



Environmental Institutions Seminar Series

Presents

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The Role of Equilibrium Sorting Models in Non-Market Valuation

**Wednesday, March 23, 2005
12:30 pm –2:00 pm**

Room A158 Levine Science Research Center, Research Drive, Duke University

Abstract

The most commonly used techniques for valuing non-marketed environmental commodities are based on equilibrium models of individual behavior. These models, however, typically incorporate a contradictory combination of assumptions. First, they assume that agents face no constraints in making the optimizing decisions that determine the observed equilibrium. Second, they assume that those same agents face binding constraints in being unable to re-optimize in response non-marginal policy changes. Relaxing these contradictory assumptions requires a complete model of the equilibrium process itself. Such a model will be the basis of this talk.

Timmins will demonstrate the ways in which these contradictory assumptions can bias the results of non-market valuation exercises in three empirical contexts: long-run mobility constraints and the willingness-to-pay to avoid particulate matter, the effect of housing and labor market re-equilibration on the predicted costs of global climate change, and the valuation of a large fishing site when congestion costs matter to anglers.

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Biography

Professor Timmins received his Ph.D. from Stanford University in 1997 and joined the Duke Economics Department in 2004 after spending seven years on the faculty at Yale University. His dissertation and early research focused on the allocation of water resources in the western United States, with a particular emphasis on the pricing decisions of municipal water authorities. Since then, his interests have shifted toward environmental and development economics – in particular in Latin America.

Timmins's current work focuses on the use of equilibrium models of sorting behavior in describing preferences for non-marketed environmental commodities and urban infrastructure. Some applications include recovering the role of congestion in site choice models of recreation demand, describing the spatial variation in multidimensional measures of poverty in Brazil, valuing investments in transportation infrastructure in Colombia, and estimating the role of imperfect mobility in recovering households' willingness to pay for cleaner air. His research has been supported by Resources for the Future, the World Bank, the National Science Foundation, and the Inter-American Development Bank.



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