

List of Topics for Final Examination

1. Dealing with uncertainty (Lecture 8)
  - Expected values
  - Decision trees and expected net benefits
  - Sensitivity analysis
    1. Partial sensitivity analysis
    2. Worst case analysis
    3. Monte Carlo sensitivity analysis
  - The value of information
  
2. Valuing impacts from observed behavior: Indirect market methods (Lecture 9)
  - Market analogy method
  - The trade-off method
    - i. The value of time saved
    - ii. The value of statistical life
  - Intermediate good method
  - Asset valuation method
  - Hedonic pricing method
  - Travel cost method
  - Defensive expenditures method
  - Case study: Fezzi, C., Bateman, I. J., and Ferrini, S. (2014). Using revealed preferences to estimate the value of travel time to recreation sites. *Journal of environmental economics and management*, 67, 58-70. (Lecture9\_case)
  
3. Contingent valuation: Using surveys to elicit information about costs and benefits (Lecture 10)
  - Overview of CV methods
    1. Stated preference
    2. Elicitation of WTP
  - 2 methods:
    1. direct elicitation
    2. dichotomous choice methods
  - Payment vehicle
  - CV problems and issues: hypotheticality, WTA vs WTP, judgment bias
  - Case studies:

1. Choe, K., Whittington, D., & Lauria, D. T. (1996). The economic benefits of surface water quality improvements in developing countries: a case study of Davao, Philippines. *Land Economics*, 519-537.

(Lecture10\_case1)

2. Corso, P.S., J.K. Hammitt, and J.D. Graham. 2001. "Valuing Mortality-Risk Reduction: Using Visual Aids to Improve the Validity of Contingent Valuation." *Journal of Risk and Uncertainty*. 23(2):165-184.

(Lecture10\_case2)

4. Case studies:

- Environment (see Choe, Whittington, & Lauria (1996) in CV topic)
- Transportation: Boardman, A. E., Laurin, C., Moore, M. A., & Vining, A. R. (2009). A cost-benefit analysis of the privatization of Canadian National Railway. *Canadian Public Policy*, 35(1), 59-83.
- Health: Whittington, D., Jeuland, M., Barker, K., & Yuen, Y. (2012). Setting priorities, targeting subsidies among water, sanitation, and preventive health interventions in developing countries. *World Development*, 40(8), 1546-1568.

5. Cost-effectiveness Analysis (Lecture 12)

- What is cost-effectiveness analysis (CEA)?
- CE and ICER (incremental cost-effectiveness ratio)
- Scale problems and imposing constraints to deal with scale difference
- Cost-utility analysis (CUA)
- QALY
- Approaches to determine health-related quality of life (HRQoL):
  1. Health rating method
  2. Time trade-off method
  3. Standard gamble method
  4. Health index method