Topics in Health Economics

Course syllabus
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1 Overview and objectives

This course will cover frontier research on the evaluation of public programs with focus on issues related to determinants of health on one hand and health care delivery on the other. The recent Health literature applies the empirical tools pioneered in labor economics and capitalizes on the availability of high quality microdata on health outcomes for practically the entire population in many cases. The number of empirical papers on Health in the top-5 journals in Economics has increased manifold during the last ten years.

The course’s focus will be on empirical applications but will briefly discuss two theoretical models of health, i.e., the human capital model by Grossman (1972) and the developmental model by Cunha and Heckman (2007). More importantly, the bulk of the empirical literature covered relies on the theoretical model of potential outcomes by Rubin (1974) which is key to thinking about identification and causal inference. We will deal with this model and include methodological topics, such as difference-in-difference, regression dis-
continuity designs, social experiments, and instrumental variables. Knowledge at the level of Wooldridge (2002) is required and some prior knowledge of program evaluation is useful but not imperative. The textbook in applied econometrics by Angrist and Pischke (2009) will prove to be handy throughout the course.


## 2 Course outline

1. Human capital model - Health and education: Part 1
   
   (a) Grossman (1972)
   
   (b) Twin studies

2. Human capital model - Health and education: Part 2

3. Human capacity formation: Part 1
   
   (a) Theoretical framework: Human capacity formation model
   
   (b) Life course epidemiology
   
   (c) Fetal origins
i. A conceptual framework: scarring vs. cohort inversion

ii. Relationship between maternal mortality rates and maternal influenza infection

4. Human capacity formation: Part 2

   (a) Capacity formation model and natural experiments

   (b) Reinforcing or compensating investments

   (c) Nurture or nature (Lindahl & Palme (2014))

5. Healthcare delivery - Health and the hospital: Part 1

   (a) Healthcare spending


   (a) Returns to health care

   (b) Physician financial incentives

7. Regression discontinuity designs in health

8. Global health: Part 1

   (a) Worms

   (b) Malaria eradication


   (a) HIV/AIDS

   (b) Unaccompanied refugee children

10. Social and disability insurance: Part 1
11. Research in practice - data + writing articles

(a) Swedish databases (data, availability, application procedure etc.)

(b) Examples of leveraging existing datasets (Almond and Currie, 2010)

(c) Writing advice (McCloskey, STROBE Checklist, Cochrane’s “Writing tips for Ph.D. students”)

12. In-class presentations of research sketches (15 min presentations to class using slides)

3 Required activities

Research proposal. Propose a new research design that can be used to evaluate a question of interest to you. Key to this exercise is your argument as to why the treatment/policy is not related to other determinants of the outcome of interest. Following Angrist & Pischke (2009), you should describe:

1. What is the causal relationship of interest?

2. Leaving cost and ethical considerations aside, what is the ideal experiment you would run?

3. In an observational setting, what is the identification strategy? (This is the critical piece of the assignment.)

You should identify the real-world dataset in which your research question can be evaluated. No results are necessary, just a viable action plan. I.e., you must propose an analysis of existing data that are available to researchers. Submit 4-5 page description (1.5 spaced) of your proposed analysis by May 29. Consult with Mårten or Torsten in advance on your topic choice either
by email or in office hours. Ideally, this assignment will serve as a platform for executing the analysis in the future.

**Referee report.** Write a referee report on a paper in health economics, with your assessment of whether the paper should be published in a top journal (leaving aside whether/where it is already published). This report is not a summary of the paper, but a critique of the analysis, its contribution relative to the existing literature, and especially, the soundness of the identification strategy. Eligible papers are those listed in Section 4, along with other papers that have not been covered in detail in class. If you select a paper that is not listed in Section 4, you need to clear it with Mårten or Torsten by Tuesday, April 18. The report itself (roughly 2-3 pages 1.5 spaced) is due Thursday, May 4.

**Presentation of a paper in-class.** Present an assigned paper from the compulsory reading to the class (using slides), we will do a 10 minute presentation per class. The slots are assigned after the first class. The paper for the presentation is always assigned one class in advance.

### 4 Papers to referee


### 5 Literature

* = required reading for class

1. Human capital model - Health and education: Part 1


   Boardman JD, Fletcher JM. To cause or not to cause? That is the question, but identical twins might not have all of the answers. *Soc Sci Med* 2015;127:198-200.


2. Human capital model - Health and education: Part 2


3. Human capacity formation: Part 1


4. Human capacity formation: Part 2
(a) Capacity formation model and natural experiments


(b) Reinforcing or compensating investments


(c) Infant health


(d) Nurture or nature

5. Healthcare delivery - Health and the hospital: Part 1


7. Regression discontinuity designs in health


8. Global Health: Part 1


(a) Worms


Bleakley H. Disease and development: Evidence from hookworm eradication in the American South. *The Quarterly Journal of Economics* 2007;122(1)


(b) Malaria


9. Global Health: Part 2

(a) HIV/AIDS and health behavior


(b) Unaccompanied refugee children


Sedgwick P. Bias in observational study designs: prospective cohort studies. *BMJ* 2014;349:g7731.

10. Disability


Von Wachter, Till, Jae Song, and Joyce Manchester. "Trends in employment and earnings of allowed and rejected applicants to the social security

11. Data + writing


*Cochrane JH. Writing tips for PhD students. 2005, Unpublished