Empirical Economics **

Instructor: Erik Lindqvist

Economists study the behavior of individuals, firms, and aggregates. Economic models provide ways to think about how agents act. Data allows us to quantify these relationships and test competing models against each other. The course provides a link between economic theory and observations from the real world. In doing so we cover a number of commonly used empirical methods. The focus will be on the practical applications of these methods and interpretation of the results. Pre-requisites: One course in Microeconomics, one course in Macroeconomics, and one introductory course in Statistics. This course is equivalent to a 300 level economics course. This course is typically given credit by Economics Departments

Intended Learning Outcomes

At the end of the course, students should:

☐   Understand how economic theory can guide empirical analysis
☐   Be able to perform and evaluate cross-sectional analysis
☐   Be able to perform and evaluate panel data analysis
☐   Understand the concepts of heteroscedasticity, auto correlation, omitted variables and endogeneity
☐   Understand how instrumental variables can address some empirical concerns

Course structure

The course consists of 17 lectures (including one review lecture) and 7 seminars. The aim of the lectures is to teach the basics of econometrics and sound research practice when doing empirical work. The aim of the seminars is to provide intuition for the topics taught in the lectures and in the textbook. The seminars also allow students to work with the statistical software STATA and provide valuable "hands on" experience with empirical work. Neither the lectures nor the seminars are mandatory. However, participation in the first seminar is strongly encouraged as student pairs for the assignments will be formed during the first seminar, and since there will be an introduction to working with STATA.

Advice for students

The course requires students to understand a set of ideas rather than memorizing facts. Since the ideas taught toward the end of the course build upon the ideas in the early part, we strongly encourage students to put in effort right from the start, and not wait until the last weeks before the exam.

Lectures

Each lecture is given twice. You are free to go to whichever lecture you find most suitable. However, you should be aware that the lecture in each "lecture group" will start where the last one ended. Since the pace may differ somewhat between lecture groups, there is a chance that you will hear something twice or miss something in case you switch groups.

Note that the "lectures" as defined below refer to a set of slides, rather than to a specific session. For example, we will spend almost two sessions going over the slides in lecture 2 (the simple regression model), while some of the lectures 5 and 6 require less than a session each. This implies that we will initially "lag behind" schedule and catch up (so that lectures and sessions coincide) toward the end of the third week.

Seminars

There are three different seminar groups. Unlike the lectures, we require students to stick to the seminar group to which they are registered. Requests to change seminar groups will be handled by the respective seminar teacher.

The seminars will focus on going through empirical exercises in Stata connected to the material covered in the lectures. We intend to indicate the relevant exercises on the course web before each seminar. The material is usually covered in class before discussed in the seminars. One exception is that some of the panel data methods may be discussed in the seminar 6 before being covered in lecture 14.

Assignments

The assignments should be solved in teams of two students. Students are allowed to form their own teams within (but not across) seminar groups. In the event that some students are unable to find a partner, the seminar teacher will facilitate the formation of groups in the first seminar. In case there are an odd number of students in the seminar group, a team of three students will be formed. We require each group to hand-in a unique solution (one solution per group). Copy-paste from fellow students or other sources is not allowed.

There will be four assignments in the course, each of which gives a maximum of 3 points on the exam.

The deadlines for handing in the assignments are **September 14th and 21st** and **October 5th and 19th**. The assignments are to be handed in the box next to the elevator at the entrance to the Department of Economics on the 8th floor (the part of the building built in the 1970's). The box will be emptied at 15.00 the day of the deadline. Solutions handed in after 15.00 will not be accepted.

We aim to publish the solutions to each assignment on the course webpage within a day after the deadline.

Mid-term exam

The mid-term exam takes place on **September 25th, 15.15-17.00 in room HO and 350**. The exam will consist of multiple-choice question on the material covered in the first **seven** lectures of the course (**chapter 1-6 in Wooldridge**). (Note that the information regarding the mid-term has been updated). The result on the mid-term exam gives a maximum of 10 points to the final score on the course.