Discipline: [Methods/Field]

1 Title
Endogeneity

2 Lecturer
Prof. Dr. Dominik Papies (University of Tübingen)

3 Date and Location
University of Tübingen
School of Business and Economics
Naukerstr. 47
72074 Tübingen

4 Course Description
4.1 Abstract and Learning Objectives
Many empirical research projects that use non-experimental data are struggling with the proper identification of causal effects of independent variables (e.g., price, management decisions) on dependent variables (e.g., demand). The reason is that the identification of a causal effect hinges on the untestable assumption that the error term of a model is uncorrelated with the independent variables. If this assumption is not met, a model is plagued by endogeneity.

The topic of endogeneity has received considerable attention, and it is probably the most frequently encountered troublemaker in a review process at an academic journal.

This course therefore has the goal of making students familiar with the problem of endogeneity and potential remedies. This implies that it will cover the opportunities and problems associated with traditional approaches (e.g., Instrumental Variable estimation) as well as more recent developments (e.g., Gaussian Copulas). Because the literature on endogeneity is often quite technical, this course aims at providing an easily accessible approach to this topic.

After completing this course, students will be able to define and describe endogeneity problems in different empirical settings, they will know how to implement techniques that address endogeneity, and they will be aware of the (dis)advantages of different methods.

4.2 Content
1. Introduction & Terminology
2. How Instrumental Variables tackle endogeneity
3. Choice of Instruments (Strength; Validity; Examples)
4. Multiple endogenous regressors, Quadratic effects & Interactions
5. Binary endogenous regressors
6. Control function & Holdout sample validation
7. Panel methods
8. IV-Free methods

4.3 Schedule
Wednesday, September 27, 2017: 11:15 a.m. – 6 p.m.
Thursday, September 28, 2017: 9 a.m. – 6 p.m.
Friday, September 29, 2017: 9 a.m. – 6 p.m.
Saturday, September 30, 2017: 9 a.m. – 3 p.m.

Social activities for the evenings will be announced when the list of participants is complete.

4.4 Course format
Lecture, group discussion, student presentation, PC-based implementation

5 Preparation and Literature
5.1 Prerequisites
Participants should have some experience with empirical analyses, statistics, and econometrics.
Participants should have some degree of familiarity with either Stata or R.

5.2 Essential Reading Material
5.3  To prepare

Students should familiarize themselves with the key points of endogeneity with the help of the reading list. Participants are expected to give a short presentation on their own research problem. Further, participants will be required to discuss one research paper on endogeneity during the course. The assignment of papers to participants will take place when the list of participants is complete.

6  Administration

6.1  Max. number of participants

The number of participants is limited to 20.

6.2  Assignments

Participants will present (1) a summary of their research (plan), and (2) a paper from the reading list. The specific paper will be assigned to participants once the list of participants is complete. (3) Students will actively participate in all in-class discussions. (4) Students will actively work on the completion of the in-class programming assignments.

6.3  Exam

To successfully pass this class, students must complete all assignments described above.

6.4  Credits

The course (including the exam) is eligible for 6 ECTS.

6.5  Costs

The participation fee amount EUR 600,--.