

USC Dornsife

Economics 587: Urban Economics

Units: 4

Spring 2022

Location: 10-11:50 MW in spring.

Instructor: Matthew E. Kahn

Office: KAP 334A

Office Hours:

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<https://usc.zoom.us/j/2593307639>

Course Description

This course serves as an elective course for both the USC Economics Masters Degree and the Spatial Sciences Institute's MS in Spatial Economics and Data Analysis.

This course explores the theoretical foundations, empirical methods, data collection efforts and research techniques used in empirical urban economics. The course aims to provide students with the knowledge and skills necessary to investigate socioeconomic problems that take place in space.

Students will gain an in-depth understanding and hands-on experience to explore a variety of applications through a combination of lectures, discussions, presentations, and projects. Students will learn how economists use Spatial "Big Data" to test various hypotheses related to firm locational choice, urban growth, residential location patterns and pollution challenges.

Urban economic ideas will be applied to understand economic growth in cities in the developed world and the developing world. This framework is useful both for understanding emerging business opportunities and for designing public policies that seek to reduce the social cost of urban economic growth (i.e pollution, infectious disease and congestion). Special emphasis will be placed on the role of designing incentives to reduce environmental externalities such as air pollution and greenhouse gas emissions associated with urban economic growth.

Students will learn how to apply microeconomic concepts to understand economic geographic patterns and to predict emerging patterns. They will learn how to measure trends in economic vibrancy and to study the correlates of differential economic growth rates. Students will use several different spatial data sets to map economic activity and try to tease out correlations versus causal relationships. We will study the shared commonalities and differences in urban economic growth patterns across the continents.

Learning Objectives

When you have completed this course, you will be able to:

- Articulate the key theoretical concepts of urban economics and understand how spatial concepts can be used to produce new and better inferences in economics
- Collect urban spatial data and test urban economics hypotheses using basic statistical tools such as linear regression analysis and ArcGIS mapping
- Enhance written and oral communication skills that are essential for today's workforce. Integrate empirical research findings into research presentations.
- Use the tools of urban economics to form informed predictions about the possible unintended consequences of new public policies that influence the locational choices of firms and people both across cities and within cities.

- More applied practice using various software including; Microsoft Excel, Stata, or a basic programming language for crunching data and using spatial mapping software such as ArcGIS.

Professor Biography

Matthew E. Kahn is the Provost Professor of Economics and Spatial Sciences at USC. He is the author of *Green Cities: Urban Growth and the Environment* (Brookings Institution Press 2006) and the co-author of *Heroes and Cowards: The Social Face of War* (Princeton University Press 2008). He is the author of *Climatopolis: How Our Cities Will Thrive in the Hotter World* (Basic Books 2010). In 2013, he published *Fundamentals of Environmental and Urban Economics* (Amazon Books). His research areas include; environmental, urban, energy and real estate economics.

Research Webpage: mek1966.googlepages.com

Prerequisite(s): [ECON 500: Microeconomic Analysis and Policy](#), and [An introduction to Statistics Class](#)

Course Grading Breakdown

Two Course Papers with each worth 25%

Three Course Homeworks worth 10%

Final exam 20%

Extra Credit 5%

Each paper will be 10 pages long double spaced. Students will use a spatial data set to test an economics hypothesis. In each paper, the paper title should reveal the student's core question. The introduction should briefly explain why the question is of interest to spatial social scientists. The next section should provide a literature review of at least two peer reviewed papers. Students should use Google Scholar to find these papers. Footnotes should be used to reference these papers. The next section of the paper should list out the core hypotheses that will be tested. The next section should present the spatial statistical methods that will be used to test the hypotheses. The next section should report the data sources and summary statistics. The next section is the results section and the final section should be called "Future Research" describing what would be the next steps the student would want to take to make progress.

The first paper will be due during 7th week and the second paper will be due during the last week of classes.

Homeworks will combine ideas from urban economics and spatial statistics. Students can work in groups of up to 4 and should submit 1 homework with your names on the first page.

The final exam will be open notes and will test on the course's big themes.

The Extra Credit portion focuses on helping me upgrade my nascent Amazon E-Book titled "Introduction to Urban Economics". This book will become my textbook for urban economics and I will sell it for \$1 on Amazon. Extra Credit is tied to:

- Pointing out several weaknesses in my manuscript regarding writing or logic
- If you provide weblinks of specific interesting examples of specific cities or issues related to urban economics
- If you create a microsoft Excel data set that is related to cities that I can include in the e-book
- if you help me to create a diagram or an algebra example that improves my manuscript.

Any student who helps to improve my e-book will receive both Extra Credit and your name and contribution to the book will be included in the book to acknowledge your hard work.

All Course Materials will be posted to the course Blackboard page.

Text: O'Sullivan, *Urban Economics* (McGraw-Hill, 2019)

The paperback version can be purchased from Amazon

<https://www.mheducation.com/highered/product/urban-economics-o-sullivan/M9780078021787.html>

Textbook #2: Fundamentals of Environmental and Urban Economics by Matthew E Kahn

A Free copy of Professor Kahn's book will be posted to Blackboard.

<https://www.amazon.com/Fundamentals-Environmental-Urban-Economics-Matthew-ebook/dp/B00E1U992U>

This book provides some insights about how I write my e-books.

Additional Reading (these will be posted to our Blackboard Page)

Bassi et. al. Avoiding Pollution or Adapting to it? Managerial Quality and Worker Exposure to PM2.5 in Urban Uganda

Baum-Snow N. Did highways cause suburbanization?. *The quarterly journal of economics*. 2007 May 1;122(2):775-805.

Baum-Snow, Nate. and Fernando Ferreira *Causal inference in urban economics, Handbook of Urban Economics, Volume #5*

Black, Sandra E. "Do better schools matter? Parental valuation of elementary education." *Quarterly journal of economics* (1999): 577-599.

Bryan G, Glaeser E, Tsivanidis N. Evidence paper. Cities, IGC paper.
https://www.theigc.org/wp-content/uploads/2019/12/IGC-Cities-evidence-paper-December-2019_web.pdf

Bryan G, Chowdhury S, Mobarak AM. Underinvestment in a profitable technology: The case of seasonal migration in Bangladesh. *Econometrica*. 2014 Sep;82(5):1671-748.

Duranton G, Turner MA. The fundamental law of road congestion: Evidence from US cities. *The American Economic Review*. 2011 Oct 1;101(6):2616-52

Gibson, John & Olivia, Susan & Boe-Gibson, Geua & Li, Chao, 2021. "[Which night lights data should we use in economics, and where?](#)," *Journal of Development Economics*, Elsevier, vol. 149(C).

Giuliano, G. and K. Small, "[Subcenters in the Los Angeles Region](#)," *Regional Science and Urban Economics*, July 1991.

Gibson, John & Olivia, Susan & Boe-Gibson, Geua & Li, Chao, 2021. "[Which night lights data should we use in economics, and where?](#)," *Journal of Development Economics*, Elsevier, vol. 149(C).

Gollin D, Kirchberger M, Lagakos D. Do urban wage premia reflect lower amenities? Evidence from Africa. *Journal of Urban Economics*. 2021 Jan 1;121:103301.

Glaeser, Edward Jed Kolko, and Albert Saiz, 2001. "Consumer City." *Journal of Economic Geography*, Oxford University Press,

Glaeser, Edward L. "Are cities dying?." *The Journal of Economic Perspectives*(1998): 139-160.

Glaeser EL, Kahn ME, Rappaport J. Why do the poor live in cities? The role of public transportation. *Journal of urban Economics*. 2008 Jan 1;63(1):1-24.

Glaeser, E., J. Gyourko and R. Saks, "[Why is Manhattan So Expensive: Regulation and the Rise in Housing Prices](#)," *Journal of Law and Economics*, October 2005.

Glaeser, Edward Jed Kolko, and Albert Saiz, 2001. "Consumer City." *Journal of Economic Geography*, Oxford University Press,

Kahn ME. Climate change adaptation: lessons from urban economics. *National Bureau of Economic Research*; 2014 Nov 26.

Kahn ME. Urban growth and climate change. *Annu. Rev. Resour. Econ.* 2009 Jun;1(1):333-50.

<https://voxeu.org/article/climatopolis-how-will-climate-change-impact-urbanites-and-their-cities>

Kahn ME, Li P. Air pollution lowers high skill public sector worker productivity in China. *Environmental Research Letters*. 2020 Jul 15;15(8):084003.

Kahn ME, McComas M. Unlocking the Potential of Post-Industrial Cities. Johns Hopkins University Press; 2021 Feb 23.

Kahn, M.E and Walsh, Randall "Cities and the Environment, Handbook Volume #5

Lall, Somik Vinay, J. Vernon Henderson, and Anthony J. Venables. *Africa's cities: Opening doors to the world*. World Bank Publications, 2017.

McMillen, D., "[Nonparametric Employment Subcenter Identification](#)," *Journal of Urban Economics*, November 2001.

Moretti E. Cities and growth. International Growth Center. 2014 Apr 11.

Rosenthal SS, Strange WC. Evidence on the nature and sources of agglomeration economies. *Handbook of regional and urban economics*. 2004 Dec 31;4:2119-71.

Zheng, Siqi, and Matthew E. Kahn. "Land and residential property markets in a booming economy: New evidence from Beijing." *Journal of Urban Economics* 63, no. 2 (2008): 743-757.

Zheng S, Kahn ME. A new era of pollution progress in urban China?. *Journal of Economic Perspectives*. 2017 Feb;31(1):71-92.

Zheng S, Sun C, Qi Y, Kahn ME. The evolving geography of China's industrial production: Implications for pollution dynamics and urban quality of life. *Journal of Economic Surveys*. 2014 Sep;28(4):709-24.

Zheng S, Wang J, Sun C, Zhang X, Kahn ME. Air pollution lowers Chinese urbanites' expressed happiness on social media. *Nature Human Behaviour*. 2019 Mar;3(3):237-43.

Zheng S, Kahn ME. Understanding China's urban pollution dynamics. *Journal of Economic Literature*. 2013 Sep 1;51(3):731-72.

Zheng S, Sun W, Wu J, Kahn ME. The birth of edge cities in China: Measuring the effects of industrial parks policy. *Journal of Urban Economics*. 2017 Jul 1;100:80-103.

Zheng S, Wang J, Sun C, Zhang X, Kahn ME. Air pollution lowers Chinese urbanites' expressed happiness on social media. *Nature Human Behaviour*. 2019 Mar;3(3):237-43.

Zheng, Siqi, and Matthew E. Kahn. "Land and residential property markets in a booming economy: New evidence from Beijing." *Journal of Urban Economics* 63, no. 2 (2008): 743-757.

	Topics/Daily Activities	Readings and Homework	Deliverable/ Due Dates
Lecture 1 Jan 10, 2022	Course Overview & Introduction	O'Sullivan, Chapter 1	
Lecture 2 Jan 12, 2022	Key Concepts of Urban Economics	O'Sullivan, Chapter 2	
Lecture 3 Jan 17, 2022	NO CLASS		
Lecture 4 Jan 19, 2022	Trading and Agglomeration	O'Sullivan, Chapter 3 and 4	Homework #1 Due
Lecture 5 Jan 24, 2022	Hypothesis Testing	Kahn Manuscript	
Lecture 6 Jan 26 2022	Consumer Cities	O'Sullivan, Chapters 5 and Chapter 6	
Lecture 7 Jan 31, 2022	Cities in a Regional Economy	O'Sullivan, Chapter 7	
Lecture 8 Feb 2, 2022	Urban Labor Market	O'Sullivan, Chapter 8	
Lecture 9 Feb 7, 2022	Land Rent and Manufacturing	O'Sullivan, Chapter 10	
Lecture 10 Feb 9, 2022	Office Space & Tall Buildings	O'Sullivan, Chapter 11	
Lecture 11 Feb 14, 2022	Housing Prices & Residential Land Use	O'Sullivan, Chapter 12	Homework #2 Due
Lecture 13 Feb 16, 2022	Big Data in Urban Research I		
Feb 21, 2022	NO CLASS		
Lecture 14 Feb 23, 2022	Urban General Equilibrium	O'Sullivan, Chapter 14	
Lecture 15 Feb 28, 2022	Neighborhoods	O'Sullivan, Chapter 15	Paper #1 Due
Lecture 16 Mar 2, 2022	Land Use Policy	O'Sullivan, Chapter 16	
Lecture 17 Mar 7, 2022	Urban Housing Policy	O'Sullivan, Chapter 17	
Lecture 18 Mar 9, 2022	Cars and Roads	O'Sullivan, Chapter 18	
Lecture 19 Mar 21, 2022	Public Transit	O'Sullivan, Chapter 19	
Lecture 20 Mar 23, 2022	Local Government	O'Sullivan, Chapter 20-21	
Lecture 21 Mar 28, 2022	Education, Crime, and Local Government's Role	O'Sullivan, Chapter 22-23	Homework #3 Due
Lecture 22 Mar 30, 2022	Unlocking the Potential of Post-Industrial Cities	Kahn and McComas Chapter One	
Lecture 23 Apr 4, 2022	Cities in the Developing World #1	Readings to be Distributed	
Lecture 24	Cities in the Developing World #2	Readings to be Distributedd	

Apr 6, 2022			
Lecture 25 Apr 11, 2022	Climate Change and Cities #1	Kahn, Adapting to Climate Change	
Lecture 26 Apr 13 2022	Climate Change and Cities #2	Kahn Adapting to Climate change	
Lecture 27 Apr 18, 2022	The Urban Big Data Revolution II		Paper #2 Due
Lecture 28 Apr 20, 2022	Course Summary		
Final Exam Take Home Exam	Final Exam		

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards*<https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* <http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems

A number of USC’s schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services* and *Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

