U-6016: Cost-benefit Analysis
School of International and Public Affairs, Columbia University
Spring 2001

Instructor:  Arthur A. Small
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Hours:  Tues. & Thurs. 2:40—3:40 p.m.
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Time:  Wednesday, 4:10 p.m. – 6:00 p.m.
Location:  405 IAB
Course Web Site:  http://www.columbia.edu/itc/sipa/U6016/

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TA sessions:  Thurs., 1:00 p.m. – 2:00 p.m., Rm. 405 IAB and SIPA Computer Lab.

Goals and Coverage: This course aims to provide an introduction to the basic principles of cost-benefit analysis, i.e., the economic appraisal of public investment projects, expenditures, programs, and regulations. The goal is that by the end of the course you will have the tools you need to begin performing such project appraisals. We will begin with a relatively brief review of the techniques of financial appraisal (i.e. cashflow analysis) of projects, since similar techniques are used in most cost-benefit analysis exercises. However, a financial analyst for a private, profit-making entity generally focuses only on the net cashflows the entity receives from a project. The cost-benefit analyst has to consider a proposal’s economic costs and benefits from a societal perspective. We will, therefore, go on to cover more comprehensively the steps involved in the valuation of these costs and benefits. The details of this valuation process will depend naturally on the particular project being considered, whether to build a dam, institute consumer product safety standards, initiate a job-training program, or undertake a large-scale livestock project. We will not (and cannot) go into all the technological details and institutional considerations that arise in any of these specific situations. Rather, we will focus on the general economic concepts and analytical approaches that ought to guide the cost-benefit analyses of these proposals.

Intended audience: This course should be most directly relevant for those who intend to pursue careers in the public sector, as analysts/applied economists with governmental agencies (e.g. the U.S. Congressional Budget Office, the U.S. Environmental Protection Agency, finance, industry, agriculture ministries, regulatory agencies, etc.), public authorities (e.g. Port Authority of NY & NJ, marketing boards, health agencies, etc.), multilateral institutions (e.g., the World Bank, the IMF, regional development banks, the International Finance Corporation, etc.), or research institutes/think-tanks (e.g., Resources for the Future, the RAND Corporation, etc.). Those who hope to work in non-profit or public sector agencies, but in a more managerial or administrative capacity should still find the course useful, though less directly relevant. Finally, for those who
wish to work in the private sector, in finance-related positions, the course should provide an additional, and I think useful, perspective: the private sector is increasingly called on to examine the broader social and environmental impacts of their activities. However, the course will not serve as a substitute for higher level courses in investment and project finance, cost-accounting, and capital-budgeting.

**Prerequisites:** I assume a solid grounding in and willingness to work with basic microeconomic and statistical concepts. *Familiarity with (or a willingness to quickly and independently pick up) basic accounting concepts, financial analysis techniques, and the use of computer spreadsheet applications is also required.*

**Requirements and Expectations:** You are expected to attend class, to prepare for class by doing assigned readings, to complete four assignments, and to write a final exam. Students are encouraged to work in teams on the assignments. Teams should not, however, have more than three members. The names of all team members should be clearly listed on all assignments. To the extent possible, the teams should remain the same through the course of the semester. *No late assignments will be accepted.*

The grade for the course will be based on the four assignments completed during the term, and on an in-class final examination. The best three of your scores on the four assignments will each count 20% of the course grade. The lowest of the four scores will be dropped. Each team member will receive the same grade on jointly-completed assignments. The final exam will count 40% of the course grade. The format of the final exam will be discussed toward the end of the semester.

**Readings:** The main text for the course is:


Additional readings will be drawn from:


This edition is a photocopy-perfect re-issue of a book by the same name originally published by Prentice-Hall in 1990. Either edition is fine.

Both books should be available for purchase at the Labyrinth Bookstore on 112th Street between Broadway and Amsterdam. Copies have also been placed on reserve in the Lehman Library. Students who wish to examine (on their own) the close relationship between private-sector financial analysis and public-sector CBA may wish to take a look at the following book, available on reserve at the Business Library in Uris Hall: