



El Departamento Académico de Estadística del ITAM

anuncia la siguiente sesión (No. 213) de

EL SEMINARIO ALEATORIO

que, con el título

Economic Theory as a Guide for the Specification and Interpretation of Empirical Health Production Functions

impartirá

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Abstract

In this talk I will discuss the estimation of household production functions when, as is almost always the case, the researcher cannot observe all of the relevant inputs to the production function. Issues of this type arise in both observational studies and experimental studies. In a preliminary paper, Sergey Mityakov and I demonstrate the main issues through a static model of utility maximization with health production; we derive precise interpretations of estimated effects of observable inputs on health outcomes. We argue that if omitted inputs are not properly accounted for in the empirical specification, then estimated marginal products of health inputs cannot be easily interpreted. Some previous research has addressed this important issue, but those studies have not explored how one can use economic models to derive empirical specifications that account explicitly for the fact that researchers do not observe all of the health inputs chosen by the family.

Using a general theoretical model, we propose empirical specifications one can use to control for “omitted” inputs to the household production function. The theoretical analysis implies that, even with experimentally assigned inputs, the functional forms and “explanatory variables” one needs to use to be consistent with an economic model are quite different than those used by most researchers. Even with properly specified empirical models, the “effects” one can estimate using such specifications do not correspond exactly to the marginal products of the observed inputs on health. Using the theoretical model, however, we establish some bounds on the “true” marginal products of the observed inputs. These interpretations require that one use empirical specifications compatible with economic theory. In particular, we show that when some key health inputs are omitted from the empirical health production function but properly accounted for, then the estimated effect on an observed, health improving input will likely be a negatively biased estimate of the true marginal effect. We show some preliminary empirical evidence to support our methodology using cross section data from the Behavioral Risk Factor Surveillance System (BRFSS) and panel data from the Russia Longitudinal Monitoring Survey (RLMS).

Fecha: Martes 21 de Septiembre

Hora: 13:00 hrs.

Salón: 311

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El Seminario Aleatorio está destinado tanto a profesores como a estudiantes, por lo que el Departamento de Estadística agradece a los profesores que colaboren invitando a sus alumnos a estas sesiones.

María F. Rojano Agraz

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