NYU | ROBERT F. WAGNER GRADUATE SCHOOL OF PUBLIC SERVICE

PADM-GP 2149
Cost-Benefit Analysis
Fall 2019

Instructor Information

- Travis St.Clair
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- Office Address: Puck 3048 (3rd Floor)
- Office Hours: Wednesdays, 3:30–5:30pm, or by appointment
    - Sign up here: calendly.com/travis-stclair

Course Information

- Class Meeting Times: Tuesdays 6:45–8:25pm
- Class Location: Silver, Rm. 507

Course Prerequisites

CORE-GP 1021, CORE-GP 1018, and CORE-GP 1011 are prerequisites. Microeconomics provides the foundation for cost-benefit analysis, and consequently the course assumes a basic background in microeconomics at the level of 1018 or higher. Students who have only taken 1018 and received a grade lower than a B may register, but should expect to spend extra time learning the underlying microeconomic principles and tools.

Course Description

Cost-benefit analysis (CBA) involves the use of microeconomics to formally assess the costs and benefits of different projects or investments. CBA is required for major regulations in the United States and is frequently used as a key input into major policy decisions. Understanding its advantages and limitations, and being able to distinguish well-conducted from poor analyses, is an important skill for a policy analyst. This course provides you with the conceptual foundations and practical knowledge you will need to both conduct CBA as well as be a more thoughtful consumer of policy research. The course draws on a mixture of economic theory and real-life case studies to examine both the theoretical and practical issues involved in CBA.

Course and Learning Objectives

1. Understand the economic concepts that provide the foundation for cost-benefit analysis.
2. Learn the practical steps involved in conducting CBA.
3. Develop a set of analytical tools that can be applied to decision-making, including impact analysis, Monte Carlo simulation, sensitivity analysis, and valuation.
4. Become a more critical consumer of policy research and analysis.

Learning Assessment Table

Corresponding Course Learning Objective	Corresponding Assignments
#1	Final Exam, Final Paper, Problem Sets
#2	Final Paper
#3	Problem Sets, Final Paper
#4	Final Exam, Final Paper, Problem Sets

Course Materials

The textbook for this course is: Boardman et. al, **Cost-Benefit Analysis**, Fifth Edition (2019), Cambridge University Press. Additional readings will be posted on NYU Classes. You may use another edition of the textbook, though I caution you that some material has changed. There will be a copy of the Fifth edition on reserve at Bobst.

Course Requirements

There will be three components used in determining your final grade for the course:

Weekly Problems Sets, 20%

There are a total of 8 problem sets, each of which is worth 2-3% of your grade. Problem sets are due at the beginning of each class and should be submitted via NYU Classes. I will be grading the problem sets on the basis of completion rather than accuracy. If you complete the entire assignment on time, you will receive full credit even if your work contains errors. If you do not submit the assignment prior to the start of class, you will receive no credit. If you have hand-drawn graphs, you can scan them or use a camera-based scanner app on your phone (like Scanbot) to turn it into a pdf. I encourage you to work on the assignments in small groups, however each student must write and submit his or her own assignment. Two or more students turning in identical homework assignments constitutes cheating and will be reported to the administration and subject to disciplinary action.

CBA Project, 50% (see handout for details)

- CBA Project Proposal, 5%
- List of Potential Costs and Benefits, 5%
- Literature and Data Review, 5%
- Presentation, 5%
- Final Paper, 30%

Final Exam, 30%

The final exam will take place in class during Class 11 and will be closed book. Please note the date of the exam; if you have a conflict, please come speak to me at the beginning of the semester.

Academic Integrity

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by Wagner's Academic Code. All Wagner students have already read and signed the Wagner Academic Oath. Plagiarism of any form will not be tolerated and students in this class are expected to report violations to me. If any student in this class is unsure about what is expected of you and how to abide by the academic code, you should consult with me.

Henry and Lucy Moses Center for Students with Disabilities at NYU

Academic accommodations are available for students with disabilities. Please visit the Moses Center for Students with Disabilities (CSD) website and click on the Reasonable Accommodations and How to Register tab or call or email CSD at (212-998-4980 or mosescsd@nyu.edu) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

NYU's Calendar Policy on Religious Holidays

NYU's Calendar Policy on Religious Holidays states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with class assignments to schedule mutually acceptable alternatives.

Class Schedule at a Glance

Class	Week	Date	Topics	Assignments
1	1	9/3	Overview of Cost-Benefit Analysis	
2	2	9/10	Foundations of Welfare Economics	
3	3	9/17	Valuing Benefits and Costs in Efficient Primary Markets	CBA Proposal, PS #1
4	4	9/24	Valuing Benefits and Costs in Inefficient and Secondary Markets	PS #2
5	5	10/1	Predicting and Monetizing Impacts	PS #3
6	6	10/8	Discounting	List of Costs and Benefits, PS#4
	7	10/15	No Class – Legislative Day	
7	8	10/22	Valuing Non-Market Goods and Services	PS #5
8	9	10/29	Special Cases of Non-Market Goods in CBA	PS #6
9	10	11/5	Uncertainty	Literature and Data Review, PS #7
10	11	11/12	Related Methods: Distributionally Weighted CBA and Cost-Effectiveness Analysis	PS #8
11	12	11/19	- Final Exam -	Final Exam
	13	11/26	No Class - Thanksgiving	
12	14	12/3	Presentations	
13	15	12/10	Presentations	
14	16	12/17		Final Paper Due

Week 1: Overview of Cost-Benefit Analysis

Topics Covered:

- How, When, Why is it Useful?
- Limitations
- Alternatives

Read before class:

- BGVW Chapter 1
- Cellini & Kee. 2015. Cost-Effectiveness and Cost-Benefit Analysis. In Newcomer (ed.), Handbook of Practical Program Evaluation, Wiley & Sons.

Week 2: Foundations of Welfare Economics

Topics Covered:

- Pareto Efficiency
- Opportunity Cost and Willingness-to-Pay
- Consumer Surplus, Producer Surplus, Social Surplus

Read before class:

- BGVW Chapters 2-3
- Hassett and Swagel. 2006. Creative Accounting: MoMA's Economic Impact Study. WSJ.
- Washington State Institute for Public Policy. 2015. The King County Education and Employment Training Program: Outcome Evaluation and Benefit-Cost Analysis.

Week 3: Valuing Benefits and Costs in Efficient Primary Markets

Topics Covered:

- Efficient Markets

Read before class:

- BGVW Chapters 5-6
- Siegfried & Zimbalist. 2000. The Economics of Sports Facilities and Their Communities. JEP.

Assignments:

- CBA Proposal Due
- Problem Set #1 Due

Week 4: Valuing Benefits and Costs in Inefficient and Secondary Markets

Topics Covered:

- Inefficient Markets
- Secondary Markets

Read before class:

- BGVW Chapter 7
- Haveman. 1974. Evaluating Expenditures Under Conditions of Unemployment.
- Alcott et al. 2019. Should We Tax Sugar-Sweetened Beverages? JEP.

Assignments:

- Problem Set #2 Due

Week 5: Predicting and Monetizing Impacts

Topics Covered:

- Experimental and Quasi-Experimental Methods

Read before class:

- BGVW Chapters 4, 8, 14
- Garces et. al. 2002. The Longer-Term Effects of Head Start. AER.
- Belfield et. al. 2006. The High/Scope Perry Preschool Program: Cost-Benefit Analysis Using Data from the Age 40 Follow-Up. JHR.

Assignments:

- Problem Set #3 Due

Week 6: Discounting

Topics Covered:

- Net Present Value
- Inflation

Read before class:

- BGVW Chapters 9-10
- Brand et al. 2001. Application of Benefit-Cost Analysis to a Proposed California High Speed Rail System. Transportation Research Record.
- Arrow et al. 2013. Determining Benefits and Costs for Future Generations. *Science.*

Assignments:

- List of Costs and Benefits Due
- Problem Set #4 Due

Week 7: No Class – Legislative Day

Week 8: Valuing Non-Market Goods and Services

Topics Covered:

- Indirect Markets Methods

- Survey Methods

Read before class:

- BGVW Chapters 15-16
- Cellini. 2012. For-Profit Higher Education: An Assessment of Costs and Benefits. NTJ.

Assignments:

- Problem Set #5 Due

Week 9: Special Cases of Non-Market Goods in CBA

Topics Covered:

- Value of a Statistical Life

Read before class:

- BGVW Chapters 13,17
- Ashenfelter, 2006. Measuring the Value of a Statistical Life. Economic Journal.

Assignments:

- Problem Set #6 Due

Week 10: Uncertainty

Topics Covered:

- Sensitivity Analysis
- Value of Information

Read before class:

- BGVW Chapters 11-12
- Posner. 2005. Probability of a Catastrophe. WSJ.
- Hallegatte. 2006. A Cost Benefit Analysis of the New Orleans Flood Protection System. AEI-Brookings Regulatory Analysis 06-02.

Assignments:

- Literature and Data Review Due
- Problem Set #7 Due

Week 11: Related Methods: Distributionally Weighted CBA and Cost-Effectiveness Analysis

Topics Covered:

- Cost-Effectiveness Analysis
- Review

Read before class:

- BGVW Chapters 18 & 19
- Profit et. al. 2010. Clinical Benefits, Costs, and Cost-Effectiveness of Neonatal Intensive Care in Mexico. Plos Medicine.

Assignments:

- Problem Set #8 Due

Week 12: Final Exam
Week 13: No Class - Thanksgiving
Week 14: Final Exam Review and Presentations
Week 15: Presentations
Week 16: Final Paper Due