

REAL 946 – **Topics in Urban Economics**

Tuesday 3.30-6.30. Room: TBD

Instructor: Gilles Duranton

Room: VH 452.

Email: duranton@wharton.upenn.edu

Web: <https://real-estate.wharton.upenn.edu/profile/duranton/>

Office hours: By appointment.

Objectives: This course will explore a range of topics related to current research in urban and regional economics: the modelling and estimation of agglomeration economies; the costs of cities and their internal structure with emphasis on land use regulations and transportation; amenities and the local supply of labour; the sizes and functions of cities. Both theory and empirics will be covered. Special attention will be devoted to building bridges with other fields including labour, international, public, IO, and development.

General issues:

1. This course hopes to achieve several objectives:

- Provide you with substantive knowledge about the economics of cities and regions.
- Foster your technical knowledge about a number of modelling aspects, econometrics techniques, and the link between the two.
- Make you think critically (and hopefully creatively) about existing research.
- Improve your ability to present complex research output in a clear and synthetic way.

2. The course builds on standard microeconomic theory (adapted to the complications introduced by space) and econometrics. Familiarity with standard first year microeconomics and empirical methods will be assumed. Given the range of problems that urban and regional economists face, no single empirical approach is expected to fully dominate.

3. The assessment will be made of:

- One replication assignment (30%) due at the beginning of the 4th class.

[[Objective: to replicate the main results of a published paper]]

- One final report for a research proposal (50%) due at the end of term

[[Establish a research question, briefly survey the relevant literature, discuss possible existing data to analyse the question, provide a research design and critically comment it. Preliminary data analysis may also be provided. Alternatively, research proposals for an applied theory paper are also possible. Research proposals need to be discussed with me beforehand.]]

- Class participation (20%)

4. Announcements and other related items will be emailed. Please stay up to date with the course. Most course materials (readings and data) will be posted on Canvas.

5. Class attendance is fundamental. A lot of what you will learn will be during the class and the class will strongly complement everything else.

Syllabus:

1/2. Agglomeration: Theory and empirics

+ Duranton, Gilles and Diego Puga. 2020. The economics of urban density. *Journal of Economic Perspectives* 34(3): 2-26.

+ Duranton, Gilles and Diego Puga. 2004. Micro-foundations of urban agglomeration economies. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2063–2117.

+ Combes, Pierre-Philippe and Laurent Gobillon. 2015. The empirics of agglomeration economics. In Gilles Duranton, J. Vernon Henderson, and William C. Strange (eds.) *Handbook of Regional and Urban Economics*, volume 5. Amsterdam: North-Holland.

+ Ahlfeldt Gabriel M, Stephen J. Redding, Daniel M. Sturm and Nikolaus Wolf. 2015. The economics of density: Evidence from the Berlin Wall. *Econometrica* 83(6): 2127-2189.

+ De la Roca, Jorge and Diego Puga. 2017. Learning by working in big cities. *Review of Economic Studies* 84(1): 106-142

- Further references to be given later.

2/3. Dispersion and land use

+ Duranton, Gilles, and Diego Puga. 2015. Urban land use. In Gilles Duranton, J. Vernon Henderson, and William C. Strange (eds.) *Handbook of Regional and Urban Economics*, volume 5. Amsterdam: North-Holland.

+ Heblich, Stephan, Stephen J. Redding, and Daniel M. Sturm, (2020). The making of the modern metropolis: evidence from London. *Quarterly Journal of Economics*, 135(4), 2059-2133.

+ Combes, Pierre-Philippe, Gilles Duranton, and Laurent Gobillon. 2019. The costs of agglomeration: House and land prices in French cities. *Review of Economic Studies*, 86(4), 1556-1589.

- Further references to be added.

4. Local labour supply and amenities

+ Glaeser, Edward L. and Joshua D. Gottlieb. 2009. The wealth of cities: Agglomeration economies and spatial equilibrium in the United States. *Journal of Economic Literature* 47(4):983–1028.

+ Diamond, Rebecca. 2016. The determinants and welfare implications of US workers' diverging location choices by skill: 1980-2000. *American Economic Review* 106(3), 479-524.

- Kline, Patrick and Enrico Moretti. 2014. People, places and public policy: some simple welfare economics of local economic development programs. *Annual Review of Economics* 6(0), 629-662.

- Albouy, David. 2012. Are big cities really bad places to live? Improving quality-of-life estimates across cities. Processed, University of Michigan.

- Lee, Sanghoon and Jeffrey Lin. 2018. Natural amenities, neighborhood dynamics, and persistence in the spatial distribution of income. *Review of Economic Studies* 85(1) 663-694.

- Blanchard, Olivier Jean and Lawrence F. Katz. 1992. Regional Evolutions. *Brookings Papers on Economic Activity* 0(1): 1–61.

5. Systems of cities

+ Behrens, Kristian, and Frédéric Robert-Nicoud, 2015. Agglomeration theory with heterogeneous agents. In Gilles Duranton, J. Vernon Henderson, and William C. Strange (eds.) *Handbook of Regional and Urban Economics*, volume 5. Amsterdam: North-Holland.

+ Duranton, Gilles and Diego Puga. 2014. The growth of cities. In Philippe Aghion and Steven N. Durlauf (eds.) *Handbook of Economic Growth*, volume 2B. Amsterdam: North-Holland, 781–853.

Hsieh, Chang-Tai, and Enrico Moretti (2019). Housing constraints and spatial misallocation. *American Economic Journal: Macroeconomics*, 11(2), 1-39.

Duranton, Gilles and Diego Puga. 2020. Urban growth and its aggregate implications. Processed, University of Pennsylvania.

6/7. Topic to be determined depending on student interest.

Transportation

- Brinkman, Jeffrey and Jeff Lin. 2021. Freeway revolt! Processed, Federal Reserve Bank of Philadelphia.

- Akbar, Prottoy A. and Gilles Duranton. 2021. Measuring the cost of congestion in a highly congested city: Bogota. Mimeographed, University of Pennsylvania.

- Redding, Stephen J. and Matthew A. Turner, 2015. Transportation costs and the spatial organization of economic activity. In Gilles Duranton, J. Vernon Henderson, and William C. Strange (eds.) Handbook of Regional and Urban Economics, volume 5. Amsterdam: North-Holland.

- Allen, Treb, David Atkin, Santiago Cantillo, and Carlos Hernandez. 2021. Trucks. Work in progress, Dartmouth.

Atkin, David and Dave Donaldson. 2018. Who's Getting Globalized? The Size and Implications of Intranational Trade Costs. Processed, MIT.

Transportation in general equilibrium (theory/quantitative)

- Fajgelbaum, Pablo D. and Edouard Schaal. 2020. Optimal Transport Networks in Spatial Equilibrium. *Econometrica* 88(4), 1411-1452.

- Allen, Treb and Costas Arkolakis. 2016. The welfare effects of transportation infrastructure improvements. Processed, Yale University.

Land use regulation

- Baum-Snow, Nathaniel and Lu Han (2021) The Microgeography of housing supply. Processed, University of Toronto.

- Haughwout, Andrew, Matthew A. Turner, and Wilbert van der Klaauw. 2014. Land use regulation and welfare. *Econometrica* 82(4), 1341-1403.

- Gaubert, Cécile and Frédéric Robert-Nicoud. 2021. Sorting into expensive cities. Mimeo in progress. University of California Berkeley.
- Gyourko, Joe, J. Hartley, and Jake Krimmel. 2019. The Local Residential Land Use Regulatory Environment Across U.S. Housing Markets: Evidence from a New Wharton Index. Processed, University of Pennsylvania.

Measurement and big data

- Burchfield, Marcy, Henry G. Overman, Diego Puga, and Matthew A. Turner. 2006. Causes of sprawl: A portrait from space. *Quarterly Journal of Economics* 121(2): 587–633.
- Naik, Nikhil, Scott Duke Kominers, Ramesh Raskar, Edward L. Glaeser, and Cesar A. Hidalgo. 2017. Computer Vision Uncovers Predictors of Physical Urban Change. *Proceedings of the National Academy of Sciences* 114(29): 7571-7576.
- Davis, Donald R., Jonathan I. Dingel, Joan Monras, and Eduardo Morales. 2019. How Segregated is Urban Consumption? *Journal of Political Economy* 127(4), 1684-1738.
- Akbar Prottoy, Victor Couture, Gilles Duranton, and Adam Storeygard. 2021. Mobility and congestion in Urban India. Processed, University of Pennsylvania.
- Couture, Victor, Jonathan Dingel, Allison Green, and Jessie Handbury. 2021. Quantifying spatial interactions. In progress, University of Pennsylvania.

Urban development: slums

- Baruah, Neeraj, Dzhamilya Nigmatulina, Guy Michaels, Ferdinand Rauch, and Tanner Regan. 2021. Planning Ahead for Better Neighborhoods: Long Run Evidence from Tanzania. *Journal of Political Economy* 129(7): 2112–2156.
- Henderson, J. Vernon, Tanner Regan, and Anthony J. Venables. 2021. Building the city: urban transition and institutional frictions. *Review of Economics Studies*.
- Harari, Mariaflavia and Maisy Wong. 2020. Long-term impacts of slum upgrading: Evidence from the Kampung Improvement Program in Indonesia. Processed, University of Pennsylvania.

Urban resilience?

- Lin Yatang , Guy Michaels, and Thomas McDermott. 2021. Cities and the Sea Level. Processed, London School of Economics.
- Hornbeck , Richard and Daniel Keniston. 2017. Creative destruction: Barriers to urban growth and the Great Boston Fire of 1872. *American Economic Review* 107(6), 1365-1398.
- Allen, Treb and Dave Donaldson. 2020. Persistence and Path Dependence in the Spatial Economy. Processed, MIT.
- Michaels, Guy and Ferdinand Rauch. 2018. Resetting the Urban Network: 117-2012. *Economic Journal*.
- Kocornik-Mina, Adriana, Thomas McDermott, Guy Michaels, and Ferdinand Rauch. 2015. Flooded cities. Oxford Department of Economics Discussion Paper, Number 772.

Other possible topics:

- Commuting and value of time (Le Barbanchon, Rathelot, Roulet QJE 2021, Goldsmchitz et al, unpub 2021, Bucholtz et al unpub 2020)
- Neighbourhood and urban change (Bergma et al. unpub. 2020, Chetty et al. unpub. 2020.)
- Structural modelling of housing supply (Murphy AEJ 2018, Bayer et al E 2016, Combes et al JPE 2021).
- Land assembly and institutions (Libecap and Lueck JPE 2011, Brooks and Lutz unpub 2013).
- Microstructure of housing markets (Diamond McQuade and Qian AER 2019)
- Innovation and cities
- etc.