# The Economics of Cities and Regions (ECO3202H1F) University of Toronto, 2011

## Description

This course will explore recent developments in the economics of cities and regions, including the modelling and estimation of the productive advantages of cities, the sizes and functions of cities, urban growth and sprawl, and the evolution of regional inequalities. Both theory and empirics will be covered. While most of the readings are drawn from urban and regional economics, the course is designed so that it may be useful to students interested in a wide variety of topics. At the same time, a strong background in economics and quantitative methods is required to follow the course.

## Instructor

Diego Puga (diego.puga@imdea.org) Office: Room 342, Max Gluskin House, 150 Saint George Street Office hours: Friday 10:00-11:00.

## Time and location

Room GE100, Max Gluskin House, 150 Saint George Street (except 14 October, GE168).

- Thursday 15 September 18:00-20:00.
- Friday 16 September 14:00-16:00.
- Thursday 22 September 18:00-20:00.
- Friday 23 September 14:00-16:00.
- Thursday 6 October 18:00-20:00.
- Friday 7 October 14:00-16:00.
- Thursday 13 October 18:00-20:00.
- Friday 14 October 14:00-16:00 (different room, GE168)
- Thursday 27 October 18:00-20:00.
- Friday 28 October 14:00-16:00.
- Thursday 3 November 18:00-20:00.
- Friday 4 November 14:00-16:00.

## Grading

- 50% written exam, during final exam period.
- 30% replication assignment, due 28 October (objective: to replicate the main results of a published paper from a given list).
- 20% class participation.

## **Programme and Reading list**

## 1. The productive advantages of cities

#### Main reading

- Puga, Diego. 2010. The magnitude and causes of agglomeration economies. *Journal of Regional Science* 50(1):203–219.
- Rosenthal, Stuart S. and William Strange. 2004. Evidence on the nature and sources of agglomeration economies. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2119–2171.

## Additional reading

- Combes, Pierre-Philippe, Gilles Duranton, Laurent Gobillon, Diego Puga, and Sébastien Roux. 2008. The productivity advantages of large cities: Distinguishing agglomeration from firm selection. Processed, IMDEA.
- Combes, Pierre-Philippe, Gilles Duranton, Laurent Gobillon, and Sébastien Roux. 2010. Estimating agglomeration effects with history, geology, and worker fixed-effects. In Edward L. Glaeser (ed.) *Agglomeration Economics*. Chicago, IL: Chicago University Press, 15–65.

## 2. Urban congestion and housing

#### Main reading

- 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.
- Brueckner, Jan K. 2000. Urban growth models with durable housing: An overview. In Jean-Marie Huriot and Jacques-François Thisse (eds.) *Economics of Cities: Theoretical Perspectives*. Cambridge: Cambridge University Press, 263–289.
- Glaeser, Edward L. and Joseph Gyourko. 2005. Urban decline and durable housing. *Journal* of *Political Economy* 113(2):345–375.

## 3. Urban systems and city formation

#### Main reading

• Becker, Randy and J. Vernon Henderson. 2000. Intra-industry specialization and urban development. In Jean-Marie Huriot and Jacques-François Thisse (eds.) *Economics of Cities: Theoretical Perspectives*. Cambridge: Cambridge University Press, 138–166.

## 4. The motives for agglomeration: what generates aggregate increasing returns?

## Main reading

• 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.

# 5. Empirical analysis of agglomeration

## Main reading

- Rosenthal, Stuart S. and William Strange. 2004. Evidence on the nature and sources of agglomeration economies. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2119–2171.
- Holmes, Thomas J. 2010. Structural, experimentalist, and descriptive approaches to empirical work in regional economics. *Journal of Regional Science* 50(1):5–22.

#### Additional reading

- Ciccone, Antonio and Robert E. Hall. 1996. Productivity and the density of economic activity. *American Economic Review* 86(1):54–70.
- Cingano, Federico and Fabiano Schivardi. 2004. Identifying the sources of local productivity growth. *Journal of the European Economic Association* 2(4):720–742.
- Ellison, Glenn, Edward L. Glaeser, and William Kerr. 2010. What causes industry agglomeration? Evidence from coagglomeration patterns. *American Economic Review* 100(3):1195–1213.
- Henderson, J. Vernon. 2003. Marshall's scale economies. *Journal of Urban Economics* 53(1):1–28.
- Holmes, Thomas J. 1998. The effect of state policies on the location of manufacturing: Evidence from state borders. *Journal of Political Economy* 106(4):667–705.
- Holmes, Thomas J. 2005. The location of sales offices and the attraction of cities. *Journal of Political Economy* 113(3):551–581.
- Jaffe, Adam B., Manuel Trajtenberg, and Rebecca Henderson. 1993. Geographic localization of knowledge spillovers as evidenced by patent citations. *Quarterly Journal of Economics* 108(3):577–598.
- Rosenthal, Stuart S. and William C. Strange. 2003. Geography, industrial organization, and agglomeration. *Review of Economics and Statistics* 85(2):377–393.

## 6. Specialization and diversification in cities

#### Main reading

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

## Additional reading

• Duranton, Gilles and Diego Puga. 2005. From sectoral to functional urban specialisation. *Journal of Urban Economics* 57(2):343–370.

# 7. Location and relocation over the life cycle

#### Main reading

- Brezis, Elise S. and Paul R. Krugman. 1997. Technology and the life cycle of cities. *Journal of Economic Growth* 2(4):369–383.
- Duranton, Gilles and Diego Puga. 2001. Nursery cities: Urban diversity, process innovation, and the life cycle of products. *American Economic Review* 91(5):1454–1477.

## 8. The distribution of city sizes and urban growth

#### Main reading

• 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.

#### Additional reading

- Eeckhout, Jan. 2004. Gibrat's law for (All) cities. *American Economic Review* 94(5):1429–1451.
- Duranton, Gilles. 2007. Urban evolutions: The fast, the slow, and the still. *American Economic Review* 97(1):197–221.
- Gabaix, Xavier. 1999. Zipf's law for cities: An explanation. *Quarterly Journal of Economics* 114(3):739–767.
- Rossi-Hansberg, Esteban and Mark L. J. Wright. 2007. Urban structure and growth. *Review of Economic Studies* 74(2):597–624.

## 9. Sprawl and suburbanization: causes and consequences

#### Main reading

- 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.
- Glaeser, Edward L. and Matthew E. Kahn. 2004. Sprawl and urban growth. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2481–2527.

#### 10. Integration, increasing returns, and agglomeration

#### Main reading

- Krugman, Paul R. 1991. Increasing returns and economic geography. *Journal of Political Economy* 99(3):484–499.
- Krugman, Paul R. and Anthony J. Venables. 1995. Globalization and the inequality of nations. *Quarterly Journal of Economics* 110(4):857–880.
- Puga, Diego. 1999. The rise and fall of regional inequalities. *European Economic Review* 43(2):303–334.

#### Additional reading

- Baldwin, Richard E. and Philippe Martin. 2004. Agglomeration and regional growth. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2671–2711.
- Neary, J. Peter. 2001. Of hype and hyperbolas: Introducing the new economic geography. *Journal of Economic Literature* 39(2):536–561.
- Ottaviano, Gianmarco I. P. and Diego Puga. 1998. Agglomeration in the global economy: A survey of the 'new economic geography'. *World Economy* 21(6):707–731.
- Ottaviano, Gianmarco I. P., Takatoshi Tabuchi, and Jacques-Franccois Thisse. 2002. Agglomeration and trade revisited. *International Economic Review* 43(2):409–436.
- Puga, Diego. 2002. European regional policy in light of recent location theories. *Journal of Economic Geography* 2(4):372–406.

## **11.** The empirics of agglomeration and trade

#### Main reading

• Head, Keith and Thierry Mayer. 2004. The empirics of agglomeration and trade. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2609–2669.

#### Additional reading

- Hanson, Gordon H. 2005. Market potential, increasing returns, and geographic concentration. *Journal of International Economics* 67(1):1–24.
- Redding, Stephen and Anthony J. Venables. 2004. Economic geography and international inequality. *Journal of International Economics* 62(1):53–82.