

Revealed Preference Analysis

University of Mannheim and ZEW

Contact: kuminoff@asu.edu

Dates: June 29-30; July 1-3, 6-7.

Time / place: Zoom @ 4pm – 7pm.

Course objective:

Students will learn how to combine theory and data to infer agents' preferences from their observed behavior and then use this information to evaluate actual and counterfactual policies. Students will develop the skills needed to apply revealed preference methods in their own research in ways that incorporate best practices in econometric identification and economic interpretation. Applications will be drawn from the fields of environment, urban, labor and health economics, and concentrate on markets for housing, labor, and health care.

Useful texts:

Angrist and Pischke, *Mostly Harmless Econometrics*

Bockstael & McConnell, *Environmental & Resource Valuation w/ Revealed Preferences*

Freeman, Herriges, and Kling, *Measurement of Environmental and Resource Values*

Manski, *Identification for Prediction and Decision*

Train, *Discrete Choice Methods with Simulation*

Lecture format:

Lectures will use Zoom. Slides will be provided in advance. Please arrange to have a stable internet connection that allows for video and screen sharing.

Grading

In-class paper presentation: 40%

Written research proposal: 60%

Assignments and Deadlines

IN-CLASS PAPER PRESENTATION (GROUP WORK)

Students will be assigned to teams and each team will be assigned to present and discuss a working paper during class. Each presentation will be allocated one hour. You should budget 15 minutes for questions and group discussion. Your presentation should avoid literature review and extensive discussion of robustness checks. Grades will be based on the quality of your presentation and the extent to which it clearly addresses the following points:

1. What is the authors' research question?
2. What are the key features of the economic model?
3. What sources of variation in the data identify key model parameters?
4. What are the main insights and policy implications?
5. What are the main limitations of the research design?
6. Propose a research design that would advance knowledge.

June 8 – email me a brief summary of your academic background and research interests. Include your University affiliation, year in the PhD program, PhD course work completed, main field(s) of interest, and summaries of any completed or ongoing research projects. I will use this information to create teams.

June 15 – I will announce team assignments and provide each team with instructions.

June 30, July 1, July 2, July 3, July 6 – Presentations will occur during the last hour of class. You must email me a pdf copy of your slides at least 24 hours in advance of your presentation.

WRITTEN RESEARCH PROPOSAL (INDIVIDUAL WORK)

Students will write a short paper proposal for an original research project using revealed preference analysis (target length = 5-10 pages). It may be conceived as an extension of research discussed in class or as an original idea. It should include the following items:

1. A clear explanation of your research question and how it could advance knowledge (with citations to relevant literature).
2. An economic model.
3. A summary of the econometric methods and data that could be used to identify model parameters.

July 14 @ 11:59pm – submission deadline. Papers should be submitted by email in pdf format. Grades will be based on economic content.

Tentative Schedule

JUNE 29 – FOUNDATIONS OF REVEALED PREFERENCE ANALYSIS

- Bajari, Patrick and C. Lanier Benkard. 2005. "Demand Estimation with Heterogeneous Consumers and Unobserved Product Characteristics: A Hedonic Approach." *Journal of Political Economy*. 113(6): 1239-1276.
- Epple, Dennis. 1987. "Hedonic Prices and Implicit Markets: Estimating Demand and Supply Functions for Differentiated Products." *Journal of Political Economy*, 95(1): 59-80.
- Ekeland, Ivar, James J. Heckman, and Lars Nesheim. 2004. "Identification and Estimation of Hedonic Models." *Journal of Political Economy*, 112(1): S60-S109.
- Kuminoff, Nicolai V., V. Kerry Smith, and Christopher Timmins. 2013. "The New Economics of Equilibrium Sorting and Policy Evaluation Using Housing Markets." *Journal of Economic Literature* 51(4): 1007-1062.
- Rosen, Sherwin. 1974. "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition." *Journal of Political Economy*, 82(1): 34-55.
- Varian, Hal. R 1982. "The Nonparametric Approach to Demand Analysis" *Econometrica*. 50(4): 945-974.

JUNE 30 – EMPIRICAL HEDONIC MODELS

- Banzhaf, H. Spencer. 2020. "Panel Data Hedonics: Rosen's First Stage as a 'Sufficient Statistic'." *International Economic Review*, forthcoming.
- Bento, Antonio, Matthew Freedman, and Corey Lang. 2015. "Who benefits from environmental regulation? Evidence from the Clean Air Act Amendments." *Review of Economics and Statistics* 97(3): 610-22.
- Bishop, Kelly C., Nicolai V. Kuminoff, H. Spencer Banzhaf, Kevin J. Boyle, Kathrine von Gravenitz, Jaren C. Pope, V. Kerry Smith, and Christopher D. Timmins. 2020. "Best Practices for Using Hedonic Property Value Models to Measure Willingness to Pay for Environmental Quality" *Review of Environmental Economics and Policy*, forthcoming.
- Bishop, Kelly and Alvin Murphy. 2019. "Valuing Time-Varying Attributes Using the Hedonic Model: When Is A Dynamic Approach Necessary?" *Review of Economics and Statistics*, 101(1): 134-145.

- Black, Sandra E. 1999. "Do Better Schools Matter? Parental Valuation of Elementary Education." *Quarterly Journal of Economics*, 114(2): 577-599.
- Chay, Kenneth Y. and Michael Greenstone. 2005. "Does Air Quality Matter? Evidence from the Housing Market." *Journal of Political Economy*. 113(2): 376-424.
- Davis, Lucas. 2004. "The Effect of Health Risk on Housing Values: Evidence from a Cancer Cluster." *American Economic Review*, 94(5): 1693-1704.
- Kuminoff, Nicolai V. and Jaren C. Pope. 2014. "Do Capitalization Effects Measure the Willingness to Pay for Public Goods?" *International Economic Review*, 55(4), 1227-1250.

JULY 1 – EMPIRICAL SORTING MODELS

- Banzhaf, H. Spencer and Randall P. Walsh. 2008. "Do People Vote with Their Feet? An Empirical Test of Tiebout's Mechanism." *American Economic Review*, 98(3): 843-63.
- Banzhaf, Spencer H. and V. Kerry Smith. 2007. "Meta Analysis in Model Implementation: Choice Sets and the Valuation of Air Quality Improvements." *Journal of Applied Econometrics*, 22(6): 1013-1031.
- Bayer, Patrick, Fernando Ferreira, and Robert McMillan. 2007. "A Unified Framework for Measuring Preferences for Schools and Neighborhoods." *Journal of Political Economy*, 115(4): 588-638.
- Berry, Steven, James Levinsohn, and Ariel Pakes. 1995. "Automobile Prices in Market Equilibrium." *Econometrica*, 63(4): 841-890.
- Epple, Dennis and Holger Sieg. 1999. "Estimating Equilibrium Models of Local Jurisdictions." *Journal of Political Economy*, 107(4): 645-681.
- Galiani Sebastian, Alvin Murphy, and Juan Pantano. 2015. "Estimating Neighborhood Choice Models: Lessons from a Housing Assistance Experiment". *American Economic Review*, 105(11): 3385-3415.
- Sieg, Holger, V. Kerry Smith, H. Spencer Banzhaf, and Randy Walsh. 2004. "Estimating the General Equilibrium Benefits of Large Changes in Spatially Delineated Public Goods." *International Economic Review*. 45(4): 1047-1077.

- Kahneman, Daniel, Peter P. Wakker, and Rakesh Sarin. 1997. "Back to Bentham? Explorations of Experienced Utility." *Quarterly Journal of Economics*. 112(2): 375-405.
- Abaluck, Jason, and Jonathan Gruber. 2011. "Choice Inconsistencies among the Elderly: Evidence from Plan Choice in the Medicare Part D Program." *American Economic Review*. 101(4): 1180-1210.
- Agarwal, Sumit, and Bhashkar Mazumder. 2013. "Cognitive Abilities and Household Financial Decision Making." *American Economic Journal—Applied*. 5(1): 193-207.
- Agarwal, Sumit, John C. Driscoll, Xavier Gabaix, and David Laibson. 2009. "The Age of Reason: Financial Decisions over the Life Cycle and Implications for Regulation." *Brookings Papers on Economic Activity*. Fall: 51-117.
- Busse, Meghan R., Devin G. Pope, Jaren C. Pope, and Jorge Silva-Risso. 2014. "The Psychological Effect of Weather on Car Purchases." *Quarterly Journal of Economics*. 130(1): 371-414.
- Chetty, Raj, John N Friedman, Soren Leth-Petersen, Torben Nielsen, and Tore Olsen. 2015. "Active vs. Passive Decisions and Crowdout in Retirement Savings Accounts: Evidence from Denmark." *Quarterly Journal of Economics*. 129(3): 1141-1219.
- Handel, Benjamin. 2013. "Adverse Selection and Inertia in Health Insurance Markets: When Nudging Hurts." *American Economic Review*. 103(7): 2643-2682.
- Ketcham, Jonathan D., Nicolai V. Kuminoff, and Christopher Powers. 2014. "Choice Inconsistencies among the Elderly: Evidence from Plan Choice in the Medicare Part D Program: Comment". *American Economic Review*. 106(12): 3932-3961.
- Kling, Jeffrey R., Sendhil Mullainathan, Eldar Shafir, Lee Vermeulen, and Marian Wrobel. 2012. "Comparison Friction: Experimental Evidence from Medicare Drug Plans." *Quarterly Journal of Economics*. 127(1), 199-235.
- Madrian, Brigitte and Dennis Shea. 2001. "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior." *Quarterly Journal of Economics*. 116: 1149-1187.
- Pope, Jaren C. 2008. "Buyer Information and the Hedonic: The Impact of a Seller Disclosure on the Implicit Price for Airport Noise." *Journal of Urban Economics*. 63: 498-516.

JULY 3 – REVEALED PREFERENCE ANALYSIS WITH FRICTIONS

- Bernheim, B. Douglas and Antonio Rangel. 2009. “Beyond Revealed Preference: Choice-Theoretic Foundations for Behavioral Welfare Economics.” *Quarterly Journal of Economics*. 124: 51-104.
- Leggett, Christopher G. 2002. “Environmental Valuation with Imperfect Information.” *Environmental and Resource Economics*. 23: 343-355.
- Allcott, Hunt and Dmitry Taubinsky. 2015. “Evaluating Behaviorally Motivated Policy: Experimental Evidence from the Lightbulb Market”. *American Economic Review*. 105(8): 2501-2538.
- Handel, Benjamin and Jonathan Kolstad. 2015. “Health Insurance for “Humans”: Information Frictions, Plan Choice, and Consumer Welfare. *American Economic Review*. 105(8): 2449-2500
- Ketcham, Jonathan D., Nicolai V. Kuminoff, and Christopher Powers. 2019. “Estimating the Heterogeneous Welfare Effects of Choice Architecture”. *International Economic Review*. 60(3): 1171-1208.
- Wiswall, Matthew and Basit Zafar. 2015. “Determinants of College Major Choice: Identification Using an Information Experiment,” *Review of Economic Studies* 82(2): 791–824.

JULY 6 – ENDOGENOUS PREFERENCES

- Bishop, Kelly C., Jonathan D. Ketcham, and Nicolai V. Kuminoff. 2019. “Hazed and Confused: The Effect of Air Pollution on Dementia.” *NBER Working Paper #24970*.
- Chetty, Raj and Nathan Hendren. 2018. “The Impacts of Neighborhoods on Intergenerational Mobility I: Childhood Exposure Effects.” *Quarterly Journal of Economics*. 133(3): 1107-1162.
- Ebenstein, Avraham, Victor Lavy, and Sefi Roth. 2016. “The Long Run Economic Consequences of High-Stakes Examinations: Evidence from Transitory Variation in Pollution.” *American Economic Journal: Applied Economics*, 8(4): 36-65.
- Finkelstein, Amy, Matthew Gentzkow and Heidi Williams. 2019. “Place-Based Drivers of Mortality: Evidence from Migration.” *NBER Working Paper #25975*.
- Isen, Adam, Maya Rossin-Slater and W. Reed Walker. 2017. “Every Breath You Take- Every Dollar You’ll Make: The Long-Term Consequences of the Clean Air Act of 1970”. *Journal of Political Economy*, 125(3): 849-909.
- Mathes, Sophie-Marie. 2020. “A Dynamic Model of Health and Residential Sorting:

Implications of Climate Change for Seniors in the US.” *Working Paper*.

Schlenker, Wolfram and W. Reed Walker. 2016. “Airports, Air Pollution, and Contemporaneous Health.” *Review of Economic Studies*, 83(2): 768-809.

JULY 7 – REVEALED PREFERENCE EVIDENCE ON THE VALUE OF LIFE

Costa D. and M. Kahn. 2004. “Changes in the Value of Life, 1940-1980.” *Journal of Risk and Uncertainty*. 29(2): 159-180

Hall, Robert E. and Charles I. Jones. 2007. “The Value of Life and the Rise in Health Spending.” *Quarterly Journal of Economics*, 122(1): 39-72.

Hwang, H. W.R. Reed, and C. Hubbard. 1992. “Compensating Wage Differentials and Unobserved Productivity.” *Journal of Political Economy*. 100(4): 835-858.

Kneisner, Thomas J., W. Kip Viscusi, Christopher Woock, and James P. Zilak. 2012. “The Value of a Statistical Live: Evidence from Panel Data.” *Review of Economics and Statistics*, 94(1): 74-87.

Lee, Jonathan, and Laura Taylor. 2019. “Randomized Safety Inspections and Risk Exposure on the Job: Quasi-Experimental Estimates of the Value of a Statistical Life”. *American Economic Journal: Economic Policy*. 11(4): 350-374.

Mrozek, J. and Laura Taylor. 2002. “What Determines the Value of Life? A Meta-Analysis.” *Journal of Policy Analysis and Management*. 253-270.

Murphy, Kevin M. and Robert H. Topel. 2006. “The Value of Health and Longevity.” *Journal of Political Economy*, 114(5): 871-904.

Shogren, J.F. and T. Stamland. 2002. “Skill and the Value of Life.” *Journal of Political Economy*. 110(5):1168-1197.

Thaler, Richard, and Sherwin Rosen. 1976. “The Value of Saving a Life: Evidence from the Labor Market.” *Household Production and Consumption*, edited by Nestor E. Terleckyj. Cambridge, MA: Columbia University Press.