

ECO433H1S – The Economics of Cities and Regions

Section L0101 Wednesday 10-12, Room: UC67 (plus an extra slot on Friday at 10 in the same room)

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Office hours: Wednesdays 16.30-18.15

Objectives: This course will provide a broad introduction to modern regional and urban economics. In the first part of the course we will attempt to understand how and why cities grow and develop. In the second part, we will explore how cities interact and why they differ in size and perform different activities. Given time, the third part of the course will look at regional development and attempt to understand the determinants of regional inequalities.

Prerequisite for undergraduate students: ECO375H

Equivalent pre-requisites for commerce students.

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. To reflect this, the assessment will be made of:

- Two short papers where you will have to do some data analysis using STATA and write down the results. Each will count for 25% of the final grade.
- One mid term of about an hour. It will count for 16.67% of the final grade.
- One final exam of about two hours. It will count for 33.33% of the final grade.

3.. Exam dates

Midterm:	Some date to be decided mid February (18 February?)
First paper:	2 March
Final exam:	TBA (during the Spring exam period)
Second paper:	After the end of term

The Faculty of Arts and Science selects the dates for examinations. You must not make travel, employment or other plans that may conflict with the date chosen for the examination in this course and any such conflict will not be accepted as grounds for writing a deferred exam. Instructors cannot make special arrangements with students who miss the final exam for any reason.

4. In absence of suitable textbook, I will make most of the material in the reading list available. The main cost associated with the course is to get a STATA licence for those of you who do not already have one.

5. Announcements and other related items will be posted on the web at <http://individual.utoronto.ca/gilles/ECO433Y.html>. Please check this page frequently and stay up to date with the course.

6. Most course materials (readings and data) will be posted on the blackboard page for the course.

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

8. Absence from exams.

- If you miss the midterm test due to illness and present a medical note within one week of the date of the test, the final will then be weighted 50%. Failure to produce a medical note in time will result in a mark of 0.
- If you miss the final, an alternative exam will be set. Failure to produce a medical note in time will result in a mark of 0.

- There is normally no excuse for missing deadlines for the term papers. A long illness is the only accepted exception. A medical note is necessary. Failure to produce a medical note in time will result in a mark of 0.

University policy also requires you to self declare any missed exam on ROSI.

The only medical note that will be accepted is the University of Toronto Student Medical Certificate (see the Registration Handbook & Timetable for a copy of the certificate).

9. Any appeal of a grade (beyond obvious counting errors) *is very likely to lead to the whole exam being re-graded* (and not only the part where the student feels cheated). This will be done by the instructor (whose standards are usually tougher than those of TAs). Hence appealed grades are likely to go down after the appeal. Trying to bargain on your grade is thus a potentially very costly strategy.

10. Course etiquette and other issues

- Time keeping. The lectures will start sharply at the conventional time. **DO NOT BE LATE.**

- **SWITCH OFF YOUR MOBILE PHONE DURING THE CLASS.**

- I have no power to allocate students to courses and cannot do anything regarding exam dates.

- Many issues can be dealt with by email but an immediate answer cannot be expected (especially for emails sent on Friday at 10 pm). Unless I am out of town, I try to reply within 48 hours (72 if over the weekend). When the answer you expect is long and complex, a face-to-face meeting may be needed during my office hours (if I receive an email questions for which the answer is likely to be more than 3 lines long, I will ask you to do come to my office hours). If you think a long conversation is needed, a separate appointment can be made.

BUT BEFORE ANY EMAIL REMEMBER that the syllabus contains the answer to most of your basic questions!

Syllabus:

1. Presentation, Agglomeration theory

Introductory text (to read first):

- Glaeser, Edward L. 1998. Are cities dying? *Journal of Economic Perspectives* 12(2): 139-160.

Main text (a formal review of theories of agglomeration):

- 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.

Supplement 1 (presentation of the 3.5 curve framework):

- Duranton Gilles. 2008. Viewpoint: From cities to productivity and growth in developing countries. *Canadian Journal of Economics* 41(3): 689-736.

READ ONLY SECTION 2.

Supplement 2 (Marshall himself):

- Marshall, Alfred. 1890. *Principles of Economics*. London: Macmillan.

READ PAGE 270-274

Supplement 3 (Presentation of Dixit Stiglitz):

- Combes, Pierre-Philippe, Thierry Mayer, and Jacques Thisse. 2008. *Economic Geography – The Integration of Regions and Nations*. Princeton: Princeton University Press, forthcoming.

READ ONLY CHAPTER 3 SECTION 1.

2. Agglomeration empirics

Introductory text (to read first):

- Rosenthal Stuart S., and William C. Strange. 2006. The micro-empirics of agglomeration economics. In Richard J. Arnott and Daniel P. McMillen (eds.) *A Companion to Urban Economics*. Oxford: Blackwell, 7–23.

Main text (estimation of agglomeration effects using iv):

- Ciccone, Antonio and Robert E. Hall. 1996. Productivity and the density of economic activity. *American Economic Review* 86(1): 54–70.

Main text 2 (estimation of agglomeration effects using quasi experimental data):

- Greenstone, Michael, Richard Hornbeck, and Enrico Moretti. 2010. Identifying agglomeration spillovers: Evidence from winners and losers of large plants openings. *Journal of Political Economy* 118(3):536–598.

Supplement 1 (A great discussion of how to do empirical work):

- Holmes, Thomas J. 2010. Structural, experimentalist, and descriptive approaches to empirical work in regional economics. *Journal of Regional Science* 50(1):5–22.

Supplement 2 (A review on iv estimation):

- Murray, Michael P. 2006. Avoiding invalid instruments and coping with weak instruments. *Journal of Economic Perspectives* 20(4): 111-132.

Supplement 3 (Estimation issues):

- Combes, Pierre-Philippe, Thierry Mayer, and Jacques Thisse. 2008. *Economic Geography – The Integration of Regions and Nations*. Princeton: Princeton University Press, forthcoming.

READ ONLY CHAPTER 11. THE MOST RELEVANT SECTIONS ARE 2.1 TO 2.4. THE REST CAN BE READ AS WELL.

Supplement 4 (A paper directly relevant for the first essay):

- Combes, Pierre-Philippe, Gilles Duranton, Laurent Gobillon, and Sébastien Roux. 2010. Estimating agglomeration economies with history, geology, and worker effects. In Edward L. Glaeser (ed.) *The Economics of Agglomeration*. Cambridge (mass.): National Bureau of Economic Research, 15–65.

Supplement 5 (A survey of recent results):

- Puga, Diego. 2010. The magnitude and causes of agglomeration economies. *Journal of Regional Science* 50(1):203–219.

3. Dispersion theory: the monocentric model, its extensions and multicentric cities

Introductory text (to read first):

- Kraus, Marvin. 2006. Monocentric cities. In Richard J. Arnott and Daniel P. McMillen (eds.) *A Companion to Urban Economics*. Oxford: Blackwell, 96–108.

Main text 1 (in-depth presentation of the monocentric model):

- Zenou, Yves. 2006. Urban Economics. Mimeographed. THE LECTURE WILL FOLLOW SECTIONS 1.1, 1.2, 1.3, 1.5. SECTIONS 1.4 AND 3 CAN BE IGNORED. SECTION 2 IS WORTH A LOOK.

Main text 2 (extensions of the monocentric model):

- Zenou, Yves. 2006b. The basic model with heterogeneous agents. Mimeographed. SECTIONS 1, 2, and 4 MOSTLY

Main text 3 (a review of multicentric models):

- White, Michelle J. 1999. Urban areas with decentralized employment: Theory and empirical work. In Paul C. and Edwin S. Mills (eds) *Handbook of Regional and Urban Economics*, volume 3. Amsterdam: North-Holland, 1375-1412. ONLY SECTIONS 2, 3, AND 4 WILL BE DISCUSSED

Supplement 1 (Another presentation of the monocentric framework, intermediate between Kraus and Zenou):

- Brueckner, Jan K. 1987. The structure of urban equilibria: A unified treatment of the Muth-Mills model. In Edwin S. Mills (ed) *Handbook of Regional and Urban Economics*, volume 2. Amsterdam: North-Holland, 821-845.

Supplement 2 (More on endogenous CBDs and subcenters):

- Fujita, Masahisa and Jacques Thisse. 1996. Economics of agglomeration. *Journal of the Japanese and International Economies* 10: 339-378. READ ONLY SECTION 2

4. Dispersion empirics

Introductory text (to read first):

- McMillen, Daniel P. 2006. Testing for Monocentricity. In Richard J. Arnott and Daniel P. McMillen (eds.) *A Companion to Urban Economics*. Oxford: Blackwell, 128–140.

Main text (decentralisation of employment in the USA):

- Glaeser, Edward L., and Matthew E. Kahn. 2001. Decentralized Employment and the Transformation of the American City. *Brookings/Wharton Papers on Urban Affairs* 2(0): 1-63.

Supplement 1 (using microgeographic data 1)

- McMillen, Daniel P. 2001. Nonparametric employment subcenter identification. *Journal of Urban Economics* 50(3): 448-473.

Supplement 2 (using microgeographic data 2)

- 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. ONLY IF YOU ARE INTERESTED

Supplement 3 (using microgeographic data 3)

- Duranton, Gilles and Henry G. Overman. 2005. Testing for localization using microgeographic data. *Review of Economic Studies* 72(4): 1077-1106. ONLY IF YOU ARE INTERESTED

Supplement 4 (a close-up on transportation)

- de Palma, André, Robin Lindsey, and Nathalie Picard. Urban passenger travel demand. In Richard J. Arnott and Daniel P. McMillen (eds.) *A Companion to Urban Economics*. Oxford: Blackwell, 261-280.

GO THROUGH IT BUT LOOK AT THE DETAILS ONLY IF YOU ARE INTERESTED

5. Amenities and mobility across cities

Introductory text 1 (to read first):

- Blomquist, Glenn C. 2006. Measuring quality of life. In Richard J. Arnott and Daniel P. McMillen (eds.) *A Companion to Urban Economics*. Oxford: Blackwell, 483-501.

Introductory text 2 (to read first):

- Bartik Timothy J. and Randall W. Eberts. 2006. Urban labor markets. In Richard J. Arnott and Daniel P. McMillen (eds.) *A Companion to Urban Economics*. Oxford: Blackwell, 389-403.

Main text 1 (quality of life estimates and connecting the dots)

- 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.

SECTION 2 IS A GOOD PRIMER ON ROBACK AND HOW TO USE IT. THE OTHER SECTIONS CONNECT IT BACK WITH AGGLOMERATION.

Main text 2 (mobility across cities and shocks):

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

Supplement (a recent quality of life estimate)

- Albouy, David. 2008. Are big cities really bad places to live? Improving quality-of-life estimates across cities. Mimeographed, University of Michigan.

NO NEED TO READ EVERYTHING IN DEPTH. THINK ABOUT WHAT THIS PAPER IS TRYING TO FIX AND HOW IMPORTANT THESE THINGS ARE.

6. Many cities: the division of economic activities across cities and urban growth

Main text 1 (facts about activities in cities):

- Duranton, Gilles and Diego Puga. 2000. Diversity and specialisation in cities: Why, where and when does it matter? *Urban Studies* 37(3): 533–555.

Main text 2 (Zipf's law and urban growth):

- Duranton, Gilles. 2009. Notes about random urban growth models. Mimeographed, University of Toronto.

Supplement 1 (city size distributions):

- Gabaix, Xavier and Yannis M. Ioannides. 2004. The evolution of city size distributions. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2341–2378.

READ SECTIONS 1,2, AND 6.

Supplement 2 (city size distributions):

- Henderson, Vernon, and Randy Becker. 2000. Political economy of city sizes and formation. *Journal of Urban Economics* 48(3): 453–484.

Supplement 3 (urban growth and human capital):

- Simon, Curtis J. and Clark Nardinelli. 2002. Human capital and the rise of American cities, 1900–1990. *Regional Science and Urban Economics* 32(1): 59–96.

Supplement 4 (urban growth and agglomeration externalities):

- Cingano, Federico and Fabiano Schivardi. 2004. Identifying the sources of local productivity growth. *Journal of the European Economic Association* 2(4): 720-742.

Supplement 6 (urban growth and climate, important for your second essay)

- Rappaport, Jordan. 2004. Moving to nice weather. *Regional Science and Urban Economics* 37(3): 375–398.

Supplement 7 (uncovering facts about urban growth, also important for your second essay)

- Black, Duncan and Henderson, Vernon. 2003. Urban Evolution in the US. *Journal of Economic Geography* 3(4), 343–372.

7. Cities and regions: New Economic geography, theory

Introductory text (to read first):

- Puga, Diego. 2002. European regional policies in light of recent location theories. *Journal of Economic Geography* 2(4): 373-406.

SECTIONS 2 AND 3 ARE THE MOST IMPORTANT

Main text (the founding model):

- Krugman, Paul R. 1991. Increasing returns and economic geography. *Journal of Political Economy* 99(3): 484–499.

Supplement 1 (alternative modelling strategy):

- Ottaviano, Gianmarco I.P., Takatoshi Tabuchi, and Jacques F. Thisse. 2002. Agglomeration and trade revisited. *International Economic Review* 43(2): 409-436.

ONLY IF YOU ARE INTERESTED

Supplement 2 (simplifying Krugman):

- Pflüger, Michael. 2004. A simple, analytically solvable, Chamberlinian agglomeration model. *Regional Science and Urban Economics* 34(4): 565-573.

ONLY IF YOU ARE INTERESTED

Supplement 3 (simplifying Krugman even more and attempting to kink with urban):

- Thisse, Jacques-François. 2010. Towards a unified theory of economic geography and urban economics. *Journal of Regional Science*, forthcoming.

Supplement 4 (going further with the NEG)

- Baldwin, Richard E., Rikard Forslid, Philippe Martin, and Frédéric Robert-Nicoud. 2003. The core-periphery model: Key features and effects. In S. Brakman and B. Heijdra and (eds), *The Monopolistic Competition Revolution in Retrospect*, Cambridge University Press.

ONLY IF YOU ARE INTERESTED

8. Cities and regions: New Economic geography, empirics and wrap-up

Bringing things together:

- Combes, Pierre-Philippe, Gilles Duranton, and Henry G. Overman. 2005. Agglomeration and the adjustment of the spatial economy. *Papers in Regional Science* 84(3): 311-349.

Main text 1 (structural identification in NEG):

- Mayer, Thierry. 2008. Market potential and development. CEPR discussion paper 6798.

Main text 2 (an alternative approach):

- Redding Stephen J., and Daniel M. Sturm. 2008. The costs of remoteness: Evidence from German division and reunification. *American Economic Review*, 98(5): 1766-1797.