



COURSE SYLLABUS
Urban & Regional Economics
AGEC 596R – Spring 2008

Instructor

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Lectures: Tuesday–Thursday, 3:00–4:15 PM, KRAN G016
Office hours: One hour after class or as needed by appointment

Course description

Did you ever wonder why the location of car dealers is spatially clustered on the auto mall and bookstores seem to be much more spread across town? Or, why Silicon Valley is in California and there is no similar high-tech cluster in Indianapolis? Given that the responsibility for regional development policy rests largely with the states in the US, do you think that the state legislature should make a point of trying to establish such a cluster in Indiana? Also, what is the economic significance of city agglomerations, and will agglomeration externalities cause more profound disparities between urban conurbations and rural hinterlands to appear more or less automatically?

The above questions are all at the heart of the field of urban and regional economics. Although classical economists have traditionally considered spatial variation in economic development as a core area in economics (e.g., Adam Smith’s treaty on the nature and causes of the wealth of nations), space has not received a prominent status in theory, except for the work on location theory at the end of the nineteenth century. Walter Isard, the founding father of the field of regional science, opposed this “Anglo-Saxon bias” and vehemently pushed for the incorporation of the spatial dimension in economic theory. His work, and the work of others, precludes the increased attention for space in economics that occurred towards the end of the twentieth century. Nowadays, the work of Krugman and others in what is called ‘New Economic Geography’ and the work on agglomeration externalities and the development of cities in urban economics has given the spatial dimension a much more prominent place in economic theory. Concurrently, this theoretical push has been accompanied by new developments in methods and data processing tools. On the one hand, areas such as spatial statistics and spatial econometrics, pushed to a certain extent by the increased opportunities for geographical data storage, visualization and analysis through Geographic Information Systems (GIS) and Remote Sensing (RS), have been developed. On the other hand, useful analytical tools for impact analysis (such as, the development of concentration indices, economic base analysis, interregional input-output modeling) have been influential in shaping the opportunities for regional (economic) development policy.

The literature discussed in this urban and regional economics course covers theoretical texts, conceptual as well as statistical, and empirical applications in order to introduce you to the economist' view on spatial variation in economic outcomes. This ranges from coverage of the theory of industrial location choice, through a theoretical and empirical analysis of the spatial distribution of economic activities (agglomeration theory, industrial clusters, central place theory), to theoretical and empirical explanations for the spatial structure of cities. Apart from the above partial equilibrium approaches, a general equilibrium approach allowing for increasing returns to scale is much more prominent in the recently developed New Economic Geography. Subsequently, the course will cover various empirical tools dealing with the analysis of spatial data (spatial econometrics) and modeling of regional economies and their interrelations (interregional input-output analysis). These are intended to facilitate the analysis of, for instance, labor markets and migration as well as regional economic growth. They are also intended to feed into regional impact analysis, with its obvious relevance for urban and regional economic development policy.

Prerequisites

Good working knowledge of principles of micro- and macroeconomics, and basic knowledge of econometrics.

Texts

There are several textbook-like monographs covering parts of the contents of this course. The first one is the textbook that will be used. A list of some of the most relevant other texts, of which those marked with an asterisk are on reserve in the library, is as follows:

- McCann, P. (2001). *Urban and Regional Economics*. Oxford: Oxford University Press.
- O'Sullivan, A. (2007, 6th edition). *Urban Economics*. Boston: Irwin McGraw-Hill.*
- Armstrong, H.W. and J. Taylor (2000, 3rd edition). *Regional Economics and Policy*. Oxford: Blackwell.*
- Brakman, S., H. Garretsen and C. van Marrewijk (2001). *An Introduction to Geographical Economics: Trade, Location and Growth*. Cambridge: Cambridge University Press.*
- Capello, R. (2007). *Regional Economics*. London: Taylor and Francis.

In addition to the McCann textbook some chapters of the other books will be used, in addition to a series of seminal papers on different topics. The required readings are announced in the notes that accompany each class.

Policies

1. Grading is based on assignments comprising problem sets, a midterm exam, and a final exam. Problem sets and the midterm exam are worth 30 percent each. The final exam accounts for 40 percent of the final grade. Details are presented during the first lecture.
2. Class attendance and active participation are required.
3. Incomplete grades are not given unless extremely extenuating circumstances warrant. Late assignments will be graded by deducting points from the lowest score among those earned by students who turned their assignments in on time.

Course outline

The course comprises eight major modules. The first module introduces the field of urban and regional economics and outlines the microeconomic principles underlying the theory of industrial location. The second module deals with the spatial distribution of economic activities, both in a theoretical sense as well as empirically. The latter includes the development of empirical insights on the basis of location and concentration indices. The third module covers various aspects of the spatial structure and development of urban systems. In the fourth module, the analysis is extended towards a general equilibrium approach of location and development, accounting for increasing returns to scale.

Starting with the fifth module, the course will be slightly more empirical and methodologically oriented. The fifth module deals with a concise overview of the main approach and techniques developed in spatial econometrics. Subsequently, the sixth module provides concrete applications of such techniques, especially in the areas of the working of labor markets, population dynamics (specifically migration), and regional economic growth. Module seven covers various techniques that have been developed for regional impact assessment, and provides examples related to, for instance, university establishments and ethanol plants. Finally, module eight deals with theoretical and empirical approaches towards urban and regional economic development policy.

A sequential overview of the topics to be covered is presented below. Note that this overview may be subject to change depending, among other things, on articulated interests of the students.

- 1 Introduction and Industrial Location
- 2 The Spatial Distribution of Economic Activities
- 3 Urban Economics
- 4 New Economic Geography
- 5 Econometrics for Spatial Data
- 6 Labor Markets, Migration and Economic Growth
- 7 Economic Impact Analysis
- 8 Urban and Regional Economic Policy Analysis

Website

See the website for the course at <http://www.agecon.purdue.edu/academic/agec596R/>. The site is developed “as we go” so you have to check regularly. It will contain PDF versions of PowerPoint files used during the lectures, handouts, problem sets, and useful links to software and data.