Spatial Economics | ECP77533

Year	1
ECTS Credits	5
Contact Hours	20 hours of lectures and 18 hours of computer laboratory sessions
Pre-Requisite	Nil
Semester	1
Module Leader and Lecturer	Professor Martina Kirchberger
Contact Email	kirchbem@tcd.ie

Module Outline:

The module aims to introduce students to the use of spatial data in economics research.

Syllabus:

The use of spatial data has become increasingly popular in economics research. Microsurveys now routinely collect GPS coordinates of households and communities, satellites provide real-time measurements of night-time luminosity, and georeferenced historic maps are linked to outcomes both across long time spans and space.

Spatial data serve in general two main purposes. First, they allow measuring outcomes that are otherwise hard to measure. Second, they aid identification of causal effects by, for example, controlling for covariates, enabling the construction of instruments, or exploiting boundaries. In the first part of the course, we will discuss how papers are using geo-referenced data, focusing on the role of spatial data in answering research questions. The second part of the course will be hands on: we will cover basic spatial tools, such as creating datasets on our own, merging spatial datasets, computing distances and the basics of map algebra.

Module Learning Outcomes:

On completion of the module, students will be able to:

1. Describe recent trends using spatial data in economics research
2. Understand a range of methods using spatial data
3. Critically evaluate whether and how spatial data can assist in answering a particular research question
4. Know of the possible sources of spatial data and possible applications
5. Conscientiously build their own spatial dataset.

Assessment:

- 70% exam
- 30% coursework

Recommended Reading List:

A full reading list will be provided at the start of lectures.