

Urban economics course

The course is organized by the Department of Spatial Planning, FA CTU.

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The lecturer: Lukáš Makovský: <https://www.henley.ac.uk/people/lukas-makovsky>

Date: Fri 1/11 - Sun 3/11/2024 and Fri 8/11 - Sun 10/11/2024

The urban economics course aims to familiarize students with the basics of urban economics, focusing on the effects of spatial and urban planning. The course is approximately 25 hours long and consists of lectures, practical seminars, discussion, individual consultation and two informal evening meetings. The lectures are based on academic publications, especially in empirical research. The seminars subsequently illustrate the material using data from the Czech environment and combine the form of lecture, discussion and work with the open-source statistical software R, where each listener performs the analysis on their computer. The course aims at architecture and urban planning students at all levels of study and planning professionals who want to expand their knowledge in urban economics and applied economic analysis of spatial data. Previous knowledge of microeconomics, econometrics, and working with spatial data is not required – an introduction in detail necessary for the course will be the subject of the first day.

Framework overview

25.5 hours of contact teaching per student:

- 10 lectures of 90 minutes each
- 8 x 60-minute exercises
- 2x discussions of 60 minutes each
- 30 minutes of individual discussion
- + One recommended reading (article, chapter) for four afternoons
- + 1x welcome evening – networking

	9.00-10.30	11.00-12.30		13.30-14.30	14.45-15.45		16.00-18.00		19.00+
Pá	Lecture	Lecture		Seminar	Seminar		1:1		Social event
So	Lecture	Lecture		Seminar	Seminar		1:1		
Ne	Lecture	Seminar		1:1					

	9.00-10.30	11.00-12.30		13.30-14.30	14.45-15.45		16.00-18.00		19.00+
Pá	Lecture	Lecture		Seminar	Seminar		1:1		Public lecture
So	Lecture	Lecture		Seminar	Discussion		1:1		

Ne	Lecture	Discussion		1:1				
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Lecturer

Lukáš Makovský will teach the course, including the preparation of materials (slides for lectures and exercises, statistical analysis codes for seminars and necessary data). Lukáš is a lecturer at the Institute of Real Estate and Planning at the University of Reading. He completed a master's degree in architecture and urban planning at the FA CTU and applied economics at CERGE-EI. He subsequently completed a doctoral program in economic geography at the London School of Economics. Previously, he worked, among other things, as head of the strategy and development office at the Institute of Planning and Development of the Capital City of Prague.

What the course graduate will get (Learning outcomes)

- Students will learn the basic economic models that describe the city and the region. Economic models aim to describe the behaviour of critical actors – in this case, households, companies and developers. With the help of these models, students will understand how cities and regions organize themselves and how they respond to change.
- At the scale of regions, students will learn why cities exist as concentrations of economic activity, why there is migration between cities, and why some regions grow. Others lose their inhabitants in the course of history. The aim will be to describe the theoretical starting points and the results of empirical research.
- At the city scale, students will learn the economic view of the city structure—how the city changes from the centre to its outskirts. In this concept, real estate prices, residential and structural densities, and commuting are logically linked. The lectures will focus on the specialization of workplaces and residences and the related topic of suburbanization.
- Students will also get to know the perspective of urban economics on city planning – on the meaning of planning, the theoretical basis of planning, and the effects of planning on cities and regions. Emphasis will again be placed on results from empirical research.
- Students will also learn the basics of spatial and econometric methods using the open-source statistical software R and real data from the Czech environment.

Format

- The estimated number of participants is 25. The lectures may be accessible to a broader audience.
- The lectures present individual blocks in the urban economy. The first two days are devoted to theory and used models, which provide a conceptual framework in which the topics in the urban economy are embedded. In the remaining days, the aim is to focus mainly on empirical research and findings with links to theory and models.

- Seminars are designed as hands-on sessions (a combination of lectures and practical exercises). The teaching takes the form of an explanation with a parallel illustration of the topic using real data from the Czech environment and real-time analysis of this data. A statistical analysis code will be prepared for the students so that during the presentation, they can perform the analysis on their own computer together with the teacher and thus master the basics of applied data analysis.

Program

Friday 1 - Introduction

Lecture 1

Introducing each other

Motivation – why study cities from an economics perspective

Lecture 2

Introduction to microeconomics – basic concepts key to urban economics – utilities, supply, demand, general equilibrium; commonly used models and their realism

Seminar 1

Spatial data – what is spatial data, what information is collected about the territory and what is interesting about it, how statistical data is linked to spatial projection, how variables are created from spatial data; parallel demonstrations in R

Seminar 2

Introduction to econometrics – method of least squares, transformation of variables, interpretation of results and estimation accuracy; parallel demonstrations in R

Saturday 1 - Regions

Lecture 3

Motivations for the existence of cities – Local productivity, Marshallian externalities – agglomeration economies of scale, especially empirical findings and relevance for innovation;

Lecture 4

The City System – Rosen-Roback and General Equilibrium, Balancing Spatial Utility, Migration, Dynamics of Regional Competitiveness

Seminar 3

Analysis of the concentration of economic activity in space, the relationship between density and labour productivity; parallel demonstrations in R

Seminar 4

Historical development of the size of settlements in the Czech Republic – relation to the productivity and structure of the local economy; parallel demonstrations in R

Sunday 1 - City

Lecture 5

Canonical model of the city – Alonso, Muth, Mills, price and density gradient formation, natural zoning of the city, commuting behaviour, influence of work from home, evolution from monocentric model to ARSW with realistic geography

Seminar 5

How to set city boundaries – OECD commute-based method, analysis of SLDB 2021 commute data, jobs-to-residents ratio; parallel demonstrations in R

Friday 2 - City and Planning

Lecture 6

Localization factors within the city – the view of households and companies, the essence of hedonic models and critical results

Lecture 7

Justification of intervention from an economic perspective, Coas theorem, Pigouvian taxation, internalization of externalities

Seminar 6

Hedonic pricing model – classic applications such as price gradient from centre to edge, the effect of noise, etc.; parallel demonstrations in R

Seminar 7

The influence of planning on the gradient of floors in Czech cities – what happened before 1945 and what happened afterwards; parallel demonstrations in R

Saturday 2 - Planning 1

Lecture 8

The effects of city-level planning, theoretical conclusions and empirical results, primarily evidence of partial equilibrium

Lecture 9

The effects of planning on the city system, the issue of optimal city size, effects on productivity, misallocation, migration restrictions

Seminar 8

Analysis of suburbanization beyond the boundaries of large cities using satellite images; parallel demonstrations in R

Discussion

What planning tools should they use so they don't do more harm than good?

Sunday 2 - Planning 2

Lecture 10

Heterogeneity in the impacts of planning and public investment – uneven effects of regulation on rich/poor; unevenness of different public investments, variation in demand for amenities; natural segregation and the influence of decentralization of local public finances

Discussion

What types of regulations have different impacts on households in Prague according to their income?