

Fall 2022, PPHA 41300, Cost Benefit Analysis Class Meeting Time: Tuesdays and Thursdays 9:30-10:50 a.m.

Instructor: Robert Kaestner E-mail: <u>kaestner@uchicago.edu</u> **Office:** Keller 3057 **Office Hours**: Email anytime; TH. 1-2 p.m., and by appt.

Teaching Assistants: TBD

Office: TBD Office Hours: TBD

Course Description

Cost-benefit analysis (CBA) is the primary tool used to provide quantitative evidence to inform public policy decisions. Ideally, the use of CBA will improve the efficiency of public policy by identifying public policies/projects that create the most "value" for society. The concept of CBA is easily understood. For any project/policy under consideration (versus current state of the world), do the following: add up all of the current and future monetary costs of the project/policy; add up all of the current and future monetary benefits to costs. If benefits are greater than costs, then the project/policy makes society better off and is candidate to be implemented. Seems straightforward, right? Conceptually it is straightforward, although there are a few theoretical and philosophical issues that arise that complicate the analysis. The conceptual difficulties, while important, are few in comparison, however, to the practical difficulties associated with conducting a CBA. I can think of few issues that merit the characterization "the devil is in the details" more than CBA. In this course, we will review the theoretical/conceptual foundations of CBA as applied in the public sector. We will also review some of the philosophical issues central to the validity of CBA and practical difficulties in conducting CBA.

Ideally, the course will provide a foundation to be an astute consumer of CBA and a beginner producer of CBAs.

Course Format

The class will meet in-person during scheduled class time. For students who are incapable of attending in-person because of illness (COVID) or another unavoidable circumstance there will be a remote option to attend using Zoom.

Except for the first class, lectures will be prerecorded and are to be viewed prior to weekly class meetings. In addition, it is expected that students will complete the assigned readings prior to class.

In-class activities are intended to be student directed. I have provided some discussion questions for each such activity and I expect students to be ready to engage with me and each other. The in-class activities are intended to allow students to articulate course content in their own words, deepen their understanding of the course content and to provide an opportunity for students to learn from one another. Everyone is expected to participate and everyone should feel comfortable expressing their view. I understand that it may be difficult for some students to speak publicly, but the class is a welcoming, respectful community. The class discussions are an active learning process and by definition learning means not knowing already. So, feel free to think creatively and openly even though sometimes it will be a miss hit.

Relationship to Curriculum

This is a course in applied economic analysis focused on assessing whether programs and policies increase social welfare.

This course is intended to build on the foundation of microeconomics provided in the two-course, core economics sequence. Accordingly, there will be some overlap with the material presented in those courses because cost benefit analysis is based largely on microeconomic analysis of markets. To the extent that there is overlap and review, this will serve to strengthen your understanding of microeconomic analysis. However, this course will focus more on welfare economics (market surplus, market failure and government intervention). Costbenefit analysis also depends on empirical estimates of costs and benefits, and this aspect of the course will build on your training in statistics and program evaluation. Finally, applications of cost-benefit analysis span several areas of public policy, including health, education and the environment.

Course Objectives:

- Obtain a thorough understanding of the microeconomic foundations of CBA.
- Understand the Hicks-Kaldor Criterion and philosophical objections and criticism of it and concerns over the distributional impacts and how they are accounted for in CBA.
- Acquire the skill to use supply and demand analysis to measure benefits and costs in primary and secondary markets.
- Learn common techniques to value benefits when market prices do not exist.
- Have a working knowledge of the role and importance of each of the key steps in conducting a CBA, such as the issue of who has standing, the importance of transparency and the use of sensitivity analysis.
- Understand the most common practical problems that arise in CBA including the appropriate discount rate, uncertainty, the efficacy of contingent valuation, and how to measure the statistical value of a life.

Course Policies:

Use of Web and Email:

I will post course materials to the university's CANVAS web-based course management system: the URL is <u>http://courses.uchicago.edu/</u>. Students are responsible for any and all material posted there. I encourage the use of email and I try to respond in a timely fashion. My email address is <u>kaestner@uchicago.edu</u>. Please be sure to set your notifications on CANVAS so that you receive all communications from me sent through this platform.

Course Policies:

Attendance is required. I understand that circumstances may sometimes require you to miss a class, although with a 9-week quarter, any absence represents a significant loss of time. Students who need to miss class because of sixkness (or other reasons) shall notify me in a timely manner as to when they will be absent. I will make every reasonable effort to honor the request, not penalize the student for missing the class, and if an examination or project is due during the absence, give the student an exam or assignment equivalent to the one completed by those students in attendance. A similar process for notifying me should be followed for students who wish to observe their religious holidays. Again, I will make every reasonable effort to honor the request and not penalize the student for missing the class.

Late Assignments and Missed Exams: Unless explicitly agreed upon in advance, late assignments will not be accepted.

COVID-19 Protocols should be followed: https://goforward.uchicago.edu/health-requirements/

Disability Accommodation:

The University of Chicago seeks to provide an environment conducive to learning, teaching, working, and conducting research that values the diversity of its community. The University strives to be supportive of the academic, personal, and work-related needs of each individual and is committed to facilitating the full participation of students with a disability in the life of the University. Students with a disability, particularly those that require an accommodation, should contact Student Disability Services (https://disabilities.uchicago.edu/).

Books:

Course Requirements

• Anthony E. Boardman, David H. Greenberg, Aidan R. Vining, and David L. Weimer, *Cost- Benefit Analysis: Concepts and Practice*, 5th ed. 2018, (Cambridge University Press) ISBN: 9781108415996 (Cheaper 4th edition is available, cheaper and very similar—but if you go this route it is at your own risk)

Assignments and Grading:

• Assignments: There are 7 take-home assignments. Assignments and the due dates are listed in the course outline below. Please make sure you identify the due dates. All assignments are to be completed independently without assistance except from TAs or Professor.

Grades for assignments are: 4=excellent (professional preparation, answered specific questions directly and germanely, provided interesting analysis/insight), 3=good (professional preparation, answered specific questions directly and in most cases germanely), 2=average (professional preparation, answered specific questions directly but with some error). 1=unacceptable (unprofessional preparation, incomplete answers to specific questions, mostly incorrect answers).

- Attendance: Grades for attendance are: 4—miss 1 or fewer classes; 3—miss 2-3 classes; 2—miss 4-6 classes; 1—miss more than 6 classes
- Final grades are letter grades and follow the common grading policy of University and Harris Public Policy: <u>https://registrar.uchicago.edu/records/grading/.</u> The mapping of numerical grades to letter grades is as follows: A: 30-32, A-: 27-29, B+: 24-26, B: 21-23, B-: 18-20, C+: 15-17, C: 12-14, C-:<12

Academic Integrity: (https://studentmanual.uchicago.edu/Policies)

"It is contrary to justice, to academic integrity, and to the spirit of intellectual inquiry to submit the statements or ideas of work of others as one's own. To do so is plagiarism or cheating, offenses punishable under the University's disciplinary system. Because these offenses undercut the distinctive moral and intellectual character of the University, we take them very seriously and punishments for them may include expulsion from the University."

"Proper acknowledgment of another's ideas, whether by direct quotation or paraphrase, is expected. In particular, if any written or electronic source is consulted and material is used from that source, directly or indirectly, the source should be identified by author, title, and page number. Any doubts about what constitutes "use" should be addressed to the instructor."

	Detailed Course Outline
Date	Topic/Readings
Sept. 27	In-class Lecture: What is CBA? History of CBA and Codification of CBA for Public Policy The 10 Basic Steps of CBA
	 Readings: Boardman et al. Chapter 1 Scott Farrow, How Not to Lie with Benefit-costs Analysis, <i>The Economists Voice</i>, 10:45-50 Dudley, S., Belzer, R., Blomquist, G., Brennan, T., Carrigan, C., Cordes, J., Zerbe, R. (2017). Consumer's Guide to Regulatory Impact Analysis: Ten Tips for Being an Informed Policymaker. Journal of Benefit-Cost Analysis, 8(2), 187-204. Skim—Look Briefly) Office of Management and Budget. Circular A-4. 2003. <u>https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf</u> (Skim Table of Contents and Skim—Look Briefly at Chapters) EPA, Guidelines for Preparing Economic Analyses, <u>https://www.epa.gov/environmental-economics/guidelines-preparing-economic-analyses</u>
Sept. 29	In-class Activity
	 Student directed discussion of: Abelson, Peter. "A partial review of seven official guidelines for cost-benefit analysis." <i>Journal of Benefit-Cost Analysis</i> 11, no. 2 (2020): 272-293. For this activity, I want you to focus on starting to understand the steps of cost-benefit analysis and some
	of the important issues that arise in conducting cost-benefit analysis.
	Be prepared to discuss the questions below.
	Readings:
	 Most local and state representatives promote policies that are intended to benefit their constituents. How does this relate to the issue of standing and what would be your recommendation to a local elected official about this issue, for example, when proposing policies that encourage employment in their district? What is the difference between equivalent variation and compensating variation? What do most countries' guidelines suggest using? What are secondary markets? Is employment and macroeconomic benefits considered within the scope of a cost-benefit analysis? Do you think a life today should be valued at more or less than a life 50 years from now? Government uses taxes to provide funding to implement policies. How should this be
	incorporated into a cost-benefit analysis?6. When is benefit-cost ratio most useful?

	Detailed Course Outline
Oct. 4	In-class Activity and Assignment #1: Applying Boardman et al.'s 10 Steps
	Assignment due by the start of class. Assignment should be uploaded to Canvas. Students should be prepared to present and discuss their analysis in class.
	Read:
	• Garfinkel, Irwin, Laurel Sariscsany, Elizabeth Ananat, Sophie M. Collyer, Robert Paul Hartley, Buyi Wang, and Christopher Wimer. <i>The Benefits and Costs of a US Child Allowance</i> . No. w29854. National Bureau of Economic Research, 2022.
	For this assignment, I want you to focus on identifying and assessing Boardman et al.'s 10 steps of cost- benefit analysis. Not every step will be present. And I understand you are just starting to learn cost- benefit analysis and that you are answering as best you can with current knowledge.
	Answer the following:
	 What is the economic rationale (e.g., market failure) for a "child allowance"? What are the primary benefits? How were these benefits monetized? Were any benefits omitted? Not monetized? What are the primary costs? Were any costs omitted? Were any costs not monetized? What discount rate was used? Was the sensitivity of this assumption assessed? Were distributional/equity issues considered? Do you think the policy passes a cost-benefit test?
	Minimum of one page and maximum of three pages; 1-inch margins, 11-12 pt. font.
Oct. 6	Recorded Lecture (To be Watched Before Class): Review of Supply and Demand Analysis of Markets—Fundamental Tool of CBA Consumer, Producer and Government Surplus
	Readings:Boardman et al. Chapter 3 and Chapter 3, Appendix A
	In-class Activity: Q&A on recorded lecture
	Student directed supply and demand analyses of the following policies (be prepared to discuss in class):
	 Free college tuition Subsidized child care Tax credits for electric cars

	Detailed Course Outline
Oct. 11	In-class Activity and Assignment #2: Supply and Demand Analysis
	Assignment due by the start of class. Assignment should be uploaded to Canvas. Students should be prepared to present and discuss their analysis in class.
	 Students will be randomly assigned to read one of the following articles. Ahern et al. 2022. "Robbing Peter To Pay Paul? The Redistribution Of Wealth Caused By Rent Control." Working Paper 30083, <u>http://www.nber.org/papers/w30083</u> (Focus on Sections II and III).
	 Ekaterina Jardim & Mark C. Long & Robert Plotnick & Emma van Inwegen & Jacob Vigdor & Hilary Wething, 2022. "Minimum-Wage Increases and Low-Wage Employment: Evidence from Seattle," American Economic Journal: Economic Policy, vol 14(2), pages 263-314. (Again, focus on the big picture and don't get lost in the details of this long article)
	Provide a brief summary of the article. Conduct a supply and demand analysis of the issues discussed in the article (rent control or minimum wage). The objective is to have an analysis that can explain the conclusions of the article. So, read the article (but don't get lost in the details) and identify two to three of the most important conclusions. Then use a supply and demand analysis to illustrate (graphs necessary) and discuss the reasoning underlying those conclusions. For all analyses, identify the change in market surplus due to the policy. The discussion in the text should be with respect to your graphs and analysis.
	Two page minimum and three page maximum; 1-inch margins, 11-12 pt. font.
Oct. 13	Recorded Lecture (To be Watched Before Class):Fundamental Theorems of Welfare Economics , Hicks-Kaldor CriterionCBA Decision RulesThe Cost of Public Funds
	 Readings: World Bank, "Cost-Benefit Analysis: Evaluation Criteria (Or: "Stay away from the IRR")", Knowledge Brief, 2008. Boardman et al. Chapters 2 and 19 (Read Casually) Joseph Persky. 2001. Cost-benefit Analysis and the Classical Creed. <i>Journal of Economic Perspectives</i>, Volume 15, Number 4, Pages 199 –208 In-class Activity: Q&A on recorded lecture
	 Student directed discussion of: Boardman, A., Greenberg, D., Vining, A., & Weimer, D. (2020). Efficiency without Apology: Consideration of the Marginal Excess Tax Burden and Distributional Impacts in Benefit–Cost Analysis. Journal of Benefit-Cost Analysis, 11(3), 457-478. doi:10.1017/bca.2020.18
	Discussion Questions (be prepared to discuss in class): explain the following:
	"The METB may be ignored because analysts think that revenue extracted from taxpayers is essentially a transfer that does not affect efficiency. However, this approach ignores the actual social cost of raising tax revenue. Raising tax revenues requires the expenditure of real resources and typically distorts markets. The social cost of these expenditures and distortions, the METB, should be taken into account in a comprehensive BCA."
	"We agree with the perspective that BCA best contributes to good public policy by facilitating explicit consideration of the tradeoff between allocative efficiency and other social values, such as a more equal distribution of wealth In view of all the uncertainties involved in BCA, good practice usually involves communicating the components of benefits and costs, as well as net benefits. If one were to monetize moral sentiments, it would be especially important to convey this component of benefits to help avoid over- or undercounting of distributional values"

·	Detailed Course Outline
Oct. 18	Recorded Lecture (To be Watched Before Class)
	Market Failures and Policies to Address Them
	Externalities, Internalities, Information Problems, Imperfect Competition, Public Goods Government Failure
	Government Francie
	Readings:
	• Boardman et al. Chapter 5
	• (Read Casually Chapters 1,2, and 6-8) Winston, Clifford. 2006. Government Failure Versus
	Market Failure. Brookings Institution Press and AEI.
	In-class Activity
	Q&A on recorded lecture
	Student directed discussion of:
	• Sunstein, C. (2020). Behavioral Welfare Economics. Journal of Benefit-Cost Analysis, 11(2),
	196-220. doi:10.1017/bca.2020.14
	Discussion Questions (he prepared to discuss in class); Discuss the following quotes
	Discussion Questions (be prepared to discuss in class): Discuss the following quotes.
	1. "But as a general rule, the claim for the epistemic advantages of choosers is more than
	plausible. At the same time, it has taken a real battering from behavioral findings."
	2. "We can link Bernheim's (2016) argument here with the suggestion that behavioral
	economics justifies "means paternalism" but not necessarily "ends paternalism" (Sunstein,
	2014b)."
	3. "The first is that for behavioral economics and behaviorally informed law and policy, indirect judgments, or judgments about means, really are the coin of the realm."
	4. "The second is that with respect to direct judgments, behavioral welfare economics, like
	standard welfare economics, should proceed with humility."
Oct. 20	In-class Activity and Assignment #3: Willingness to Pay—When do we trust people?
	Assignment due by the start of class. Assignment should be uploaded to Canvas. Students should be prepared to present and discuss their analysis in class.
	be prepared to present and discuss their analysis in class.
	Read:
	• Tobacco Products; Required Warnings for Cigarette Packages and Advertisements, p-22-44
	• Chaloupka, Frank J., Kenneth E. Warner, Daron Acemoğlu, Jonathan Gruber, Fritz Laux,
	Wendy Max, Joseph Newhouse, Thomas Schelling, and Jody Sindelar. "An evaluation of the
	FDA's analysis of the costs and benefits of the graphic warning label regulation." Tobacco
	<i>Control</i> 24, no. 2 (2015): 112-119.
	Provide a brief summary of the recommendation/conclusion of the Regulatory Impact Analysis.
	Next, discuss the main rationales/justifications for government intervention in the market.
	Third, based on this rationale (assume it is correct), use a supply and demand analysis to show (include
	graphs) why the intervention may be effective—increase social welfare. Identify changes in consumer,
	producer and government surplus.
	Fourth, read Chaloupka et al. and incorporate into your analysis the argument presented that the costs of
	intervention have been overestimated because it includes lost consumer surplus.
	Make sure your discussion is linked to your graphs.
l	Two page minimum and three page maximum; 1-inch margins, 11-12 pt. font.
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Detailed Course Outline

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Oct. 25	Recorded Lecture (To be Watched Before Class)
	Valuing Inputs and Outputs in Primary Market
	Readings:
	• Boardman et al. Chapters 4, 5 and 6
	In-class Activity Q&A on recorded lecture
	 Student directed discussion of: Davis, Lucas, Estimating the Price Elasticity of Demand for Subways: Evidence from Mexico (December 2020). NBER Working Paper No. w28244, Available at SSRN: <u>https://ssrn.com/abstract=3753153</u>
	 Discussion Questions (be prepared to discuss in class): 1. What is the elasticity of demand that Davis estimated? 2. What approach (method) did he use to obtain the estimate? Discuss the internal validity of that method. 3. How did he use the elasticity in the cost-benefit analysis? 4. What was missing from cost-benefit analysis?
Oct. 27	In-class Activity and Assignment #4: Indirect Measurement of Primary Benefits
	Assignment due by the start of class. Assignment should be uploaded to Canvas. Students should be prepared to present and discuss their analysis in class.
	 Read the following article. Reynolds, A. J., Temple, J. A., White, B. A., Ou, S. R., & Robertson, D. L. (2011). Age 26 cost-benefit analysis of the child-parent center early education program. <i>Child development</i>, 82(1), 379–404. doi:10.1111/j.1467-8624.2010.01563.x
	Provide a brief summary of the article.What is the primary market?Show a supply and demand analysis that would be consistent with measuring benefits in the primary market (assume the policy is free childcare).Were the benefits and costs assessed using the primary market? Discuss why or why not.Summarize and evaluate the appropriateness of benefit (impact) categories and comment/discuss the quality of the empirical evidence supporting estimates.
	Two page minimum and three page maximum; 1-inch margins, 11-12 pt. font.

Detailed Course Outline

Detailed Course Outline Recorded Lecture (To be Watched Before Class) Nov. 1 Valuing Inputs and Outputs in Secondary Markets **Readings:** • Boardman et al. Chapter 7 In-class Activity Q&A on recorded lecture Student directed discussion of: (Read Casually) Bartik, Timothy J. "Including Jobs in Benefit-Cost Analysis" Annual Review of Resource Economics 4 (2012): 55-73. Discussion Questions (be prepared to discuss in class): 1. Are jobs usually counted in a CBA? Why or why not? 2. If you were going to count jobs, then how would you monetize the benefit? (Read Introduction and Sections 1.4 and 2; other sections can be skipped) Edward L. Glaeser and James M. Poterba . 2020. "Introduction to "Economic Analysis and Infrastructure Investment", in "Economic Analysis and Infrastructure Investment", University of Chicago Press, http://www.nber.org/chapters/c14351 Discussion Questions (be prepared to discuss in class): 1. Are macroeconomic externalities related to distributional and equity issues? What does the evidence say about macroeconomic effects of public policies, such as 2. infrastructure spending? Nov. 3 **Recorded Lecture (To be Watched Before Class)** Discounting **Readings:** Boardman et al. Chapters 9 and 10 • Arrow, K., M. et al. Cropper, C. Gollier, B. Groom, G. Heal, R. Newell, W. Nordhaus, R. Pindyck, W. Pizer, P. Portnoy, T. Sterner, R.S.J. Tol, and M. Weitzman; "Determining Benefits and Costs for Future Generations," Science 26 July 2013; Vol. 34: 349-350 (Read Sections 1-3) Drupp M, Freeman M C, Groom B and Nesje F (2018). 'Discounting Disentangled'. Forthcoming in the American Economic Journal: Economic Policy. Working paper version: Grantham Research Institute on Climate Change and the Environment Working Paper No. 172 Council of Economic Advisers, "Discounting For Public Policy: Theory And Recent Evidence On The Merits Of Updating The Discount Rate," January 2017 MacAskill, William. "The Case for Longtermism" New York Times August 5, 2022 **In-class Activity** O&A on recorded lecture Student directed discussion of: (Read pages 1-17) Chapter 6: National Academies of Sciences, Engineering, and Medicine. 2017. Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide. Washington, DC: NAP Discussion Questions (be prepared to discuss in class): 1. Describe/explain each component of the social discount rate (i.e., Ramsey formula) in Table 6.1. 2. Discuss whether there is "right" value of reach component. 3. Discuss the issue illustrated by Figures 6-3 and 6.4 and Table 6.2 and its practical importance to a CBA.

	Detailed Course Outline
Nov. 8	In-class Activity and Assignment #5: Social Cost of Carbon
	Assignment due by the start of class. Assignment should be uploaded to Canvas. Students should be prepared to present and discuss their analysis in class.
	 Read: Carleton, Tamma and Greenstone, Michael, Updating the United States Government's Social Cost of Carbon (January 14, 2021). University of Chicago, Becker Friedman Institute for Economics Working Paper No. 2021-04,
	Identify and discuss the importance of the three ingredients referred to in the following recommendation: <i>Recommendation: We recommend that the Biden administration replace all existing IAM damage functions with those that meet these three criteria.</i>
	Is the following recommendation based on the Ramsey model? Do you agree with it? Discuss. <i>Recommendation:</i> We recommend continuing to rely on existing asset markets to guide the choice of discount rates. Based on recent asset market trends, we recommend a discount rate of no higher than 2 percent.
	The following recommendation is to give the world (globe) standing in climate-related policies. Do you agree with this? Discuss. Is this standard followed for other policies/programs? Why or why not? <i>Our recommendation is to use global damages in calculating the SCC</i> .
	Two page minimum and three page maximum; 1-inch margins, 11-12 pt. font.
Nov. 10	Recorded Lecture (To be Watched Before Class) Risk and Uncertainty
	 Readings Boardman et al. Chapters 11 (Section 1.1) and 12 (Read Casually) Sunstein, Cass R., "Irreversible and Catastrophic," 91 <i>Cornell Law Review</i> 841 (2006) Flyvbjerg, Bent and Bester, Dirk W., The Cost-Benefit Fallacy: Why Cost-Benefit Analysis Is Broken and How to Fix It (September 6, 2021). Journal of Benefit-Cost Analysis, October, pp. 1-25 (focus on Sensitivity Analysis at end of article) Greenberg, D. (2012). A cost-benefit analysis of Tulsa's IDA program: Findings from a long-term follow-up of a random assignment social experiment (CSD Working Paper No. 12-58). St. Louis, MO: Washington University, Center for Social Development
	In-class Activity Q&A on recorded lecture
	Student directed discussion of:
	• Flyvbjerg, Bent and Bester, Dirk W., The Cost-Benefit Fallacy: Why Cost-Benefit Analysis Is Broken and How to Fix It (September 6, 2021). Journal of Benefit-Cost Analysis, October, pp. 1-25
	 Discussion Questions (be prepared to discuss in class): 1. Does the article present a case for retrospective cost-benefit analysis? 2. What are possible explanations for why costs are systematically underestimated? 3. What possible explanations are there for why benefits are systematically overestimated? 4. What are the proposed solutions to the "cost-benefit fallacy"? Do you think these solutions are feasible? Will they be effective?

	Detailed Course Outline
Nov. 15	Recorded Lecture (To be Watched Before Class) Measuring Program/Policy Impacts: Revealed Preference and Indirect Methods
	Readings:Boardman et al. Chapters 14, 15, 17
	In-class Activity Q&A on recorded lecture
	(Students will be randomly assigned to an article)
	 Student directed discussion of: Sandra E. Black. Do Better Schools Matter? Parental Valuation of Elementary Education, The Quarterly Journal of Economics, Vol. 114, No. 2 (May, 1999), pp. 577-599
	Discussion Questions (be prepared to discuss in class):1. Describe the basic hedonic regression used and what question it was used to answer.2. What is wrong with that basic approach and how analysis address this problem?3. What was the main finding? Does it make economic sense? How would you decide?
	• (Read Introduction. Skip Parts III and V, although V may be of interest; focus on Part IV) Currie, Janet, Lucas Davis, Michael Greenstone, and Reed Walker. 2015. "Environmental Health Risks and Housing Values: Evidence from 1,600 Toxic Plant Openings and Closings." <i>American Economic Review</i> , 105 (2): 678-709.
	Discussion Questions (be prepared to discuss in class):1. Describe the basic hedonic regression used and what question it was used to answer.2. What is wrong with that basic approach and how analysis address this problem?3. What was the main finding? Does it make economic sense? How would you decide?
Nov. 17	In-class Activity
	 Readings: Measuring the Value of a Statistical Life (VSL) Cropper, Maureen and Hammitt, James K. and Robinson, Lisa A., Valuing Mortality Risk Reductions: Progress and Challenges (October 2011). Annual Review of Resource Economics, Vol. 3, Issue 1, pp. 313-336, 2011. Aldy, J. E., & Viscusi, W. K. (2008). Adjusting the Value of a Statistical Life for Age and Cohort Effects. Review of Economics and Statistics, 90 (3), 573-581.
	 Student directed discussion of: Doti, James L., A Model to Explain Statewide Differences in COVID-19 Death Rates (October 10, 2020). Available at SSRN: https://ssrn.com/abstract=3731803 or http://dx.doi.org/10.2139/ssrn.3731803
	 Discussion Questions (be prepared to discuss in class): 1. Describe the conceptual model used in the empirical analysis. 2. What methods of analysis were used? 3. What are the limitations of the empirical analysis? 4. What was the value of a statistical life used in the analysis? What are the advantages and disadvantages of this choice?

	Detailed Course Outline	
	Assignment #6: Estimating Benefits through Indirect Methods	
Assignment due by the start of class. Assignment should be uploaded to Canvas. Students should be prepared to present and discuss their analysis in class.		
	 Read: Kahn, Matthew E., and Nils Kok. "The capitalization of green labels in the California housing market." <i>Regional Science and Urban Economics</i> 47 (2014): 25-34. 	
	Describe the method that is being used to obtain the value of green construction. Describe the results and discuss any potential problems with the method. For example, does the approach measure all benefits? What would be an alternative way to estimate the benefits of green construction? Discuss.	
	Two page minimum and three page maximum; 1-inch margins, 11-12 pt. font.	

	What would be an alternative way to estimate the benefits of green construction? Discuss.
	Two page minimum and three page maximum; 1-inch margins, 11-12 pt. font.
Nov. 29	 Value of Time: Application to Zonal Travel Cost and Other CBA Methods (Just focus on understanding the field experiments and results of this article) Goldszmidt, Ariel and List, John A and Metcalfe, Robert D and Muir, Ian and Smith, V. Kerry and Wang, Jenny. 2020. "The Value of Time in the United States: Estimates from Nationwide Natural Field Experiments", National Bureau of Economic Research", http://www.nber.org/papers/w28208" Discussion Questions (be prepared to discuss in class):
Dec. 1	 Recorded Lecture (To be Watched Before Class) Measuring Program/Policy Impacts: Stated Preference and Contingent Valuation Readings: Boardman et al. Chapters 13, 16 Catherine L. Kling, Daniel J. Phaneuf and Jinhua Zhao. 2012. "From Exxon to BP: Has Some Number Become Better Than No Number?" <i>Journal of Economic Perspectives</i> Vol. 26, No. 4, pp. 3-26. <u>http://www.aeaweb.org/articles.php?doi=10.1257/jep.26.4</u> Carson, Richard. 2012. "Contingent Valuation: A Practical Alternative When Prices Aren't Available" <i>Journal of Economic Perspectives</i> Vol. 26, No. 4, pp. 27-42. <u>http://www.aeaweb.org/articles.php?doi=10.1257/jep.26.4</u> Hausman, Jerry. 2012. "Contingent Valuation: From Dubious to Hopeless" <i>Journal of Economic Perspectives</i> Vol. 26, No. 4, pp. 43-56. <u>http://www.aeaweb.org/articles.php?doi=10.1257/jep.26.4</u> Tuncel, Tuba and James K Hammitt. "A new meta-analysis on the WTP/WTA disparity." <i>Journal of Economics and Management</i>, 175-187.

Nov. 17

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Dec. 1	In-class Activity Q&A on recorded lecture Student directed discussion of:
	 Ludwig, J., Cook, P.J. The Benefits of Reducing Gun Violence: Evidence from Contingent-Valuation Survey Data. <i>Journal of Risk and Uncertainty</i> 22, 207–226 (2001). https://doi.org/10.1023/A:1011144500928 Cohen, M. (2015). Willingness to Pay to Reduce White-Collar and Corporate Crime. Journal of Benefit-Cost Analysis, 6(2), 305-324
	 What method of elicitation of value was used in each article? Discuss the advantages and disadvantages. Discuss whether the articles laid the groundwork appropriately for the elicitation of value. For example, what was the payment vehicle? Was the good well describe and a clearly identifiable good? Does crime have direct use, passive use or other types of use value? Comment on the adequacy of the samples. What were the finings? Are they plausible?
Dec. 7	Assignment # 7: Contingent Valuation of Residential Racial/Ethnic Integration Assignment due by 9:30 AM December 7, 2021. Assignment should be uploaded to Canvas. Design a contingent valuation study of the value of greater racial/ethnic residential integration. Provide a
	thorough description of how you plan to conduct the study and discuss the motivation and justification of your choices. Two page minimum and three page maximum; 1-inch margins, 11-12 pt. font.