
CURRICULUM VITAE

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EDUCATION

Ph.D., Economics, expected 2008, Duke University, Durham, NC

M.A., Economics, 2002, *First Class Honours*, University College Dublin, Dublin, Ireland

B.A., Economics, minor Environ. Science, 2000, *Cum Laude*, Barnard College, Columbia University, NY, NY

AREAS OF SPECIALIZATION

Primary Fields: Environmental Economics, Labor Economics, Public Economics

Secondary Fields: Econometrics

DISSERTATION

Title: Models of Location Choice and the Value of Spatially Delineated Amenities

Committee: Christopher Timmins (chair), Peter Arcidiacono, Patrick Bayer, Martin Smith

ACADEMIC EXPERIENCE

- Spr. 2005 - present Department of Economics, Duke University, Durham, NC
Research Assistant, Professor Christopher Timmins
- Spr. 2007 Department of Economics, Duke University, Durham, NC
Teaching Assistant, Environmental Economics (second year PhD)
- Spr. 2005 & Spr. 2006 The World Bank, Development Division and Private Sector Division
Research Assistant, supervised by Professor Christopher Timmins
- Fall 2004 - Fall 2005 Department of Economics, Duke University, Durham, NC
Head Teaching Assistant, Intermediate Microeconomics
- Fall 2002 - Spr. 2003 Department of Economics, University College Dublin, Dublin, Ireland
Course Instructor, Introductory Microeconomics (evening)
Teaching Assistant, Intermediate Microeconomics
Teaching Assistant, Intermediate Macroeconomics
Teaching Assistant, Quantitative Techniques for Economists
- Fall 2001 - Spr. 2002 Department of Economics, University College Dublin, Dublin, Ireland
Teaching Assistant, Introductory Microeconomics

WORKING PAPERS

1. "A Dynamic Model of Location Choice and Hedonic Valuation", Fall 2007, *Job Market Paper*
2. "Recovering the Willingness to Pay to Avoid Ozone: How Panel Data Can be Used to Easily Estimate Hedonic Demand Functions," Fall 2007, with Christopher Timmins
3. "Single Women's Labor Supply Elasticities: Trends and Policy Implications," Fall 2005, with Bradley Heim and Kata Mihaly, revise and resubmit at *Industrial and Labor Relations Review*
4. "An Equilibrium Model of Housing and Labor Market Dynamics," in progress, with Patrick Bayer, Alvin Murphy, and Christopher Timmins

ACADEMIC HONORS and AWARDS

Graduate School Summer Research Fellowship, Duke University, 2007
President (elected), Economics Graduate Student Committee, Duke University, 2006-2007
Aleana Webb Dissertation Research Fellowship, Duke University, 2006-2007
Conference Travel Fellowship, Duke University, 2005 and 2007
Department of Economics Summer Research Fellowship, Duke University, 2006
Deborah Allen Graduate Fellowship, Duke University, Fall 2003-Spring 2004
Graduate School Tuition Scholarship, Duke University, Fall 2003-present

PRESENTATIONS

- Sept. 2007 Triangle Resource and Environmental Economics Workshop, Emerging Research
Presentation, North Carolina State University, Raleigh, NC
- July 2007 NBER Summer Institute Workshop on Public Policy and the Environment, Research Sketch,
Cambridge, MA

COMPUTER SKILLS

Fortran, Matlab, Stata, TSP; LaTeX, MS-Office, HTML; Windows, Unix

REFERENCES

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Emma Rasiel, Director of Undergraduate Studies, Department of Economics, Duke University
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DISSERTATION SYNOPSIS

“A Dynamic Model of Location Choice and Hedonic Valuation,” *Job Market Paper*

Hedonic equilibrium models recover willingness-to-pay for spatially delineated amenities by using the notion that individuals “vote with their feet.” However, the hedonic literature (and, more recently, the estimable Tiebout sorting model literature) has largely ignored both the costs associated with migration (financial and psychological), as well as the forward-looking behavior that individuals exercise in making location decisions. Each of these omissions could lead to biased estimates of willingness-to-pay. Building upon the dynamic migration models from the labor literature, I estimate a fully dynamic, national model of individual migration that explicitly controls for moving costs and forward-looking behavior. By employing a two-step estimation routine, I avoid the computational burden associated with the full recursive solution; I can then include a richly-specified, realistic state space. With this model, I am able to perform non-market valuation exercises and learn about the spatial determinants of labor market outcomes in a dynamic setting. Including dynamics has a significant positive impact on the estimates of a willingness to pay for air quality. In addition, I find that location-specific amenity values can explain important trends in observed migration patterns in the United States.

“Recovering the Marginal Willingness to Pay to Avoid Ozone: How Panel Data Can Be Used Easily Estimate Hedonic Inverse Demand Functions,” *with Christopher Timmins*

Over the last thirty years, property value hedonics have become commonplace in the non-market valuation of environmental amenities. This has happened despite a number of well-known problems with the technique. Bajari and Benkard (2005) describe one of these problems; the traditional “two-step” approach for estimating preferences proposed by Rosen (1974) places strict constraints on individual heterogeneity in willingness-to-pay. This problem becomes more severe as one is forced to further restrict preferences in order to solve the endogeneity problems described by Epple (1987). Bajari and Benkard propose a “preference inversion” procedure for recovering individual-specific measures of willingness-to-pay. However, with typically available data their proposed measure of willingness-to-pay suffers from a number of unrealistic constraints (e.g., willingness-to-pay cannot vary with the level of the amenity). In this paper, we show how panel data describing repeat house sales, along with repeat purchase decisions by individual home buyers, can be used to relax these constraints and flexibly estimate willingness-to-pay functions. Using data on ozone pollution in the Bay Area of California, we find evidence of significant heterogeneity in willingness-to-pay and in the elasticity of willingness-to-pay with respect to both ozone and non-housing expenditures. This heterogeneity has important consequences for the valuation of non-marginal changes in ozone. In ongoing research, we explore how a “synthesized panel” (created using matched individuals from multiple markets) might be similarly used to relax functional form constraints while recovering the individual heterogeneity allowed by Bajari and Benkard’s approach.