Economics 7710/ Nutritional Science 6850

Microeconomics of Development: Applications to Health, Nutrition, and Education

Fall 2015

Professor David E. Sahn

Course description: This seminar will explore recent empirical research and focus on the microeconomics of development. The topics covered are health, nutrition, and education, with an emphasis on models of behavior of households and individuals, as well as the impact of social programs. While we will briefly review underlying theory, and econometric techniques, the course will attempt to bridge the gap between theory and practice, addressing issues such as model identification, functional form, and estimation techniques to control for endogeneity and heterogeneity. A key objective of the class will be to focus on the merits and limitations of randomized control trials (experiments) and non-experimental and econometric methods used to evaluate social interventions, as well as to understand behavioral and structural relationships. We will also discuss the various types of household surveys that are employed for these purposes.

The course will be run like a seminar, rather than a lecture course, in order to encourage active participation of all students. Students are expected to do, and be ready to discuss, all the assigned readings. For each meeting, students will be (randomly) assigned to lead a discussion, in which all the other students are expected to actively participate. Those leading the session will be expected to prepare a short and critical evaluation of the papers, usually of 3–5 pages, in outline or annotated form. These reviews will cover central issues related to the strengths and weaknesses of the paper, and their effectiveness in addressing underlying concerns of causation, identification, internal and external validity, and so forth.

Students will also conduct a replication assignment. The replication assignment will involve selecting a published empirical paper in a refereed economics social science journal. Please read the following article by Gary King to help motivate your work: https://gking.harvard.edu/files/gking/files/replication.pdf. You are encouraged to choose a paper that is consistent with your own research interests, but that broadly is related to health, nutrition, education, or other issues related to human capital accumulation and poverty alleviation. (With special permission, students will be allowed to prepare an original empirical research paper, which defines a problem and uses household survey data to model the impact of a policy or program consistent with the focus of the course.)

In order to perform the assignment, you will need to arrange access to the data set. You should first try to find the data set on-line. If you are not able to do so, you can
contact the author(s). Many, if not most major journals now require access to the data as a condition for publication of a paper. You will then try to replicate the analysis in the journal article. My expectation is that you will be able to closely replicate the results. If not, you need to discuss in detail your findings and why you think that you are not able to replicate the results. It is certainly possible that you will find errors in the work of others. This may be due to mistakes of the researchers, for example, in coding—or worse, purposeful manipulation of the data and results. There have been a series of such cases in recent years that have come to great prominence in the social sciences, where traditionally replication has been given far too little importance.

A second part of the assignment is to conduct a variant on the original paper to extend the analysis by, for example, adding additional covariates or changing the dependent variable. For example, if the paper is looking at birth-weight outcomes of an intervention program, and the data set has other health measures, such as anthropometrics, you could estimate a similar model using height-for-age as the outcome measure. Or similarly, if the analysis looks at the impact of a program on children 6 to 36 months of age, you may focus on the impact on other age groups or explore impact by gender or urban–rural location. Alternatively, you may change the econometric model or estimation technique. For example, if the model is an OLS that looks at the age of first birth, you may want to use a hazard model instead. I understand that your extension or the original paper may not yield new and exciting results that would potentially contribute to the literature, but, you should again discuss the innovations you tried and the findings.

The paper should be around 8 to 10 single-spaced pages, 12-point typeface with standard margins. Tables, figures, and references, will be additional pages. Your paper will be reviewed and graded by me, and also by two other students who will serve as referees to carefully review your paper, both for substance and form. These reviews should include identifying grammatical errors, typos, etc., in addition to critiquing in detail what has been done and even proposing new extensions of the work. Based on your peers’ detailed referee reports of the draft, you should prepare a point-by-point response and revise the paper accordingly; in turn, the referee will assess the quality of your point-by-point rebuttal and the revised paper. If you do not agree with the referee on any point, and you do not address one or more suggestions, you should clearly state why. For those of you unaccustomed to writing and preparing referee’s reports, or responding to them, I will provide examples.

I will discuss the paper more in the first class and answer your questions.

The replication assignment (or empirical paper) will comprise 40% of the final grade. Twenty percent of the grade will be based on each of the following: your referee reports, on how well you lead the assigned discussions, and on class participation when not leading the discussion.
Key dates include **September 15** when a prospectus on the replication assignment (or research topic) is due. This should include a discussion of the paper to be replicated, a confirmation that the data is available and has been looked at and is in a format that will allow for doing the exercise. A preliminary progress report is due on **October 15**, which should at least present summary statistics, including means, standard deviations, and basic cross tabulations on the variables to be used in the model. This should include replicating descriptive statistics found in the published paper. Additionally, the progress report should include a discussion and justification for you extension of the research, and what that model will look like. A final draft is due on **November 15**. At that time, I will distribute the drafts to peer referees that I will randomly select to review each paper. Referees are responsible for preparing their reports by **November 27**. The final revised paper is due on **December 7**, at which time I will return the paper to the peer referees who will review again and assign a final grade due on **December 16**.

A preliminary reading list is found below. More details on how to organize the in-class presentations will be posted on the class blackboard site, including the questions and issues to be addressed for each paper reviewed.

Please note that before we begin our discussion of specific empirical research papers and methods, we will devote the first two class to a more general discussion on experimental versus non-experimental techniques. This will be organized as a debate-style discussion, again where I will provide prompts in advance on the blackboard site that will be debated by students in the class.

Students who have limited or no experience with STATA, SAS, or similar software will be expected to find appropriate assistance from CISER or other resources on campus, including other students.

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<thead>
<tr>
<th>Meeting Time and Location:</th>
<th>Monday 1:25 p.m.-3:55 p.m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Hours:</td>
<td>Professor Sahn will hold office hours by appointment in B16 MVR Hall.</td>
</tr>
<tr>
<td>Course Website:</td>
<td><a href="http://blackboard.cornell.edu">http://blackboard.cornell.edu</a></td>
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**I. EVALUATING SOCIAL PROGRAMS — EXPERIMENTAL VS. STRUCTURAL MODELS**


II. HEALTH AND NUTRITION

Background Reading:


Case Studies:

A. IN UTERO AND PERI-NATAL PERIOD


B. HEALTH AND NUTRITION


**C. REPRODUCTIVE HEALTH**


**D. HIV/AIDS**


III. IMPACT OF HEALTH ON PRODUCTIVITY

*Background Reading:*


*Case Studies:*


IV. INTRAHOUSEHOLD DECISION-MAKING


V. IMPACT OF HEALTH AND NUTRITION ON EDUCATION AND SCHOOLING

Background Reading:


Case Studies


VI. EDUCATION OUTCOMES

Background Reading:


Case Studies:


VII. MULTIDIMENSIONAL POVERTY

