

Course Syllabus



Course Information:

Spring 2017
EPPS 7304.501 **COST-BENEFIT ANALYSIS**
Monday 7:00 - 9:45 pm CB 1.218

Professor Contact Information:

Professor Simon Fass
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Office: GR 3.224
Office hours: Monday and Wednesday 5:00 - 6:30 pm, Tuesday 9:00-11:30

Course Pre-requisites:

None. However, understanding how to read graphs is an advantage, and it can be helpful to have completed introductory courses in welfare (or micro-) economics and statistics.

Course Description:

Cost-benefit analysis is a useful analytical method for policy, program and project assessment in the public, non-profit and private sectors. It is a structured approach to weighing the pros and cons of alternative courses of action. More simply, it compares the benefits that come from policies, programs or projects to the costs that these actions incur to produce the benefits. This comparison helps to distinguish public and private actions that make better use of resources to reach their objectives from actions that make poorer use of them.

Organized around basic, mainly economic theories of behavior, the course provides a conceptual and practical introduction to the method and way of thinking. Themes covered include identification of cost and benefit components, valuation of these components, converting future to present values, dealing with uncertainty, estimating impacts, and accounting for transfers between winners and losers that invariably result from intervention.

Student Learning Objectives/Outcomes:

Students will:

- ❖ become familiar with theoretical underpinnings and other aspects of cost-benefit analysis;
- ❖ appreciate the wide range of applications for this method of judging worth;
- ❖ distinguish between high and low quality analyses, and be able to critique both well; and
- ❖ be able to contribute to preparation of cost-benefit studies and research in practice.

Required Textbooks and Materials:

Introduction to Cost-Benefit Analysis: Looking for Reasonable Shortcuts, 2010
Ginés de Rus, Edward Elgar Publishing, 2010 (reprinted 2014), 978-84980 460 8

Cost-Benefit Analysis and Public Policy, 2008,
David Weimer (Ed) , Wiley-Blackwell, 978-1-4051-9016-9

Cost-Benefit Analysis: Cases and Materials, 2011,
Euston Quah and Raymond Toh, Routledge, 978-0-415-56226-3

.... plus articles and other materials posted on elearning

Suggested Texts

Cost-Benefit Analysis, 5/, E.J. Mishan and Euston Quah, Routledge, 2007

Cost Benefit Analysis: Concepts & Practice, 4/, Boardman, Greenberg, Vining & Weimer, Prentice Hall, 2011.

Assignments & Academic Calendar

The course is organized around two (2) assignments - critique of two cost-benefit reports and design for a cost-benefit analysis, a major research paper, formal presentation of main research findings, active participation and leadership in class discussions, and a take home final exam

The first assignment requires finding two applied cost-benefit studies (ideally on topics that no other student selects) that meet my criteria of appropriateness for the course...and then preparing a critical assessment of the studies. This assessment should be 800 (\pm 80) words in length, cover both studies and conform to writing and formatting guidelines detailed below. The 2 studies in this assignment must get my approval by February 6th. The assignment is due February 27th.

The second assignment requires choosing a specific type of program or project that meets my approval criteria and then designing a cost-benefit analysis study for it. This design should also be 800 (\pm 80) words in length and conform to the writing and formatting guidelines. This second assignment must get my approval by March 6th. It is due on April 3rd.

The research paper is an empirical or methodological work related to cost-benefit analysis. It has two (2) parts. First, due on February 13th, is a 300-word (maximum) outline that identifies and discusses the paper's theme, provides a preliminary outline for it, and presents a relevant bibliography of at least 10 scholarly articles. Make sure that you state the issue at hand at the top of the first page and, in a sentence or two, tell me why you propose to address this issue. I must approve this proposed work before you proceed further.

The second part, due on May 8th, is a 2000 (\pm 200) "original" word final paper that contains: an explanation of why the issue is important and for whom it is important; your literature search and review; and your research results and conclusions. Please review the detailed guidelines below for further guidance on preparing the paper. Areas that a research paper might focus on include, but are not limited to):

Methodological themes

benefit transfer	individual rationality	option, existence values	discount rate
standing	contingent valuation	value of life	ethical, political issues
opportunity cost of funds	value of time	hedonic pricing	

Sectoral themes

drug war	economic development	education and training	noise pollution
sports facilities, events	industry policy, regulation	migration	health and health
information	waste disposal	energy and conservation	regulation
agriculture	research and development	wilderness, wildlife	hazardous waste
redistribution programs	public works	water pollution	commercial fisheries
housing	forestry	transportation, safety	crime and drug abuse
professional regulation	water supply	parks and other recreation	air pollution

Calendar of Topics and Readings

- Note: RUS = chapter in *Introduction to Cost-Benefit Analysis: Looking for Reasonable Shortcuts, 2010*
Q&T = chapter in *Cost-Benefit Analysis: Cases and Materials, 2011*
W = article in *Cost-Benefit Analysis and Public Policy, 2008*
* = article or other item posted on e-learning

1. Introduction to the Method of Cost Benefit Analysis (CBA)

RUS: Chapter 1 Introduction

11 Microeconomic foundations of cost-benefit analysis (sections 11.1 and 11.2 only)

Q&T: Chapter 1 Introduction

2 History and scope of cost-benefit analysis

W: - Introduction: Cost-Benefit Analysis and Public Policy (Weimer)

January 16: MLK DAY

2. January 23: Ways to Think About Benefits and Costs

RUS: Chapter 2 The economic evaluation of social benefits

Q&T: Chapter 3 Valuation issues and methods

7 Estimating the economic cost of air pollution on health

8 Economic cost of diseases

- W: - Costs and benefits through bureaucratic lenses: Example of a highway project (Boardman)
- Using the Kaldor-Hicks tableau format for cost-benefit analysis and policy evaluation (Krutilla)
- The issue of standing in cost-benefit analysis (Whittington)
- Assessing preferences in cost-benefit analysis: Reflections on rural water supply....(MacRae)
- Who has standing in cost-benefit analysis? (Trumbull)
- Comment: Judgments about who has standing in cost-benefit analysis (Whittington)
- Reply to Whittington and MacRae (Trumbull)
- Comment: Does benefit-cost analysis stand alone? Rights and standing (Zerbe)

3. January 30: How to Conceptualize Social/Societal Benefits and Costs

RUS: Chapter 3 The economic evaluation of indirect effects

4 Opportunity costs, market and shadow prices

4. February 6: How to Estimate Benefits and Costs When There are No Prices A

RUS: Chapter 5 Economic valuation of non-marketed goods I

6 Economic valuation of non-marketed goods II

Q&T: Chapter 4 Benefit transfers

5. February:13 How to Estimate Benefits and Costs When There are No Prices B

- W: - Why existence value should not be used in cost-benefit analysis (Rosenthal).
- Why existence value should be used in cost-benefit analysis (Kopp)
- Existence value and benefit-cost analysis: A third view (Quiggin)
- Rethinking the arithmetic of damage assessment (Smith)

* Hanemann, W.M. 1994. *Valuing the Environment Through Contingent Valuation*, Journal of Economic Perspectives, 8(4), pp. 19-43

* Diamond, P. and J. Hausman, 1994. Contingent Valuation: Is Some Number Better than No Number? J of Economic Perspectives, 8(4), pp. 45-64

* Nelson, R.H. 1996. How Much is God Worth? Competitive Enterprise Institute

6. February:20 Assessing the Impact on Values of Accounting for the Passage of Time

Q&T: Chapter 5 Simple mathematics of discounting and decision criteria

RUS: Chapter 7 Discounting and decision criteria I

8 Discounting and decision criteria II

- W: - Policy analysis, welfare economics and the greenhouse effect (Brown)
- Discounting the benefits and costs of environmental regulations (Kolb)
- The “new” view of investment decisions and public policy analysis.....(Metcalf)
- “Just give me a number!” Practical values for the social discount rate (Moore)
- * Lind, R. 1999. “Chapter 17: Analysis for Intergenerational Decision making,” in P. Portney and J.P. Weyant, eds. *Discounting And Intergenerational Equity*, Resources for the Future.
- * Newell, R. and W. Pizer, 2002. Discounting the Benefits of Climate Change Policies Using Uncertain Rates *Resources*, Winter, Issue 146.

7. February: 27 The Challenge of Estimating the Value of Life and Limb

Q&T: Chapter 6 Value of a statistical life in Singapore

- W: - Doubling the estimated value of life: Results from new occupational fatality data (Moore)
- The value of reducing risks of death: A note on new evidence (Fisher)
- Assumptions, behavioral findings and policy analysis (Knetsch)
- What determines the value of life: A meta-analysis (Mrozek)
- Understanding differences in estimates of the value of mortality risk (Hammitt)
- The value of reducing risk of death: A policy perspective (Krupnick)

- * Herzog, H and A. Schlottman. 1990. Valuing Risk in the Workplace: Market Price, Willingness to Pay, and the Optimal Provision of Safety, Review of Economics and Statistics, pp. 463-70.
* Posner, E.A. and Sunstein, C.R. 2004. Dollars and Death. AEI-Brookings Joint Center for Regulatory Studies

8 March 6 Methods of Addressing Uncertainty

RUS: Chapter 9 Uncertainty and risk analysis

- * Durkin, J.T., and Greeley, A.M. 1991. "A Model of Religious Choice Under Uncertainty: On Responding Rationally to the Nonrational," Rationality and Society, 3:2. 178-196
* Camerer, C. and H. Kunreuther. 1989. Decision Processes for Low Probability Events: Policy Implications, Journal of Policy and Management, September. 8(4) pp.565-92.

9. March 20: Applying CBA to Economic Development

Q&T: Chapter 11 The Three Gorges Dam project, China

15 Qinghai-Tibet railway: investment to improve travel...tourism and economic growth

23 Jamuna Bridge project in Bangladesh

24 Construction of Suvarnabhumi Airport, Bangkok, Thailand

W: - Restraining auto imports: Does anyone win? Gomez-Ibanez, J., Leone, R. A., & O'Connell, S. A.

- * Texas Institute for Economic Development. 2005. ...A Study of the Economic Impact of The UT System, Institute for Economic Development, University of Texas at San Antonio.

10. March 27: Applying CBA to Sports and Other Entertainment

Q&T: Chapter 13 Hosting international events: cases from Beijing Olympics.. & Youth Olympics...

- * Zimmerman, D. 1997. Ch 4: Subsidizing Stadiums: Who Benefits, Who Pays? in Noll and Zimbalist, eds. Sports, Jobs and Taxes: The Economic Impact of Sports Teams and Stadiums," Brookings pp. 119-45.
* Noll, R and A. Zimbalist. 1997. The Economic Impacts of Sports Teams and Facilities, in Noll, R and A. Zimbalist, eds. Sports, Jobs & Taxes: The Economic Impact of Sports Teams and Stadiums," Brookings Institution, pp.55-91.
* Grinols, E. and J. Omorov, 1996, Development or Dreamfield Delusions?: Assessing Casino Gambling's Costs and Benefits, The Journal of Law and Commerce, Fall, 1996

11. April 3: Applying CBA to Health and Safety

Q&T: Chapter 18 Wastewater management project in Sri Lanka

20 Southeast Asian haze of 1997

21 H5N1 avian influenza immunization programme

- W: - Benefits and costs of the 55 MPH speed limit: New estimates and their implications (Kamerud)
- Medicaid costs and birth outcomes: The effects of prenatal WIC...& use of prenatal care (Devaney)
- Do speed cameras produce net benefits? Evidence from...Canada (Chen)

12. April 10: Applying CBA to Environmental Concerns

Q&T: Chapter 12 Flue gas desulphurization in Mae Moh, Thailand
17 Preservation of the Amazon rainforest ENV

W: - Net loss: A cost-benefit analysis of the Canadian Pacific salmon fishery (Schwindt)

- * Heinzerling, L. & Ackerman, F. 2002. Pricing The Priceless: CBA of Environmental Protection, Environmental Law and Policy Institute Georgetown University, Washington D.C.
- * Kiel, K. and J. Zabel. 2001. Estimating the Economic Benefits of Cleaning up Superfund Sites: The Case of Woburn, Massachusetts, J. of Real Estate Finance & Economics, (22(2) pp. 163-184.

13. April 17: Applying CBA to Human Capital Improvement

Q&T: Chapter 14 Human capital investment programmes in Singapore

W: - Evaluating the benefits and costs of the Job Corps (Long)

- * Fass, S.M. and Pi, C-R. 2002. Getting Tough on Juvenile Crime: An Analysis of Costs and Benefits. Journal of Research in Crime and Delinquency, 30(4), 363-419

14. April 24: Recent Developments and Enduring Dilemmas in CBA

Q&T: Chapter 9 Pair-wise comparison: a novel approach

10 Behavioural effects and cost-benefit analysis: lessons from behavioural economics

W: - Is cost-benefit analysis legal? Three rules (Zerbe).

- On the accuracy of regulatory cost estimates (Harrington)
- Benefit estimation goes to court: The case of natural resource damage assessment (Kopp)

- * Wolfson, A. 2001. The Costs and Benefits of Cost-Benefit Analysis, Public Interest, Fall, 93-9
- * Berg, N. 2002. Behavioral Cost-Benefit Economics: Toward a New Normative Approach (mimeo)

15. April 28: Presentation of Research Findings and Distribution of Take Home Exam

May 8: Research Paper and Exam Due Before 5:00 pm

Grading Policy

Grades are based on 4 things:

- | | |
|---|-----|
| ➤ quality of the assignments (2 @ 15% each) | 30% |
| ➤ research paper | 30% |
| ➤ presentation of research findings | 10% |
| ➤ participation quantity/quality, including discussion leadership | 10% |
| ➤ take home examination | 20% |

The grading structure is:

92% and higher = A (4.00)	80% to 83.9% = B (3.00)	68% to 71.9% = C (2.00)
88% to 91.9% = A- (3.67)	76% to 79.9% = B- (2.67)	less than 68% = F (0.00)
84% to 87.9% = B+ (3.33)	72% to 75.9% = C+ (2.33)	

Course & Instructor Policies

Attendance is prized and highly recommended, but not mandatory. However, given that students cannot participate in or lead discussions in absentia, nonappearance can harm grades. Oh, and keep in mind that sleeping in class undermines the purpose of attendance. So awake is good too.

Kindly silence cell phones while in class, and do not talk or text on the phone during class. This behavior disrupts nearby students and disrespects the instructor... who typically takes unrepentant dising (aka "phubbing" or cellphone snubbing) into account when adjusting grades. More generally, unless otherwise instructed by the professor, cell phones, laptop computers and other electronic devices must be off during every class.

In general, the way to succeed in the course is to read the assigned materials ahead of time, arrive to class on time, participate in discussions, not be embarrassed to ask questions or talk, and study diligently.

"Course Messages" on the ELearning course page is the only electronic way to communicate with the instructor. Students should therefore check it often for messages that may contain important information.

Extra Credit: none

Late Submission: 10% of assignment and research paper value is lost for each day overdue

Guidelines for Preparing the Research Paper

Literature review: Class research papers are mainly reviews of existing literature on the subject you choose. The review helps to show how what you write fits into a relevant "body of knowledge." The literature review shows that you have enough understanding of what exists about your theme to make coherent statements about the current state of knowledge of something to do with cost-benefit analysis in general and in specific relation to the theme that you are looking at. The literature review might reveal gaps in what is known, if there are any, which you can use as a basis for an "original" contribution to the subject matter.

Writing: The logic and presentation of what you submit ought to be clear. Say what you want to say in your own words. "Write like you talk" is good rule. If I understand what you say when you talk but cannot understand what you say when you write, then there is a brain-hand dysfunction that needs cure. Do not be intimidated by what you think may be an "academic" writing style. Most researchers would not be researchers if they had talent for writing. Give me, the reader, a "roadmap" at the beginning of your outline and paper and, as appropriate, recap sentences at the beginning and end of subsections. If I cannot figure out within a minute or so what your submission is about and where leads, then you are in trouble. If I get bored, you are in deeper trouble.

Format: I have excruciatingly strong preferences about format. It would be nice if you could strictly adhere to them so that in the process you learn about aesthetically correct presentation of the written word. Note that here the synonym for "nice" is "mandatory." You lose points if you stray from any of the following 15 commandments:

- 1) margins: 1-inch on all sides
- 2) page: white 8½ inches by 11 inches, portrait orientation
- 3) font: times new roman, regular, 12 points
- 4) alignment: left justification: none
- 5) page numbering: on all pages, centered at the bottom
- 6) line spacing: single-space within paragraphs (not 1.15 spacing), double-space between paragraphs
- 7) indentation: none
- 8) paper title: at top of first page on one line (i.e. no cover sheet)
- 9) student name: next line after the title
- 10) citations in text: in any standard format (e.g., Smith, 2004)
- 11) bibliography: in standard format (e.g., as you see them at the end of published articles)
- 12) spelling: no errors (i.e., use spelling checker, and also review manually for wrong words)
- 13) grammar: do not be horrible (i.e., use grammar checker set to strictest/most formal level)
- 14) endnotes: place after bibliography (no footnotes)
- 15) tables or graphics: include only if essential, place at very end.

Length: 2000 (± 200) original words, excluding quoted material, bibliography, notes, tables, graphics etc. In other words, the adjective "*original*" refers to what you yourself write. Though rarely necessary, you can include quoted text. But such text does not count as part of the required length.

Media: All submissions should be electronic via elearning's "**Course Messages**," saved in any format that MSWord can read directly (i.e. no pdf or other format).

Filename: (not Elearning subject heading) must be your name (last then first), followed by "Research Paper." For example, the paper *Bobby Smith* submits must be named: **Smith Bobby Research Paper.**

Honesty: It is better to be safe than sorry. Please heed the notice on Academic Integrity from the UTD Office of Judicial Affairs linked further below. And note that I submit everything to Turnitin to check for the sin of plagiarism.

Guidelines for Preparing Assignments

Everything spelled out in the preceding section applies here as well, except:

Length: Each assignment is 800 (\pm 80) words in length, where “*original*” refers to what you yourself write. No quotes.

Content: The top of the first page should show your name and the title of what you writing about. Beyond this, I do not have a specific structure in mind.

Filename: (not subject heading) for each assignment must be your name (last, first). followed by the assignment number. So for *Bobby Smith's* second assignment, the file name is: **Smith Bobby A2**

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same: “As a Comet, I pledge honesty, integrity, and service in all that I do.”

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.