



COURSE INFORMATION

Course Title:

BUS315 Cost-Benefit Analysis for Business

Semester:

July Session, 2020

OVERVIEW

Governments want to evaluate projects and assess policy to measure the monetary impacts of policy changes. Cost-benefit analysis (CBA) is a powerful tool and a strong analytical framework for evaluating policies and improve decision making for the government. This analysis can be used to strengthen a wide range of public policy choices, such as making a decision on changes of social welfare and tax system, choose a regulation, and to undertake an infrastructure project.

Businesses want to cut down expenditure and improve productivity. Managers want to identify and quantify the benefits and the costs of a planned action. Cost-Benefit Analysis is the fundamental assessment behind virtually every business decision, due to the fact that business managers want to spend money if only the benefits exceed the costs. For businesses, CBA has become an intrinsic tool to analyse, understand and evaluate a wide range of business opportunities. Some business decisions that may be facilitated by the CBA include whether or not to recruit an employee, purchase equipment, relocate a business, modify a policy, and introduce new technology.

This unit begins with concepts and theories of cost-benefit analysis that defines what is cost and benefit then goes on to apply these concepts through various case studies. After completion of this unit students will have a comprehensive understanding of the theories, applications, advantages and challenges of benefit analysis.

LEARNING OUTCOME

After successful completion of the requirements for this course, students should be able to:

- Understand key steps involved to perform a cost-benefit analysis in an in a meaningful and scientific way,
- Should be able to explain and understand principles and assumptions that guide the analysis,
- identify the factors that may compromise the validity of the CBA such as limitations in the assumptions in modelling, limitations in data, and political concerns,
- effectively communicate the results of the CBA with the relevant parties involved in the process.

Disclaimer: Course schedule is subject to change and you will be responsible for abiding by any such changes.



PREREQUISITES

ECON101: Principles of Microeconomics and MATH101: Calculus are required to take this course. Knowledge of ECON301: Intermediate Microeconomics and STAT201: Introduction to Statistics is not necessary, but help you follow and understand the materials easy and fast.

CLASS HOURS

Class Times and Locations: Monday to Friday, 180 minutes each day, each week there will be a one-hour discussion session.

LEARNING RESOURCES

Suggested textbook:

Boardman, Anthony, David Greenberg, Aidan Vining, and David Weimer. Cost-Benefit Analysis: Concepts and Practice, 5th Ed, Cambridge University Press, 2018.

Additional reading:

Cost-Benefit Analysis, Cases and Materials, 1st Edition, By Euston Quah, Raymond Toh, (Case studies on Asian projects)

WEEKLY SCHEDULE

Week	Day	Topic	Reading
1	1	Introduction to cost-benefit analysis Conceptual foundations of cost-benefit analysis	Chapter 1 Chapter 2
	2	Microeconomic foundations of cost-benefit analysis	Chapter 3 Chapter 4
		Valuing impacts from observed behaviour: direct estimation of demand schedules Case: use of demand schedules in regulatory impact analyses	
		Discussion on Case Study 1	
	3	Valuing impacts in output markets	Chapter 5
	4	Valuing impacts in input markets	Chapter 6
	4	Valuing impacts in secondary markets	Chapter 7
	5	Predicting and monetizing impacts Case: WSIPP CBA of the nurse-family partnership program	Chapter 8
		Submit Case Study 1	

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2	1	Discounting future impacts and handling inflation Case: a CBA of the North-East mine development project	Chapter 9
	2	The social discount rate	Chapter 10
		Dealing with uncertainty: expected values, sensitivity analysis, and the value of information Case: using Monte Carlo simulation: assessing the net benefits of early detection of Alzheimer's Disease	Chapter 11
	3	Mid-Term Exam	
	4	Risk, option price and option value	Chapter 12
Existence value Discussion on Case Study 2		Chapter 13	
5	Valuing impacts from observed behaviour: experiments and quasi-experiments Case: findings from CBAs of welfare-to-work programs	Chapter 14	
3	1	Valuing impacts from observed behaviour: indirect market methods	Chapter 15
	2	Contingent valuation: using surveys to elicit information about costs and benefits Case: using contingent valuation to estimate benefits from higher education Submit Case Study 2	Chapter 16
		3	Shadow prices from secondary sources Case: shadow pricing a high school diploma
	4	Cost-effectiveness analysis and cost-utility analysis	Chapter 18
		Distributionally weighted CBA Case: the Tulsa IDA account program	Chapter 19
5	How accurate is CBA?	Chapter 20	
Final Exam			
ASSESSMENT			
Assessment Task			Weight
Class participation			10%
2 Case Studies (Application of Cost-Benefit Analysis)			30%
Mid-term Exam			30%
Final Exam			30%
Total			100%

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HOMework, CLASS ATTENDANCE, AND PARTICIPATION

Students are required to attend all classes and participate actively. Students should treat their classroom obligations as they would treat any serious professional engagement. Your participation grade (10% of the total course grade) will be based on the instructor's assessment of how well you contribute to classroom dynamics relative to your class peers; each class member is expected and encouraged to contribute to the dialogue or discussion. It is important that you read the assigned readings as background information on the issue/topic *before* each class session. The classroom will provide you with an opportunity to present your views and opinions on the topics under discussion, and to help you refine your knowledge and perspective of cross-border management based on these interactions.

Please note the following: In case of an absence, the student is responsible for the materials and assignments for that class; it is the student's responsibility to contact the course Teaching Assistant regarding absences and assignments that are missed. Students must submit a one-page write-up summarizing any assigned textbook chapter reading for each missed session; this will be due within one week of the missed session. Unexcused absence from five or more scheduled class sessions (which is a total of 33% of this course) will be *grounds for failure*. If you do have to miss class due to a personal emergency, please let the Teaching Assistant know as soon as possible. Such emergencies will be dealt with on a case-by-case basis.

Participation grades will be based on quality (an in-class performance that reflects intellectual depth, insightfulness, and contribution to class learning) and quantity (consistency and regularity of performance). Quality counts more. However, one cannot make quality comments without at least some degree of participation, so in this respect quantity will have some weight. But do keep in mind the following when considering your participation in class discussions: sometimes it's better to remain silent and have others think you are unprepared or a bit dim, rather than speaking out and confirming those suspicions.

Accordingly, you are expected to come fully prepared and ready to participate in every class. Be prepared to be called upon to "open" a class discussion by presenting your full analysis and thoughts on the assigned topic at the start of class, or to be asked through a "cold call" for comment in the midst of the discussion.

The grading of class participation is necessarily a subjective exercise. However, high-quality comments have one or more of the following characteristics: **(1) insightfulness, (2) appropriate application of course concepts, and (3) advancement of the in-class discussion at hand**. Some specific criteria for evaluating discussion contributions are:

- Does the student demonstrate an eagerness to participate?
- Is the student a good listener? Does he/she build on others' comments?
- Is the student willing to interact with other class members?
- Are the points made relevant to the discussion? Are they linked to others' comments?
- Do comments demonstrate evidence of in-depth analysis of the case?

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- Do comments add to our understanding of the situation?
- Do comments make a substantive contribution to the advancement of our analysis?
- Is there a willingness to test new ideas, or are the comments “safe?”
- Do comments show an understanding of concepts or analytical techniques properly applied to the current situation?
- Is the student presenting insightful quantitative analysis (when required)?
- Is the student demonstrating ethical considerations and insights?

ONE-PAGE WRITTEN PAPERS

Each student must submit a one-page written paper at the end of each of the first two weeks, on a given question (drawn from a set of alternatives) provided by the instructor. The questions for the paper will be provided on the first day of class; the second weekly questions will be provided at the end of the prior week.

TWO CASE STUDIES

Students will be assigned to a small group and each of these group will make an in-class presentation of a case related to the application of Cost-Benefit Analysis in a discussion session. Details of the topic to be examined and expectations of the presentation (e.g., duration and format) will be provided in class.

MID-TERM AND FINAL EXAMINATION

There will be one in-class mid-term examination and an in-class final examination, each of which accounts for 30% of the total course grade. The mid-term examination will be administered during the middle of the second week, and the final examination at the end of the course. Details of exam contents and format etc. will be announced in class well before the examination date.

***Deferred Examinations:** If students are unable to attend a scheduled exam (e.g. due to illness or other unavoidable circumstances which can be proved – e.g. medical certificate), they may be eligible to take a deferred examination at a later time.

COURSE GRADING

Upon completion of this course, you receive a final grade. A final grade is a letter grade that carries with it a numerical value, as outlined below.

Grade	Percentage
A	80-100
B	70-79
C	60-69
D	50-59
E	0-49

To pass this subject, students are required to obtain Grade C or above in order to satisfy all

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the intended learning outcomes.

ACADEMIC INTEGRITY

The academic ethics codes of the school are applied in this class. Any egregious violations of the code, such as cheating on examinations or submitting written work that is not original with the student, will be grounds for failure in this course. You may consult with appropriate university officials for details regarding the code.

DISABILITY ACCOMMODATION

Any student who needs special accommodation due to the impact of a disability should contact the instructor and/or the university within the first week of the class.