

AREC 572: Social Benefit Cost Analysis
Colorado State University
Spring Semester 2008
9:30-10:45 TR
205 Animal Science Building

Dr. Andy Seidl, professor

Office:

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Prerequisites:

Command of AREC/ECON306 material is required; AREC/ECON240, AREC/ECON340 and ECON506 are recommended.

Required Texts:

Boardman, A.E., Greenberg, D.H., Vining, A.R., and D.L. Weimer. 2006. Cost-benefit analysis: Concepts and practice, 3rd edition. Prentice Hall. (BGVW)

Objectives:

Students will become 1) aware, 2) knowledgeable, 3) conversant, and 4) analytical in the issues and concepts of applied welfare economic theory and benefit cost analysis. They will be able to understand economic issues through a benefit cost framework and critically assess approaches to project appraisal and economic analysis. The class has four essential parts: Applied Welfare Economic Theory, Benefit-Cost Analysis, Project Analysis, and Case Studies.

Evaluation:

The class will be graded in the following manner:

- 1) According to American grading traditions, if you achieve the following standards, you will be guaranteed the following minimum grade: >90.00%=A; 80.00-89.99=B; 70.00-79.99=C; 60.00-69.99=D. +s and -s will be at my discretion.
- 2) In addition, this is a graduate class. As such, the mean grade for the course should probably be a "high B." Therefore, notwithstanding the above criterion, if you are within one half of one standard deviation of the mean, you will earn a "A-, B+, or B." If you are more than one half of one standard deviation above the mean, you will earn an "A or A-," one half to one standard deviation below the mean earns a "B, B-, or C+," etc.

Exams (60% of total grade):

There will be two exams. The midterm examination will be worth 30% and the final examination will be worth 30% of your total grade. Exams questions will be graphical or mathematical illustrations and essay format. Information will be taken from assigned readings and from classroom discussion. This is a theory-in-application course, so don't be surprised if economic analyses of current news items show up on the exams. Many current issues are complex and require individual evaluation from a number of perspectives. In writing your exams, please restrict yourselves to the economic arguments supporting your position.

Homework (40% of total grade):

There will be two types of homework:

- 1) Graphical and/or mathematical applications of the concepts and tools taught in class (20% of total grade). They will be due at the beginning of class on the prescribed due date. Late submissions will

be accepted until the exercise is returned to the class. Such submissions will be subject to a 10% per day decrease in total possible points obtainable.

- 2) A paper (15%) and class presentation (5%) of a case study. Each student will choose an existing case or benefit-cost analysis to critique, analyze and present using the theoretical and applied methodological concepts covered in class. Alternatively, students may choose to undertake their own benefit-cost analysis to the best of their abilities making sure to point out areas of insufficient information and the likely implications of their lack of incorporation. The class (your peers) will assist me in the evaluation of this portion of the course. A one-paragraph proposal indicating your case and approach must be submitted by March 25 (10% of your paper grade). Individual PowerPoint presentations will be 15-20 minutes in duration in occur during the final few weeks of class. Final papers of fewer than 5000 words will be turned in prior to May 1, 2008. Late submissions will receive zero credit. Spelling and grammar count. Submissions in Spanish or Portuguese accepted, though class presentations must be in English.

Schedule (subject to adjustment according to class needs):

- Week of Jan 22 (1): Class introductions.
Introduction to Cost-Benefit Analysis (Ch 1; Seidl, 2005)
Conceptual foundations of Cost-Benefit Analysis (Ch 2)
(Homework #1 Due on January 24).
- Week of Jan 29 (2): Basic microeconomic foundations of C-B analysis (Ch 3). Surplus and compensation measures. (Ch 3. Freeman III).
- Week of Feb 5 (3): Valuing benefits and costs in primary markets (Ch 4)
(Homework #2 Due Feb 7)
- Week of Feb 12 (4): Valuing benefits and costs in secondary markets (Ch 5)
- Week of Feb 19 (5): Discounting future benefits and costs (Ch 6)
- Week of Feb 26 (6): Dealing with uncertainty: Expected value, sensitivity analysis, and the value of information (Ch 7)
(Homework #3 Due Feb 28)
- Week of March 4 (7): The social discount rate (Ch 10); Midterm Review
- Week of March 11 (8): Midterm Examination; Shulman seminar: Immigration
- Week of March 18: SPRING BREAK
- Week of March 25 (9): Valuing impacts of observed behavior (Ch 11-13)
(Case study proposals due March 25)
(Homework #4: Shulman write up due March 27)
- Week of April 1 (10): Shadow prices from secondary sources (Ch 15)
Shadow Prices: Applications to developing countries (Ch 16)
- Week of April 8 (11): Cost effectiveness analysis, cost utility analysis, distributionally weighted C-B analysis (Ch 17-18)
(Homework #5 Due April 10)
- Week of April 15 (12): Seidl case studies: Domestic and international
- Week of April 22 (13): Case studies: Domestic and international
Paper presentations and discussion
- Week of April 29 (14): Paper presentations and discussion
- Week of May 6 (15): Paper presentations and discussion
Review Session
- Tues, May 13: Final Examination (5:50-7:50 pm)

Supplemental Readings:

ADB. "Distributional Analysis and Impact on Poverty." Handbook for the Economic Analysis of Water Supply Projects. Asian Development Bank.

- Boardman, A.E., Greenberg, D.H., Vining, A.R., and D.L. Weimer. 2001. Cost-benefit analysis: Concepts and practice, 2nd edition. Prentice Hall. 526 pp.
- Boadway and Bruce, 1989. Welfare Economics.
 Ch 7, The Measurement of Welfare Change for an Individual
 Ch 8, Welfare Change Measurement in Single-Consumer Economies
 Ch 9, Measuring Welfare Changes in a Many-Consumer Economy
 Ch 10, Cost-Benefit Analysis
- Brent, R.J. 1998. Cost-benefit analysis for developing countries. Edward Elgar. 308 pp.
- Dinwiddy, C., and F. Teal. 1996. Principles of cost-benefit analysis for developing countries. Cambridge University Press. Pp 282.
- Feather, Russel, Harrington and Capan. "Review of Monetary and Nonmonetary Valuation of Environmental Investments."
- Freeman III, A.M. 2003. The measurement of environmental and resource values: Theory and practice, 2nd edition. RFF. 489 pp.
- Heinzerling and Ackerman. "Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection."
- Howe, C. Benefit-Cost Analysis for Water Resource Planning.
- Kopp, Krupnick, and Toman. "Cost-Benefit Analysis and Regulatory Reform: An Assessment of the Science and the Art."
- Mayer, E. 1993. Guidelines for project evaluation. Document #3411. UNIDO. 383 pp.
- Mayer, E. 1995. Guide to Practical Project Appraisal-Social-Benefit Cost Analysis in Developing Countries. UNIDO. Document #3421. 124 pp. Schmidt, M.J. 2003. "Fundamentos de Casos de Negocios: Una Guia de Estructura y Contenido." Solution Matrix Ltd.
- Tweeten, L. 1989. Agricultural Policy Analysis Tools for Economic Development. Westview. 410 pp.
- Ward, W.A. and B.J. Deren. 1991. The Economics of Project Analysis: A Practitioner's Guide. The World Bank. 318 pp.
- Young, R. "Measuring Economic Benefits for Water Investments and Policy." World Bank Technical Report #338.
- Zerbe and Dively. 1989. Social-Benefit Cost Analysis.
 Ch 1, Introduction to Benefit-Cost Analysis.
 Ch 2, Rationale for Benefit-Cost Analysis
 Ch 3, Aggregation of Benefits and Costs
 Ch 5, Measures of Welfare Loss for an Individual
 Ch 6, The Measurement of Aggregate Welfare Changes
 Ch 7, Calculations of Costs and Benefits in Partial Equilibrium
 Ch 11, Accounting for the Distribution of Benefits and Costs
 Ch 12, Ethical Foundations of Benefit-Cost Analysis
 Ch 13, The Interest Rate for Public Investment
 Ch 22, Government Uses of Benefit-Cost Analysis

Selected Case Studies to be discussed throughout the semester (section to be expanded by you and me):

- Biltonen, E. 2002. Safety-first criteria and Benefit Cost Analysis.
- Biltonen, E. and the Asian Development Bank. Incorporating Poverty in Benefit Cost Analysis.
- Huszar and Bucher, The Paraguay-Parana Hidrovia Project.
- Layard and Glaister, Cost-Benefit Analysis, 2nd Edition, Pearce, Ch 17, The Environment: Assessing the social rate of return from investment in temperate zone forestry.
- The economic impact of tourism on a rural economy. Western Rural Development Center series. #144-147.
- Zerbe and Dively, Ch 10, Case Study of Options for Sludge
- Zerbe and Dively, Ch 14, Case Study of the High Ross Dam
- Zerbe and Dively, Ch 20, The Evaluation of Health Risks in Bonneville Power's Weatherization Program
- Zerbe and Dively, Ch 23, The Case of the Snail Darter and the Tellico Dam