

University of Southern California
Econ 687: Topics in Urban Economics
Fall 2022

Prof. Paulina Oliva Email: olivaval@usc.edu Office Hours: KAP 324F by appointment Lecture: KAP 319 Wednesdays 9:00 - 12:00

Course overview and requirements

This course will introduce students to some of the core models and ideas in Urban Economics. It will also discuss applications of these models in related fields such as Environmental Economics, Development Economics, Labor Economics and Economics of Race and Discrimination. An important goal of the course will be to expose students to innovative empirical research in Urban Economics and related fields and to discuss and understand the empirical challenges and methods used.

Grade

30% Problem Set/Referee Reports
50% Original Paper or Paper Replication
20% Presentation

Students will receive a grade of A, A-, B+ or B based on their grades on these components (+ group incentive).

Referee Report Structure (3 pages)

1. First paragraph should explain the paper's core research question and why is it interesting. What is the conventional wisdom about the question? Why is the answer not obvious?
2. Explain the data set structure and the methodology of the paper. How is this data being used to answer the question? What are main challenges in answering the question and how is this paper overcoming those challenges?
3. Write a critique of the paper and suggestions for improving the paper.

Original Paper or Paper Replication with New Analysis (15-20 pages, double spaced)

Coauthorships are allowed and encouraged. The standard for grading will be adjusted accordingly.

1. Original Empirical Paper
 - a. The paper should follow the structure of the papers we read for the class, both in terms of the structure of the introduction and the structure of the paper sections.
 - b. In the first couple of paragraphs, the introduction should state the original research question and substantiate why is it interesting.
 - c. The paper should include the following sections: Introduction, Model, Empirical Framework, Data, Results, Conclusion, References, Figures, Tables.

- d. The Empirical Framework section should include the equation or econometric model you are estimating and a careful description of the notation. It should also state the identification assumption.
2. Paper Replication
- a. Chose an Urban or Spatial Economics paper in a journal that has a data posting policy (American Economic Journal, Applied Economics, American Economic Review, Journal of Political Economy, or the Quarterly Journal of Economics are three good examples).
 - b. The paper should include the following sections: Introduction, Literature Review, Empirical Framework, Data, Replication of Results and Discussion, Analysis Extension, Conclusion, References, Figures, Tables.
 - c. The introduction should be similar to a referee report of the paper, where you state the main question of interest, why is it important, the methodology they use and how does it answer the question of interest. Then you should provide a criticism or an extension of the paper that can be answered with additional analysis.
 - d. The literature review should briefly summarize the papers that are most closely related to the paper and that extends it beyond the papers cited by the original paper to include more recent or non-cited relevant papers.
 - e. Replicate the main tables of the analysis (the tables that provide the answer to the main research question) and explain any discrepancies between your results and the paper results (if any). Also explain any nuances in the data analysis you understood in the replication process. For example, the sample restriction could play an important role in the results, there are a lot of zeros in the dependent variable and that means most of the variation comes from a few observations, etc.
 - f. Perform additional analysis that has one of the following goals (a) to substantiate a criticism (e.g. if the sample restriction is eased, the results change substantially); (b) to address a criticism (e.g. gather additional data on a proposed confounder and show that the results do not change when adding it to the controls); (c) to extend the paper (e.g. propose a closely related question and use the paper's data or additional data to answer it). Make sure you clearly state your empirical framework for the additional analysis, which may include an equation and detailed notation description.

Note: In the AER, AEJ:Applied, and JPE you can find a link to the data when accessing the article directly through the journal and clicking on supplemental material. For the QJE there is a separate data repository at <https://dataverse.harvard.edu/dataverse/qje>.

Group Collaboration

Students will be assigned into groups to

- (a) Work on exercises together during the class
- (b) Discuss paper ideas
- (c) Reading each other drafts of final paper and giving comments
- (d) Rehearsing presentations

Contents

Week 1 (1 Lecture)

8/24

Introduction and the Definition of a City from an Economic Perspective

*Brueckner, J. 2011 Ch. 1. *Lectures on Urban Economics*, MIT Press

Fujita, M., & Thisse, J. 2002. Ch. 1. Agglomeration and Economic Theory. In *Economics of Agglomeration: Cities, Industrial Location, and Regional Growth* (pp. 1-22). Cambridge: Cambridge University Press

*Glaeser, E., "Are Cities Dying?" *Journal of Economic Perspectives*, 1998, 12:139-160

De Bellefon, M.P., Combes, P.P., Duranton, G., Gobillon, L. and Gorin, C., "Delineating urban areas using building density", *Journal of Urban Economics*, 2019, p. 103226.

Kahn, Matthew, *Green Cities. Urban Growth and the Environment.*, Brookings Institution Press, 2006

Week 2-3 (2 Lectures)

8/31, 9/7

Core Spatial Equilibrium Models

Problem Set 1 (Due on 9/14)

*Brueckner, Jan. 1987. "The Structure of Urban Equilibria: A Unified Treatment of the Muth-Mills Model.", *Handbook of Urban and Regional Economics* Vol. II

Kolstad, Charles. 2011. Ch 8: Hedonic Price Methods, *Environmental Economics*, Second Edition, Oxford University Press

*Sherwin Rosen. 1974. "Hedonic Prices and Implicit Markets: Product Differentiation in Perfect Competition," *Journal of Political Economy*, 82:34-55.

Ekeland, Ivar, James J. Heckman and Lars Nesheim. 2004. "Identification and Estimation of Hedonic Models", *Journal of Political Economy*, 112:60-109

Brueckner, Jan. 2011. Ch.11: Urban Quality-of-Life Measurement, *Lectures on Urban Economics*, The MIT Press

*Roback, Jennifer. 1988. "Wages, Rents and Amenities: Differences Among Workers and Regions", *Economic Inquiry*, 26:23-41

Week 4-5 (1 Lecture)
9/14-9/21

Spatial Equilibrium Applications

Referee Report 1 (Due on 9/15)

Fraenkel, Rebecca and Sam Krumholz. 2019. "Property Taxation as Compensation for Local Externalities: Evidence from Large Plants"

Brueckner, Jan, Matthew E. Kahn and Gary C. Lin 2021. "A New Spatial Hedonic Equilibrium in the Emerging Work-From-Home Economy" NBER WP 28526

*Black, Sandra. 1999. "Do Better Schools Matter? Parental Valuation of Elementary Education", *Quarterly Journal of Economics*, 114:577-599

*Chay, Kenneth and Michael Greenstone. 2005. "Does Air Quality Matter? Evidence from the Housing Market", *Journal of Political Economy*, 113:376-424

Epple, Dennis and Holger Sieg. 1999. "Estimating Equilibrium Models of Local Jurisdictions", *Journal of Political Economy*, 107:645-681

Kuminoff, N. V., Smith, V. K., and Timmins, C. 2013. "The new economics of equilibrium sorting and policy evaluation using housing markets", *Journal of Economic Literature*, 51(4):1007-1062

*Smith, Kerry, Holger Sieg, H. Spencer Banzhaf, and Randall P. Walsh. 2004. "General equilibrium benefits for environmental improvements: projected ozone reductions under EPA's Prospective Analysis for the Los Angeles air basin", *Journal of Environmental Economics and Management*, 47:559-584

Week 6 - 7 (2 Lectures)
9/28 and 10/5

Agglomeration externalities I

Referee Report 2 (Due on 10/12)

Ananat, Elizabeth, Shihe Fu and Stephen Ross 2021. "Agglomeration Economies and Race Specific Spillovers" *NBER Working Paper 28847*

Combes, Pierre-Philippe and Laurent Gobillon. 2005 Ch.5: The Empirics of Agglomeration Economies, *Handbook of Regional and Urban Economics*, Vol 5A

*Diamond, Rebecca. 2016. "The Determinants and Welfare Implications of US Workers' Diverging Location Choices by Skill: 1980-2000", *American Economic Review*, 106(3):476-524

*Ahlfeldt, Gabriel M., Stephen J. Redding, Daniel M. Strum and Nikolaus Wolf. 2015 "The Economics of Density: Evidence from the Berlin Wall", *Econometrica*, 83(6):2127-2189

Arkolakis, Advancements in Gravity Models of Spatial Economics 2015 (slides from Frontiers of Urban Economics Conference)

Week 8 (1 Lecture)
10/12

Agglomeration externalities II

*Greenstone, Michael, Richard Hornbeck and Enrico Moretti. 2010. "Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plant Openings" *Journal of Political Economy*, 118(2):536-598

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

Harari, Mariaflavia, "Cities in Bad Shape: Urban Geometry in India", *American Economic Review* (forthcoming)

Miyauchi, Yuhei, Kentaro Nakajima and Stephen J. Redding, "The Economics of Spatial Mobility: Theory and Evidence Using Smartphone Data", NBER WP 28497

Card, David, Jesse Rothstein and Moises Yi, "Location, Location, Location", 2022 WP

Week 8 (1 Lecture)
10/19

Housing Supply and Housing Regulation

Visiting Lecturer: Andrii Parkhomenko (USC)

Brueckner, Jan. 1995. "Strategic Control of Growth in a System of Cities," *Journal of Public Economics*, 57:393- 416

Brueckner, Jan and Yves Zenou. 1999. "Harris-Todaro Models with a Land Market, *Regional Science and Urban Economics*, 29:317-339

Rossi-Hansberg, Esteban. 2004. "Optimal urban land use and zoning", *Review of Economic Dynamics*, 7:69-106

Hilber, Christian A.L. and Frédéric Robert-Nicoud. 2013. "On the origins of land use regulations: Theory and evidence from US metro areas", 75:29-43

Hsieh, Chang-Tai and Enrico Moretti. 2019. "Housing Constraints and Spatial Misallocation", *American Economic Journal: Macroeconomics* 11:1-39

Turner, Matthew A., Andrew Haughwout, Wilbert van der Klaauw. 2014. "Land Use Regulation and Welfare", *Econometrica*, 82:1341-1403

Parkhomenko, Andrii, "Local Causes and Aggregate Implications of Land Use Regulation". 2017, *mimeo*

Bertaud, Alain and Jan Brueckner. 2005. "Analyzing Building-Height Restrictions: Predicted Impacts and Welfare Costs", *Regional Science and Urban Economics*, 35:109-125

Brueckner, Jan and Kala Sridhar. 2012. "Measuring Welfare Gains from Relaxing Land-Use Restrictions: The Case of India's Building-Height Limits", *Regional Science and Urban Economics*, 42:1061-1067

Brueckner, Jan, Shihe Fu, Yizhen Gu and Junfu Zhang. 2017. "Measuring the Stringency of Land-Use Regulation and its Determinants: The Case of China's Building-Height Limits", *Review of Economics and Statistics*, 99:663-677

Brueckner, Jan and Ruchi Singh. 2020. "Stringency of Land-Use Regulation: Building Heights in US Cities", *Journal of Urban Economics*, 116

Week 10 (1 Lecture)

10/26

Transportation

Referee Report 3 (Due on 11/2)

Liang, Yuanning, 2020. "Do safety Inspections improve safety? Evidence from the Safety Inspection Program for Commercial Motor Vehicles." *Mimeo*

Barwick, Panle Jia, Shanjun Li, Andrew Waxman, Jing Wu and Tianli Xia, "Efficiency and Equity Impacts of Urban Transportation Policies with Equilibrium Sorting", *Mimeo* 2021

LeRoy, Stephen and Jon Sonstelie, 1983. "Paradise Lost and Regained: Transportation, Innovation, Income and Residential Location", *Journal of Urban Economics*, 13:67-89

Gonzalez-Navarro, Marco and Matthew Turner. 2018. "Subways and Urban Growth: Evidence from Earth", *Journal of Urban Economics*, 108:85-106

*Severen, Christopher. 2021. "Commuting, Labor, and Housing Market Effects of Mass Transportation: Welfare and Identification", forthcoming in *Review of Economic Studies*

*Tsvanidis, Nick. 2019. "Evaluating the Impact of Urban Transit Infrastructure: Evidence from Bogota's TransMilenio", WP

Brough, Rebecca, Matthew Freedman, and David Phillips. 2020. "A (Free) Ticket to Ride: Evidence on the Effects of Subsidized Public Transportation", *mimeo*

Week 11 (1 Lecture)

11/2

Cities in the developing world and rural to urban migration

Visiting Lecturer: Vernon Henderson, LSE

Cavalcanti, T., D. Da Mata and M. Santos. 2019. "On the determinants of slum formation". *The Economic Journal*, 129, 1971–1991

Combes, P-P, G. Duranton and L. Gobillon. 2019. "The Costs of Agglomeration: House and Land Prices in French Cities", *Review of Economic Studies*, 86, 1556–158

Getcher, M. and N. Tsivanidis, 2020. "Spatial Spillovers from Urban Renewal: Evidence from the Mumbai Mills Redevelopment",
<http://www.personal.psu.edu/mdg5396/MumbaiMills.pdf>

* Harari, M and M. Wong. 2019. "Slum Upgrading and Long-run Urban Development: Evidence from Indonesia", http://real-faculty.wharton.upenn.edu/harari/wp-content/uploads/~harari/HarariWong_Oct2019.pdf

* Henderson J. V., T. Regan and A. J. Venables. 2020. "Building the city: From slums to the modern metropolis" *Review of Economic Studies*, forthcoming
http://eprints.lse.ac.uk/105054/4/Henderson_building_the_city_published.pdf

Marx, B., T. Stoker and T. Suri. 2013. "The Economics of Slums in the Developing World," *J. Econ. Perspect.* 27, 187–210.

* Michaels, G., A. Dahlstrand-Rudin, D. Nigmatulina, F. Rauch, and T. Regan. 2019. "Planning Ahead for Better Neighbourhoods: Long Run Evidence from Tanzania."
http://personal.lse.ac.uk/REGANT1/papers/Michaels_etal_unp2019.pdf Now JPE 2021

Henderson, J. Vernon and Matthew A. Turner, 2020, "Urbanization in the developing world: too early or too slow?", *Journal of Economic Perspectives*, 34 (3)

Bryan, Gharad, Shyamal Chowdhury and Ahmed Mushfiq Mobarak, "Underinvestment in a profitable technology: The case of seasonal migration in Bangladesh", *Econometrica*, 2014, 82:1671-1748

Harari, Mariaflavia and Maisy Wong, "Slum upgrading and long-run urban development:

Week 12 (1 Lecture)

11/9

Student Presentations

Week 13 (1 Lectures)

11/16

Student Presentations

Week 14 (1 Lecture)

11/30

Inequality, race and discrimination, and environmental justice

Boustan, Leah Platt. 2011. "Racial Residential Segregation in American Cities" in *Handbook of Urban Economics and Planning*, eds. Nancy Brooks, Kieran Donaghy and Gerrit Knaap. Oxford University Press.

Boustan, Leah Platt. 2010. "Was postwar suburbanization "white flight"? Evidence from the Black Migration", *Quarterly Journal of Economics*, 125(1):417-443

Boustan, Leah Platt. 2012. "School Desegregation and Urban Change: Evidence from City Boundaries", *AJ: Applied economics*, 4(1): 85-108

Aaronson, Daniel, Daniel Hartley and Bhashkar Mazumder. 2019. "The Effects of the 1930s HOLC "Redlining" Maps", WP

Card D., Alexandre Mas and Jesse Rothstein. 2008. "Tipping and the Dynamics of Segregation", *Quarterly Journal of Economics*, 123(1):177-218

Caetano, Gregorio and Vikram Maheshri. 2017. "School segregation and the identification of tipping behavior", *Journal of Public Economics*, 2148:115-135

Baum-Snow, Nathaniel, Matthew Freedman, and Ronni Pavan. 2018. "Why has urban inequality increased?" *American Economic Journal: Applied Economics*, 10:1-42

Bento, Antonio, Matthew Freedman and Corey Lang. 2015. "Who benefits from environmental regulation? Evidence from the Clean Air Act Amendments", *Review of Economics and Statistics*, 53:1-19

Borck, R. and J. Brueckner. 2018. "Optimal Energy Taxation in Cities," *Journal of the Association of Environmental and Resource Economists*, 5:481-516

Hausman, Catherine and Samuel Stolper. 2020. "Inequality, Information Failures, and Air Pollution." NBER Working Paper 26682.

Fowlie, Meredith, Stephen P. Holland and Erin T. Mansur. 2012. "What do emissions markets deliver and to whom? Evidence from Southern California's NOx Trading Program", *American Economic Review*, 102:965-993

Pastor, Manuel, James Sadd, and John Hipp. 2001. "Which came first? Toxic facilities, minority move-in, and environmental justice." *Journal of Urban Affairs*, 23(1): 1-21

Shapiro, Joseph and Reed Walker. 2021. "Where is Pollution Moving? Environmental Markets and Environmental Justice." *AER Papers and Proceedings*, 111:410-414