga. 2011. “**Micro-Foundations of Urban Agglomeration Economies**,” Chapter 48 in the *Handbook of Urban and Regional Economics*, Volume 4.
  - Proost and Thisse. 2019. “**What Can Be Learned from Spatial Economics?**,” *Journal of Economic Literature*.

- Redding. 2025. “**Quantitative Urban Economics**,” Chapter 2 in the *Handbook of Urban and Regional Economics*, Volume 6.

- **Two Quantitative Models for Regions**

- Required Readings:
  - Allen and Arkolakis. 2014. “**Trade and the Topography of the Spatial Economy**,” *Quarterly Journal of Economics*.
  - Caliendo, et al. 2018. “**The Impact of Regional and Sectoral Productivity Changes on the U.S. Economy**,” *Review of Economic Studies*.
- Optional Readings:
  - Redding. 2016. “**Goods Trade, Factor Mobility and Welfare**,” *Journal of International Economics*.
  - Rossi-Hansberg. 2005. “**A Spatial Theory of Trade**,” *American Economic Review*.
  - Krugman 1991. “**Increasing Returns and Economic Geography**,” *Journal of Political Economy*.

- **Commuting in Urban and Regional Models**

- Required Readings:
  - Ahlfedlt, et al. 2015. “**The Economics of Density: Evidence from the Berlin Wall**,” *Econometrica*.
  - Monte, et al. 2018. “**Commuting, Migration, and Local Employment Elasticities**,” *American Economic Review*.
- Optional Readings:
  - Desmet and Rossi-Hansberg. 2013. “**Urban Accounting and Welfare**,” *American Economic Review*.
  - Lucas and Rossi-Hansberg. 2002. “**On the Internal Structure of Cities**,” *Econometrica*.
  - Monte et al. 2025. “**Remote Work and City Structure**,” working paper.

- **Transportation Networks**

- Required Readings:
  - Fajgelbaum and Schaal, 2020, “**Optimal Transport Networks in Spatial Equilibrium**,” *Econometrica*.
  - Allen and Arkolakis, 2022, “**The Welfare Effects of Transportation Infrastructure Improvements**,” *Review of Economic Studies*.
- Optional Readings:
  - Bordeu. 2024. “**Commuting Infrastructure in Fragmented Cities**,” working paper.
  - Donaldson. 2025. “**Transport Infrastructure and Policy Evaluation**,” Chapter 5 in the *Handbook of Urban and Regional Economics*, Volume 6.

- Hierons. 2024, “**Spreading the Jam: Optimal Congestion Pricing in General Equilibrium**,” working paper.

- **Optimal Spatial Policy**

- Required Readings:
  - Fajgelbaum and Gaubert. 2020. “**Optimal Spatial Policies, Geography, and Sorting**,” *Quarterly Journal of Economics*.
  - Rossi-Hansberg, et al. 2023. “**Cognitive Hubs and Spatial Redistribution**,” forthcoming in *AEJ Macroeconomics*.
- Optional Readings:
  - Fajgelbaum et al. 2019. “**State Taxes and Spatial Misallocation**,” *Review of Economic Studies*.
  - Fajgelbaum and Gaubert. 2025. “**Optimal Spatial Policies**,” Chapter 3 in the *Handbook of Urban and Regional Economics*, Volume 6.
  - Gaubert et al. 2024. “**Place-based Redistribution**,” working paper.
  - Owens, et al. 2020. “**Rethinking Detroit**,” AEJ: Economic Policy.
  - Rossi-Hansberg. 2004. “**Optimal Urban Land Use and Zoning**,” *Review of Economic Dynamics*.

- **Labor Markets Frictions and Dynamic Adjustments**

- Required Readings:
  - Bilal. 2023. “**The Geography of Unemployment**,” *Quarterly Journal of Economics*.
  - Caliendo, et al. 2019. “**Trade and Labor Market Dynamics**,” *Econometrica*
  - Greaney, et al. 2025. “**Dynamic Urban Economics**,” working paper.
- Optional Readings:
  - Caliendo, et al. 2021. “**Goods and Factor Market Integration: A Quantitative Assessment of EU Enlargement**,” *Journal of Political Economy*.
  - Desmet and Parro. 2025. “**Spatial Dynamics**,” Chapter 4 in the *Handbook of Urban and Regional Economics*, Volume 6.
  - Teulings and Gautier. 2009. “**Search and the City**,” *Regional Science and Urban Economics*.

- **Spatial Growth**

- Required Readings:
  - Desmet, et al. 2018. “**The Geography of Development**,” *Journal of Political Economy*
  - Kleinman, et al. 2023. “**Dynamic Spatial General Equilibrium**,” *Econometrica*.
- Optional Readings:
  - Ahlfeldt, et al. 2021. “**Quality of Life in a Dynamic Spatial Model**,” working paper.

- Allen and Donaldson. 2022. “Persistence and Path Dependence in the Spatial Economy,” working paper.
  - Bilal. 2024. “Solving Heterogeneous Agent Models with the Master Equation,” working paper.
  - Crews. 2023. “A Dynamic Spatial Knowledge Economy,” working paper.
  - Desmet and Rossi-Hansberg. 2014. “Spatial Development,” *American Economic Review*.
  - Desmet, et al. 2025. “Human Capital Accumulation Across Space,” working paper.
- **Urban Growth and the Size Distribution of Cities**
    - Required Readings:
      - Eeckhout. 2004. “Gibrat’s Law for (All) Cities,” *American Economic Review*.
      - Gabaix. 1999. “Zipf’s Law for Cities: An Explanation,” *Quarterly Journal of Economics*.
      - Rossi-Hansberg and Wright. 2007. “Urban Structure and Growth,” *Review of Economic Studies*.
    - Optional Readings:
      - Black and Henderson. 1999. “A Theory of Urban Growth,” *Journal of Political Economy*.
      - Bleakley and Lin. 2012. “Portage and Path Dependence,” *Quarterly Journal of Economics*.
      - Duranton. 2007. “Urban Evolutions: The Fast, the Slow, and the Still,” *American Economic Review*.
      - Gabaix and Ioannides. 2003. “The Evolution of City Size Distributions,” Chapter 53 of the *Handbook of Economic Geography*.
      - Glaeser and Gyourko. 2005. “Urban Decline and Durable Housing,” *Journal of Political Economy*.
- **Sorting, Migration, and Location Decisions**
    - Required Readings:
      - Behrens, et al. 2014. “Productive Cities: Sorting, Selection, and Agglomeration,” *Journal of Political Economy*.
      - Bilal and Rossi-Hansberg. 2021. “Location as an Asset,” *Econometrica*.
      - Diamond and Gaubert. 2022. “Spatial Sorting and Inequality,” *Annual Review of Economics*.
      - De la Roca and Puga. 2017. “Learning by Working in Big Cities,” *Review of Economic Studies*.
      - Eeckhout, et al. 2014. “Spatial Sorting,” *Journal of Political Economy*.
    - Optional Readings:
      - Bryan and Morten. 2019. “The Aggregate Productivity Effects of Internal Migration: Evidence from Indonesia,” *Journal of Political Economy*.

- Couture, et al. 2023. "Income Growth and the Distributional Effects of Urban Spatial Sorting," *Review of Economic Studies*.
- Miyauchi, et al. 2022. "Consumption Access and the Spatial Concentration of Economic Activity: Evidence from Smartphone Data," working paper.
- Oh. 2025. "Spatial Sorting of Workers and Firms," working paper.

- **Firm and Plant Location Across Space**

- Required Readings:
  - Gaubert. 2018. "Firm Sorting and Agglomeration." *American Economic Review*.
  - Hsieh and Rossi-Hansberg. 2023. "The Industrial Revolution in Services," *Journal of Political Economy: Macroeconomics*.
  - Oberfield, et al. 2024. "Plants in Space," *Journal of Political Economy*.
- Optional Readings:
  - Combes, et al. 2012. "The Productivity Advantages of Large Cities: Distinguishing Agglomeration from Firm Selection," *Econometrica*.
  - Holmes. 2011. "The Diffusion of Walmart and Economies of Density," *Econometrica*.
  - Oberfield, et al. 2025. "Banks in Space," *Journal of Political Economy*.
  - Rossi-Hansberg, et al. 2021. "Diverging Trends in National and Local Concentration," *NBER Macroeconomics Annual*.

- **Climate Change and Spatial Economics**

- Required Readings:
  - Cruz and Rossi-Hansberg. 2024. "The Economic Geography of Global Warming," *Review of Economic Studies*.
  - Desmet, et al. 2021. "Evaluating the Economic Cost of Coastal Flooding", *American Economic Journals: Macroeconomics*
  - Desmet and Rossi-Hansberg. 2023. "Climate Change Economics over Time and Space," *Annual Review of Economics*.
- Optional Readings:
  - Bilal and Rossi-Hansberg. 2025. "Anticipating Climate Change Across the United States," working paper.
  - Balboni and Shapiro. 2025. "Spatial Environmental Economics," Chapter 9 in the *Handbook of Urban and Regional Economics*, Volume 6.
  - Castro-Vincenzi. 2025. "Climate Hazards and Resilience in the Global Car Industry," working paper.
  - Conte, et al. 2021. "Local Sectoral Specialization in a Warming World." *Journal of Economic Geography*.
  - Cruz. 2023. "Global Warming and Labor Market Reallocation," working paper.
  - Desmet and Rossi-Hansberg. 2015. "On the Spatial Economic Impact of Global Warming," *Journal of Urban Economics*.

- Farrokhi and Lashkaripour. 2022. “Can Trade Policy Mitigate Climate Change,” working paper.
- Nath, 2025. “Climate Change, The Food Problem, and the Challenge of Adaptation through Sectoral Reallocation,” *Journal of Political Economy*.
- Rudik, et al. 2023. “The Economic Effects of Climate Change in Dynamic Spatial Equilibrium,” working paper.