Topics in Environmental Economics
University of Colorado - Boulder
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A. General Information

This course will consist primarily of research topics in environmental economics (broadly defined). In some cases the issues will be developed from literature outside the field. These cases are intended to provide opportunities for new research. In others, existing research in an area of environmental economics will be combined with seemingly unrelated papers to suggest the potential for new approaches. The purpose is to focus attention on potential dissertation topics.

In all elements, the class is structured to help prepare students for transitioning into dissertation work and eventually the job market (the real world looms on the horizon!). The presentations, quantitative projects and discussion format reflect this goal.
The topics we will be covering in class will be chosen because of their relevance (as perceived by me with your input) and their potential as a dissertation topic here at CU.
My goal is a relaxed atmosphere in which you are all working very hard (if it doesn't kill you it makes you stronger), getting tangible rewards and enjoying the class.

B. Requirements

Grades will be based on three aspects of each participant's performance:

(a) One take home exam (approximately 2/3rds of the way through the course, date to be announced) 35%

(b) One "large" quantitative/empirical project, topic chosen by each student to be presented in Class and Written Up – 35%.

(c) Class preparation and participation (including leading the discussion around an article of your choosing) – 30%.

C. Logistics

By registering for this class I assume you have a serious interest in environmental economics. This interest translates into a commitment to begin to function like a professional economist actively involved in the field. The practical realization of this commitment is that I will assume every class member will have read the appropriate

articles **BEFORE** class each Tuesday and Thursday. In general, the format of the class will not involve the instructor (me) standing at the chalkboard lecturing. Instead, we will be working through the assigned papers as a group. The class as a whole will be responsible for making this discussion a productive activity. The responsibility of the students (you) in making this work is reflected in the fact that 30% .

READINGS

(note: we will do all of section I, everything beyond that is negotiable)

I. Thinking About Welfare from an Empirical Perspective

a. Slesnick (1998) "Empirical Approaches to the Measurement of Welfare," JEL, 2108-2165.

b. Willig(1976) "Consumer's Surplus Without Apoligy," AER v66n4, 589-597.

c. Hausman(1981) "Exact Consumer's Surplus and Deadweight Loss," AER v71n4 662-676.

d. Vartia (1983) "Efficient Methods of Measuring Welfare Change and Compensated Income in Terms of Ordinary Demand Functions," Econometrica, v51n1, 79-98.

II. Hedonic Method

Basic Theory

e. Rosen (1974) "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition," JPE, v82, 34-55.

f. Brown and Rosen (1982) "On the Estimation of Structural Hedonic Price Models," Econometrica, v50n3 (May), 765-68.

g. Epple (1987) "Hedonic Prices and Implicit Markets: Estimating Demand and Supply Functions for Differentiated Products," JPE, v95n1, 59-80.

h. Bartik (1987), "The Estimation of Demand Parameters in Hedonic Price Models," JPE, v95n1, 81-88.

i. Bartik (1988) "Measuring the Benefits of Amenity Improvement in Hedonic Price Models'" Land Economics, 64, 172-183.

j. Kanemoto "Hedonic Prices and the Benefits of Public Projects" Econometrica 56, 981-989, (1988).

k. Palmquist (1992) "Valuing Localized Externalities," Journal of Urban Economics, v31, 59-98.

l. Cropper, Maureen L & Deck, Leland B & McConnell, Kenneth E, (1988). "On the Choice of Functional Form for Hedonic Price Functions," The Review of Economics & Statistics, Vol. 70 (4) pp. 668-75

m. Chattopadhyay (1999) "Estimating the Demand for Air Quality: New Evidence Based on the Chicago Housing Market," Land Economics, 75, 22-38.

n. Chay and Greenstone (2000) “Does Air Quality Matter? Evidence from the Housing Market,” Working Paper.

o. Sieg, Smith, Banzhaf, and Walsh (2002) “Interjurisdictional Housing Prices in Locational Equilibrium,” Journal of Urban Economics.

p. Eckland, Heckman & Neisham (2001) “Identification and Estimation of Hedonic Models – Working Paper.

III. Individual Data Discrete Choice Models

Introduction

q. Small and Rosen (1981) “Applied Welfare Economics with Discrete Choice Models,” Econometrica, v49n1, 105-130.

r. Cropper, Deck, Kishor, and McConnell (1993) “Valuing Product Attributes Using Single Market Data: A Comparison of Hedonic and Discrete-Choice Approaches,” RESTAT, v75n2, 225-232.

s. Cameron and Englin (1997) “Individual Uncertainty about Use," RAND, v28n0, Special Issue S45-70.

Traditional Estimation Strategies

t. Train(2003) “Discrete Choice Methods with Simulation” forthcoming manuscript: Cambridge Press. (May be available online at Professor Train’s Web Site at Berkeley)

u. Tratjenberg (1989), “The Welfare Analysis of Product Innovations, with an Application to CAT Scanners,” JPE v97n2, 444-479.

v. McFadden and Train (2000) “Mixed MNL Models of Discrete Response,” Journal of Applied Econometrics, v15 447-470.

w. Nevo (2000) “A Practitioner’s Guide to Random Coefficients Logit Models,” Journal of Economics and Management Strategy v9.

x. Nevo (2000) “Mergers with Differentiated Products: The Case of the Ready-to-Eat Cereal Industry,” Rand 395-421.

Corner Solution Models

y. Phaneuf, Kling, and Herriges (2000), "Estimation and Welfare Calculations in a Generalized Corner Solution Model with an Application to Recreation Demand," Review of Economics and Statistics, v82 83-92.

z. Von Haefen, Phaneuf and Parsons (2002), “Modeling the Demand for a Large Set of Quality Differentiated Goods: Estimation and Welfare Results from a Systems Approach,” Working Paper

aa. Phaneuf, D. and C. Siderelis (2002), “Estimating the Demand for Sea Kayaking Trips: An Application of the Kuhn-Tucker Demand Model,” draft manuscript.

IV. Aggregate Discrete Choice Models

bb. Berry (1994) “Estimating Discrete Choice Models of Product Differentiation,” Rand 242-262.

cc. Berry Levinsohn and Pakes (1995) “Automobile Prices in Market Equilibrium,” Econometrica 841-890.

dd. Berry and Pakes (2001) “The Pure Characteristics Discrete Choice Model with Application to Price Indices,” Working Paper

V. Locational Equilibrium Models (actually a subset of category IV)

ee. Tiebout (1956). “A Pure Theory of Local Expenditures,” JPE v64 416-424.

ff. D. Epple, T. Romer (1991), “Mobility and Re-distribution”, JPE v99n4 828-858.

gg. D. Epple and G. J. Platt (1998), “Equilibrium and Local Redistribution in an Urban Economy when Households Differ in both Preferences and Income”, Journal of Urban Economics lorkref 12 0 0 123TdModel

ccc. Banzhaf & Walsh (2006) “Environmental Gentrification: an Empirical Test of Tiebout”

Issues for Analysis

ddd. C.F. Manski (1993), “ Identification of Endogenous Social Effects: The Reflection Problem,” Review of Economic Studies , 531-542.

eee. E.G. Irwin and N.E. Bockstael, “The Problem of Identifying Land Use Spillovers: Measuring the Effects of Open Space on Residential Property Values,” American Journal of Agricultural Economics (forthcoming)

fff. J. Heckman et. al. “ Matching as an Econometric Evaluation Estimator: Evidence From Evaluation of a Job Training Programme,” Review of Economic Studies (October 1997) (ER)

ggg. Sacerdote (2001) “Peer Effects With Random Assignment: Results for Dartmouth Roommates,” QJE.

hhh. Brock and Durlaff (2000) “Interactions-Based Models,” NBER Working paper 258 and Handbook of Econometrics V.

iii. AJAE (2001) “Proceedings: Spatial Modeling in Environmental and Regional Economics Environmental Amenities and the Spatial Pattern of Urban Sprawl,” American Journal of Agricultural Economics v83n3, 691-713.

VIII. Urban Economics/Urban Environment (Selected Stuff)

jjj. Wheaton (1974) “A Comparative Statics Analysis of Urban Spatial Structure,” Journal of Economic Theory, v9n2 223-237.

kkk. Wheaton (1977) “Income and Urban Residence: An Analysis of Consumer Demand for Location,” AER v67 620-631.

lll. Polinsky and Shavell (1976) “Amenities and Property Values in a Model of an Urban Area,” Journal of Public Economics, v5, 119-129.

mmm. Brueckner and Fansler (1983) “The Economics of Urban Sprawl: Theory and Evidence on the Spatial Sizes of Cities,” Review of Economics and Statistics, v65n3, 479-82.

nnn. Brueckner and Kim (2001) “Urban Sprawl and the Property Tax,” Working Paper.

ooo. Glaeser and Kahn (2001) “Decentralized Employment and the Transformation of the American City,” NBER Working Paper # 8117.

ppp. Brueckner, Thisse & Zenou (1999) “Why is Central Paris Rich and Downtown Detroit Poor? An Amenity-Based Theory,” European Economic Review v43n1, 91-107.

qqq. Wu (2001) “Environmental Amenities, Urban Sprawl, and the Economic Landscape,” (Working Paper).

rrr. Roback (1982) “Wages, Rents, and the Quality of Life,” JPE v90 1257-78.

sss. Greenwood, Hunt, Rickman & Treyz (1991) “Migration, Regional Equilibrium and the Estimation of Compensating Differentials,” AER v81n5 1382-1390.