CALIFORNIA STATE UNIVERSITY, SACRAMENTO
DEPARTMENT OF ECONOMICS
FALL 2002
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Economics 110 Cost Benefit Analysis

The course will provide students with a general introduction and practical guide to the theoretical and conceptual foundation underlying cost benefit analysis (CBA). While the essential basics of CBA will be conveyed, the course will emphasize the practical difficulties, limitations and problems associated with using this tool of economic analysis. Whenever possible, the course will examine the applications of CBA by practitioners within the public sector making decision about allocating of scarce resources.

Grading: Three of four essay examinations will be given during the semester. Your grade will be determined by your performance on the examinations, exercises and spreadsheet assignments.

Reading Assignments
Required Text: Boardman, et.al., *Cost-Benefit Analysis: Concepts and Practice*

Introduction: CBA
- Chapter 1
  - What's the difference? Impact Analysis/Cost Benefit Analysis
  - Sander, "An Ex Post Analysis of the Uncompahgre Project," *Water Resource Bulletin* April 1980, pp. 1989-193 to be distributed in class
  - For an example of an impact analysis check out: IEAB, "Review of Local Economic Impact Studies Tri-port Economic Impact Study," www.nwppc.org/t8-9_rep.htm

Basic Conceptual Framework
- Chapters 2-5
- National Center for Environmental Decision-Making Research, "Tools: Cost-Benefit Analysis," (optional) www.ncedr.org/tools/othertools/costbenefit/overview.htm (7 Modules)
- Hokayem, "Economists Weigh All the Costs of Health Care,"*The Regional Economist,* July 2002 pp. 10-11 www.stls.frb.org
- Portney, "Penny-wise and Pound-Fuelish?: New Car Mileage Standards in the United States," *Resource,* Spring 2002 www.rfforg
- Hanke & Walker, "Benefit-Cost analysis Reconsidered: An Evaluation of the Mid-State Project," *Water Resource Research* 10(5) 1974. Selected pages to be distributed in class
- NWPPC, "Methods of Economic Analysis for Salmon Recovery Programs, 1997 www.nwppc.org/cepaper4.htm
- ECONorthwest, "Salmon and the Economy: A Handbook for Understanding the Issues in

Washington and Oregon," 1999, in particular pp. 11-26.
www.Econorthwest.com

IEAB, "Comments on Restoring the Lower Snake River:Saving Snake River Salmon and Saving Money by the Oregon Natural Resource Council: Executive Summary," 1998
www.uidaho.edu/~joelh/IAEB/OtherReviews/ONRCReview.htm

Test 1 and 2

Discounting

Chapter 6 (read pages 156-162, 166-167, 176

USDA, Center for Urban Forest Research, "Benefit-Cost Analysis of Modesto's Municipal Urban Forest," 1999 http://wcufre.ucdavis.edu/benmod.htm

Test 3

Sensitivity Analysis, Uncertainty, and Non-User Benefits

Chapter 7 (read pages 156-162, 166-167, 176-182)
Chapter 8 (read pages 192-196, 201-202, 205-208)
Chapter 9 (read pages 213-219)
"Newell and Pizer, "Discounting the Benefits of Climate Change Policies Using Uncertain Rules," *Resources,* Winter 2002 www.rff.org

USGS, "Review of seismic-hazard issues associated with the Auburn Dam,"
http://water.wr.usgs.gov/auburn/review.html
http://water.wr.usgs.gov/auburn/conclusion.html

Sacramento Area Flood Control Agency (SAFCA) http://safca.org

NWPPC, "Return to the River:Executive Summary 1996.
www.nwppc.org/library/1996/96-6/00_summary.pdt
A revised "Return to the River" focusing on chapters 1 and 12, can be found at
www.nwppc.org/library/2000-12.htm
To pursue this matter further (optional) read the summary and the chapter titled "Addressing Uncertainty" of a report published by Ecosystem Diagnosis and Treatment, "A Multi-Species Framework Approach for the Columbia River Basin: Integrating Fish, Wildlife, and Ecological Functions," 2002.
www.edthome.org/framework/TOC_020212.htm

Social Discount Rate

Chapter 10 (read pages 227-231, 236-250)

Oswald, "Cost-Benefit Analysis for Geographic Information System,"
www.nysgis.state.ny.us/constanal.htm

Duffield, "Auburn Dam: A Case Study of Water Policies and Economics, *Water Resource*
Bulletin 16(2), April 1980, pp. 226-34. To be distributed in class.

Test 4

Valuing Impacts and Contingent Valuation

Chapter 11 (concentrate reading on answering exercise 4)
Chapter 12 (concentrate reading on answering exercise 1)
Chapter 13 (read pages 329-334, 336-340, 344-354)
Chapter 14
Loomis, "Building Public Trust Resources of Mono Lake and Los Angeles Water Rights: An Economic Approach," *Water Resource Research* 23(8) August 1987, pp. 1449-1456. to be distributed in class
ECONorthwest, "The Economic Impacts of the Proposed Siskiyou Wild Rivers National Monument," 2000, particularly chapters 5-7. www.Econorthwest.com/pdf/siskiyouNM.pdt
American Wilderness Alliance, *Wild and Scenic River Economics: Recreation Use and Preservation Values*, (optional) pp. 15-32, 71-77, 89-102 Reserve Book

Shadow Pricing

Chapter 15

Cost Effectiveness Analysis, Distribution Issues

Chapter 17 (read pages 437-444, 452-453)
Chapter 18
Chapter 19
Kain, "The Use of Strew Men in Economic Evaluation of Rail Transport Projects," *American Economic Review,* 88(2), May pp.487-493. to be distributed in class

USDA, Center for Urban Forest Research, "Effects of Residential Trees on Air Quality in Sacramento, CA," http://wcufre.ucdavis.edu/reseach/studies_detail.asp?ProjectID=9

Kopp, "Cost-Benefit Analysis and Regulatory Reform,"For those interested in a rigorous analysis evaluating the usefulness of CBA (optional) www.rff.org

Required Exercises

I expect students to answer the following exercises, however, those exercises requiring the use of

a spreadsheet (Excel) will be turned in unless instructed to the contrary. Answers to the spreadsheet exercises will be posted on my door.

Chapter	Exercises
1	1, 2
2	2, 3, 4, 5
3	1,2 (a-c)
4	1,2,
5	1
6	1,2,3,4,5 (spreadsheet answers)
7	1,2
8	1
9	1,2
10	1
11	4
12	1
13	1,2,3
14	1,2
15	1,2
17	1
18	1,2