

Stockholm School of Economics in Riga
Elective Course:
CBA/BCA in Environmental and Health
(Benefit-Cost Analysis with Application to Environmental and Health Issues)
 October 14 – November 14, 2014
 Glenn Blomquist, Visiting Faculty, <http://gatton.uky.edu/faculty/blomquist/>
 November 3, 2014

Course Description: This course presents fundamental concepts and methods of benefit-cost analysis (BCA) and illustrates them with applications to environmental and health issues. Concepts covered include market efficiency, market failures, government failure, implementation, Potential Pareto Improvements, Harberger's three postulates for applied welfare analysis, and roles for policy analysts. Issues related to discounting, uncertainty, and behavioral economics are discussed. Methods are presented for estimating benefits and costs based direct estimation for market goods and using implicit and contingent markets for nonmarket goods. They are applied to valuing changes in mortality risks, components of quality of life related to climate and environmental quality, disamenities associated with mobile phone towers and toxic waste sites, "green" vehicles, and various policies for vaccination against communicable disease.

Evaluation: 4 in class essay exams 40% and a project to critique an existing BCA study and present in class 60%. 200 point grading system (0 – 99/fail; 100 – 139/pass; 140 – 159/pass with merit; 160 – 200/excellent).

Readings: There is no textbook for this course. Students are responsible for all material covered in class, required readings, and the class notes. Class notes will be posted as pdfs on the e-learning platform after each class. Information about required readings of journal articles and working papers will be given on the e-learning platform. Some readings will be pdfs and some will be available electronically through the SSE Riga library web page.

Class Meetings: Usually 5:15-7:00pm twice per week for a total of 10 classes.

Course Schedule

Benefit-Cost Analysis, Perspective, Efficiency, and Social Welfare (class 1, October 14)

*Phaneuf, Dan. "Benefit-Cost Analysis" in *Environmental and Natural Resource Economics: An Encyclopedia*, Timothy C. Haab and John C. Whitehead, eds., (ABC-CLIO, 2014).

Harberger, Arnold C. and Richard Just. "A Conversation with Arnold Harberger" *Annual Review of Resource Economics* 4 (2012): 1–377

*Abrams, Burton A. and George R. Parsons. "Is CARS a Clunker?" *The Economists' Voice* (August 2009): 1-4.

*Viscusi, W. Kip. "Risk-Risk Analysis" *Journal of Risk and Uncertainty* (1994): 5-17.

Howe, Charles W. "Project Benefits and Costs from National and Regional Viewpoints: Methodological Issues and Case Study of the Colorado-Big Thompson Project" *Natural Resources Journal* 26 (Winter 1986): 77-92.

Government Failure, Implementation, Professional Roles, and Ethics (class 2, October 15)

*Wolf, Charles, Jr. "A Theory of Nonmarket Failure: Framework for Implementation Analysis" *Journal of Law & Economics* 22 (April 1979): 107-139.

*Kellogg, Ryan and Hendrik Wolff. "Daylight Time and Energy: Evidence from an Australian Experiment" *Journal of Environmental Economics and Management* 56 (2008): 207-220.

*Brandt-Rauf, Sherry I. and Paul W. Brandt-Rauf, "Occupational Health Ethics: OSHA and the Courts," *Journal of Health Politics, Policy and Law* 5 (Fall 1980), 523-534.

*Jenkins-Smith, Hank C. "Professional Roles for Policy Analysts: A Critical Assessment," *Journal of Policy Analysis and Management* 2 (Fall 1982), 88-100.

*Farrow, Scott. "How (Not) to Lie with Benefit-Cost Analysis" *The Economists' Voice* 10, 1 (2013): 45-50.

National Center for Environmental Economics. U.S. Environmental Protection Agency. *Guidelines for Preparing Economics Analyses*. May 2014.
[http://yosemite.epa.gov/ee/epa/eerm.nsf/vwAN/EE-0568-50.pdf/\\$file/EE-0568-50.pdf](http://yosemite.epa.gov/ee/epa/eerm.nsf/vwAN/EE-0568-50.pdf/$file/EE-0568-50.pdf)

European Commission. *Guide to Cost-Benefit Analysis of Investment Projects*. (July 2008).
http://ec.europa.eu/regional_policy/sources/docgener/guides/cost/guide2008_en.pdf

Independent Evaluation Group. World Bank. *Cost-Benefit Analysis in World Bank Projects*. (2010). http://siteresources.worldbank.org/EXTOED/Resources/cba_full_report.pdf
World Bank CBA videos: 1 <http://vimeo.com/15872993> 2 <http://vimeo.com/15988391>

Hutton, Guy and Eva Rehfuss. *Guidelines for Conducting Cost-Benefit Analysis of Household Energy and Health Interventions*. World Health Organization (2006).
https://extranet.who.int/iris/restricted/bitstream/10665/43570/1/9789241594813_eng.pdf

Efficiency, Potential Pareto Improvements, Markets, Consumer Surplus, Producer Surplus, Transfers and Jobs Again (class 3, October 21)

Harberger, Arnold C. "Three Basic Postulates for Applied Welfare Economics: An Interpretive Essay" *Journal of Economic Literature*, 9 (Sep. 1971): 785-797.
<http://links.jstor.org/sici?sici=0022-0515%28197109%299%3A3%3C785%3A%3E2.0.CO%3B2-X>

*Hines, James R. "Three Sides of Harberger Triangles" *Journal of Economic Literature* 13 (Spring 1999): 167-188.

*Chandra, Amitabh and Eric Thompson. "Does Public Infrastructure Affect Economic Activity? Evidence from the Rural Interstate Highway System" *Regional Science and Urban Economics* 30 (July 2000): 457-490.

*Barro, Robert J. "Voodoo Multipliers" *The Economists' Voice* (February 2009): 1-4.

Bartik, Timothy J. "Social Costs of Jobs Lost Due to Environmental Regulations" Upjohn Institute Working Paper 13-193 (March 5, 2013)
http://research.upjohn.org/cgi/viewcontent.cgi?article=1210&context=up_workingpapers

Discounting and Valuation with Uncertainty (class 4, October 23)

Burgess, David F. and Richard O. Zerbe. "Appropriate Discounting for Benefit-Cost Analysis" *Journal of Benefit-Cost Analysis* 2 (April 2011), Article 2.

Moore, Mark A., Anthony E. Boardman, Aidan R. Vining. "More Appropriate Discounting: The Rate of Social Time Preference and the Value of the Social Discount Rate" *Journal of Benefit Cost Analysis* 4 (2013): 1-16.

*Cropper, Maureen. "How Should Benefits & Costs Be Discounted Across Generations?" *Resources for the Future* 183 (2013).

Solow, Robert M. "Sustainability: An Economist's Perspective" Lecture at Marine Policy Center, Woods Hole, MA, June 14, 1991. Printed in R. Stavins *Economics of the Environment: Selected Readings* (New York: W.W. Norton, 2005).

Valuation Using Implicit Markets (class 5, October 28)

*Blomquist, Glenn C. "Rosen, Sherwin" in Timothy C. Haab and John C. Whitehead, eds., *Environmental and Natural Resource Economics: An Encyclopedia* (Santa Barbara, CA: Greenwood, 2014.)

*Hoehn, John P., Mark C. Berger, and Glenn C. Blomquist. "A Hedonic Model of Interregional Wages, Rents and Amenity Values," *Journal of Regional Science* 27 (November 1987): 605-620.

Berger, Mark C., Glenn C. Blomquist, and Klara Sabirianova Peter "Compensating Differentials in Emerging Labor and Housing Markets: Estimates of Quality of Life in Russia" *Journal of Urban Economics* (2008)

Locke, Stephen L. and Glenn C. Blomquist. "The Cost of Convenience: Estimating the Impact of Communication Antennas on Residential Property Values" UCLA working paper, August 2014.

Valuation Using Stated Preferences/Contingent Valuation (class 6, October 30)

*Haab, Timothy and John C. Whitehead. "Contingent Valuation" in T. Haab and J. Whitehead, eds., *Environmental and Natural Resource Economics: An Encyclopedia* (Santa Barbara, CA: Greenwood, 2014.)

*Kling, Catherine L., Daniel J. Phaneuf, and Jinhua Zhao. "From Exxon to BP: Has Some Number Become Better than No Number?" *Journal of Economic Perspectives* 26 (Fall 2012): 3-26.

Diamond, Peter A. and Jerry A. Hausman. "Contingent Valuation: Is Some Number Better than No Number?" *Journal of Economic Perspectives* 8 (Fall 1994): 45-64.

Ready, Richard C., Jānis Malzubris and Silva Senkane. "The Relationship between Environmental Values and Income in a Transition Economy: Surface Water Quality in Latvia" *Environment and Development Economics* 7 (2002): 147-156.

Blumenschein, Karen, Glenn C. Blomquist, Magnus Johannesson, Nancy Horn, and Patricia Freeman. "Eliciting Willingness to Pay without Bias: Evidence from a Field Experiment" *The Economic Journal* 118 (January 2008): 114-137.

Values of Statistical Life and Values of Health Improvements (class 7, November 4)

*Blomquist, Glenn. "Value of Statistical Life." In *Environmental and Natural Resource Economics: An Encyclopedia*. Edited by John C. Whitehead, Timothy C Haab. (Santa Barbara, CA: Greenwood, 2014).

*Blomquist, Glenn C. "Value of Life, Economics of" in the Economics Section edited by Tom Nechyba of the *International Encyclopedia of the Social and Behavioral Sciences*, 2nd edition, edited by James Wright (Oxford, UK: Elsevier, forthcoming 2015).

Blomquist, Glenn C. "Self Protection and Averting Behavior, Values of Statistical Lives, and Benefit Cost Analysis of Environmental Policy" *Review of Economics of the Household* 2 (March 2004): 89-110.

*Blomquist, Glenn C., Mark Dickie, and Richard M. O'Connor. "Willingness to Pay for Improving Fatality Risks and Asthma Symptoms: Evidence for Children and Adults of All Ages" *Resource and Energy Economics* 33 (May 2011): 410-425.

Behavioral Benefit-Cost Analysis of Energy and Health Proposals (class 8, November 6)

*Robinson, Lisa A. and James K. Hammitt. "Behavioral Economics and Regulatory Analysis" *Risk Analysis* 31 (2011): 1408-1422.

Madrian, Brigitte C. “Applying Insights from Behavioral Economics to Policy Design” *Annual Review of Economics* 6 (2014): 663-688.

Weimer, David L., Aidan R. Vining, and Randall K. Thomas. “Cost-Benefit Analysis Involving Addictive Goods: Contingent Valuation to Estimate the Willingness-to-Pay for Smoking Cessation” *Health Economics* 18 (2009): 181-202.

Ashley, Elizabeth M., Clark Nardinelli, and Rosemarie A. Lavaty. “Estimating the Benefits of Public Health Policies that Reduce Harmful Consumption” *Health Economics* (2014).

Allcott, Hunt, Sendhil Mullainathan, and Dmitry Taubinsky. “Energy Policy with Externalities and Internalities” *Journal of Public Economics* 112 (2014): 72-88.

BCA Critiques (classes 9 and 10, November 11 and 13)

Krutilla, Kerry and John D. Graham. “Are Green Vehicles Worth the Extra Cost? The Case of Diesel-Electric Hybrid Technology for Urban Delivery Vehicles” *Journal of Policy Analysis and Management* 31, 3 (2012): 501-532.

Cook, Joseph et al. “Using Private Demand Studies to Calculate Socially Optimal Vaccine Subsidies in Developing Countries” *Journal of Policy Analysis and Management* 28,1 (2009): 6-28.