Public Affairs 881: Cost-Benefit Analysis  
Fall 2021

Instructor:  Dave Weimer  
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Class Meetings: Mondays/Wednesdays  
8:00 to 9:15 a.m.  
Social Science 4308

Office Hours: Office hours will be from 9:30 a.m. to 11:00 a.m. on Mondays and Wednesdays following class. (Additional office hours will be available on Tuesday and Thursday mornings from 11 a.m. to noon.) When necessary, I can meet with teams by Zoom.

Course Objectives: Cost-benefit analysis (CBA) has both narrow and broad applications. In its narrow application, it serves as a decision rule for selecting policies for maximizing economic efficiency. In its broader application, it provides concepts, techniques, and conventions for assessing economic efficiency, or components of economic efficiency, when efficiency is only one of the social goals relevant to policy choice. This course provides the conceptual foundations and craft skills to prepare you to be sophisticated consumers and producers of CBA.

This three-credit course meets for 150 minutes per week and contributes to several of the Student Learning Goals set out for MPA students. Most fundamentally, it requires demonstration of progress toward the following three goals:

“Students will communicate in clear written language: a real-world problem, relevant scholarly studies and practical applications, a policy-analytic method to investigate the problem, and client-oriented advice to mitigate the problem.” (Goal III A)

“Students will demonstrate the ability to maintain fidelity to objective social science-based research methods.” (Goal IV D)

“Students will complete high-quality group projects, including demonstration of effective project management and teamwork.” (Goal V B)

Prerequisites: Familiarity with the basic concepts of microeconomics and statistical inference is assumed. Those taking the course should have completed Public Affairs 880 and Public Affairs 819, or their equivalents.

Course Requirements and Grades: Four requirements promote the course objectives:

First, I expect active participation in class and diligence in the completion of problem sets and other assignments. Our class time will be split between lectures and discussion. If this format is
to be effective both for you as an individual and for your classmates, then you must come to
class prepared to participate in discussion. Sometimes discussion will be around assigned
problems, including some that require reading about topics not yet covered in lecture. It is
important that you put effort into these problems so that you can fully participate in their
discussion. Your effort will also reward itself in terms of the depth of your understanding of
course material. Ten percent of your course grade will be based on class participation and
assignments.

Second, an in-class midterm examination (November 1) will give you an opportunity to
demonstrate your mastery of the basic concepts of CBA. Thirty percent of your course grade will
be based on your performance on the midterm examination.

Third, although the theory of CBA can be easily learned in the classroom, the craft for doing it in
a complex world, with inevitable limitations on the availability time, data, and expertise,
probably cannot. To get practice in doing CBA, you will participate in a team project on a real
issue for an actual client. During the semester, each team will make several oral and written
progress reports. A complete report is due on December 8. December 8, 13, and 15 will be
devoted to presentations of projects. A revised draft is due December 18 in PDF format with a
memorandum outlining revisions. In addition, you should plan on participating in a briefing on
the final report at your client’s convenience, most likely after the end of the semester. As most
policy analysts work in teams, you should view your participation in the project as an important
part of your development as a policy analyst. I expect team members to be professional in
interactions with their clients as well as among themselves. I also expect each team member to
be fully engaged with the project, and I reserve the right to penalize individuals who are not fully
familiar with all aspects of their team’s products. I will ask each team member to evaluate the
effort and contributions of other team members, and I will consider the responses in assigning
individual grades. Forty percent of your course grade will be based on the team project. I cannot
overemphasize the importance of the effort you put into the project for your future ability to do
cost-benefit analysis. Please do not take this course if you are unwilling or unable to give the
project a high priority. I reserve the right to lower the grade of anyone who does not contribute
fully to his or her team. I also reserve the right to give a failing grade in the course for anyone
who acts unprofessionally.

Fourth, there may be a take-home final examination distributed December 16 and due
December 17 at noon. Twenty percent of your course grade will be based on the final
examination if it is held. If class attendance after the midterm examination is regular (almost
everyone attending each class), then I will waive the final examination and allocate its grade
percentage to the final project.

Textbook: We will make extensive use of the following text (BGVW):
Team Projects: The topics for team projects are as follows:

1. Twenty-seven states and the District of Columbia have decriminalized small amounts of marijuana, including states that border Wisconsin. This generally means certain small, personal-consumption amounts are a civil or local infraction, not a state crime (or are a lowest misdemeanor with no possibility of jail time). Public opinion is increasingly in favor of, at a minimum, legalization for medical use and yet bills related to decriminalization of marijuana have not passed in the state legislature. Decriminalization or legalization of marijuana has the potential to reduce or eliminate the social and economic costs of law enforcement and could provide a unique new revenue stream for government. What would be the costs and benefits of either decriminalizing or legalizing marijuana at the one-ounce level in Wisconsin? Client: Wisconsin Assembly Member Shae Shortwell; Contact: Zach Pfaffenbach, zach.pfaffenbach@legis.wisconsin.gov.

2. Like most American communities, La Crosse County is experiencing a “childcare crisis.” This very complex issue is important to the community for many reasons. The lack of high quality and affordable childcare has been identified as a key challenge in the county’s Workforce Innovation for a Strong Economy Plan, which deals with workforce attraction and retention issues. However, it is also important because of the link between development from birth to age five and subsequent need for social services later in life. La Cross County seeks a report that considers policies it could adopt to promote greater availability of affordable and high-quality childcare. The report should develop several alternatives and estimate both the social and fiscal costs and benefits of each. For example, can the county partner with businesses or nonprofits to expand the availability of childcare? Can a special tax district be created to fund subsidies? Can the county encourage supply from currently unlicensed childcare providers? Can the county contribute to supply through its role as an employer? Are there regulatory changes that could facilitate greater supply? These questions suggest approaches that could lead to a broad range of possible alternatives. The team should identify, fully specify, and assess the ones that appear most promising. Client: Brian Fukuda, Community Development Specialist, La Crosse County, bfukuda@lacrossecounty.org.

3. Certified nursing assistants (CNAs) play an important role in the health care system. The Wisconsin Health Care Association is currently administering WisCaregiver Careers, a training program funded by the Wisconsin Department of Workforce Development. The program provides free training and free certification testing for CNAs as well as coordinates an employer consortium whose members agree to pay $500 bonuses to hired program participants. The CBA
team will complete three tasks. First, set out the cost-benefit framework for assessing the net benefits of the program. Second, estimate program costs and benefits based on available data on program participation. Third, develop a shadow price for retention that can be used to complete the estimation of costs and benefits when retention data become available. Client: Kate Battiato, Director of Workforce Development, Wisconsin Health Care Association, kbattiato@whcawical.org.

Tentative Schedule

Introduction (Sept. 8)

BGVW, Chapter 1

Team projects organized

Note: Projects from several previous years and spreadsheets for exercises are available on Canvas.

Class Discussion of Team Projects from Previous Years (Sept. 13)

BGVW, Chapter 8
BGVW, skim Chapter 17

Conceptual Foundations (Sept. 15)

BGVW, Chapter 2 (Exercises 2, 3, and 4)

Valuing in Primary Markets (Sept. 20, 22, 27, and 29)

BGVW, Chapter 3 (Exercises 1 and 2, and Spreadsheet Exercise 3.3)
BGVW, Chapter 4 (Spreadsheet Exercise 4.2)
BGVW, Case 4
BGVW, Chapter 5 (Exercise 2)
BGVW, Chapter 6 (Exercise 1)

Project report due (Sept. 20): Each team should prepare a four- to six-page (double-spaced) report that describes the issue being addressed in the project and sketches a plan for completion.

Valuing in Secondary Markets (Oct. 4)

BGVW, Chapter 7 (Exercises 2 and 3 and Spreadsheet Exercise 7.4)
BGVW, Case 8
Basics of Discounting for Time/Social Discount Rate (Oct. 6 and 11)

BGVW, Chapter 9 (Exercises 1, 2, 3, and 4 and Spreadsheet Exercise 9.6)
BGVW, Case 9
BGVW, Chapter 10 (Spreadsheet Exercise 1)

Scan: OMB Guidelines
www.whitehouse.gov/omb/circulars_a004_a-4
UK Guidelines (The Green Book)
Canadian Guidelines
New Zealand Guidelines
www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/guide
CPI Calculator
www.bls.gov/data/inflation_calculator.htm

Project report due (Oct. 11): Each team should prepare an annotated bibliography of the ten most relevant studies to its topic that it can find. Give highest priority to finding published CBAs on similar topics.

Expected Values, Value of Information, and Sensitivity Analysis (Oct. 13, 18, and 20)

BGVW, Chapter 11 (Exercises 1, 3, 4, and 6 and Spreadsheet Exercise 11.5)
BGVW, Case 11

Consider WSIPP displayed results: http://www.wsipp.wa.gov/BenefitCost


Project report due (Oct 20): Each team should prepare a list of the relevant categories of costs and benefits and indicate how each can be measured. Read BGVW, Chapter 17, to get an idea of available shadow prices from secondary sources.

Option Price and Option Value (Oct. 25)

BGVW, Chapter 12 (Spreadsheet Exercise 12.3)

Life-Cycle Analysis (Oct. 27)

Visit: [www.eiolca.net](http://www.eiolca.net) and do the tutorial for the EIO-LCA model.

**Midterm Examination** (Nov.1)

**Estimation Based on Revealed Preferences: Demonstrations and Experiments** (Nov. 3)

BGVW, Chapter 14 (Prepare exercise 2 for class)

**Estimation Based on Revealed Preferences: Observational Studies** (Nov. 8 and 10)

BGVW, Chapter 15 (Spreadsheet Exercise 15.3)
BGVW, Chapter 17
BGVW, Case 17 Case


**Contingent Valuation** (Nov. 15, 17, 22 and Dec. 1)

BGVW, Chapter 13
BGVW, Chapter 16 (Exercise 2)
BGVW, Case 16


*Project Consultation* (Nov. 24)

*Cost-Effectiveness* (Dec. 6)

BGVV, Chapter 18 (Spreadsheet Exercise 18.3)

*Presentations* (Dec. 8, 13 and 15)

Pull project draft due December 8.

Revised project report (PDF) and explanation of revisions due December 18.

Evaluation of teammates due December 18 (complete only after revised project report submitted).