

Review Questions for Econ. 6535 Resource and Environmental Economics

Sixth Set

An Introduction to nonmarket valuation

1. What is the contingent valuation method for valuing in situ natural resources?
2. Define the following terms: market commodities and nonmarket commodities. Now provide environmental examples of each.
3. What is the travel-cost method for valuing site-specific recreational activities? Briefly explain what it is and how it can be used to value recreational sites.
4. Consumer's surplus is typically measured in monetary units, but it could be measured in other units such as time working, or in terms of a particular commodity such as hazel nuts. If it was measured in units of time, consumer's surplus for an environmental commodity would be how much time one would be willing to work to have the environmental commodity available. The hazel nut consumer's surplus associated with having commodity x available at price p would be how many nuts one would be willing to give up to have commodity x available at price p . Would you expect individuals who, relative to other individuals, have a high consumer's surplus in terms of money to also have a high consumer's surplus measured in units of time, and would you expect individuals who, relative to other individuals, have a high consumer's surplus in terms of time to also have a high consumer's surplus measured in terms of money? Why? Discuss the implications of measuring consumer's surplus in terms of money.
5. What are use values and how do they differ from nonuse values? Why is the distinction important? As part of your answer define use value and nonuse value. Discuss some of the aspects and implications of including nonuse values in benefits/cost analysis for environmental policies.
6. Imagine a world where nonuse values are not considered in environmental policy. Ignoring transportation costs, where would toxic waste sites be located in such a world?
7. The famous economist Herkimer Snerd recently stated in a speech to the Friends of Finance, "If in money terms the gain to the gainers from an environmental policy is greater than the loss to the losers, the policy will make society better off and should be enacted." Is Herkimer correct? Discuss.
8. Argue that all the benefits from preserving the Cunningham property are capitalized into property values. Now argue that they are not all capitalized into property values.

9. You are at a party talking to Burt Backpacker, and he is arguing that backpacking trips are a costless activity. Argue in a way that Burt would comprehend that he is wrong and that you could use the costs he incurs to estimate how he values backpacking trips.
10. Write a short essay (one to three pages) that explains the contingent valuation method and argues that it is a good and defensible method for estimating environmental benefits and/or costs. Then give your essay to one of your classmates and have him or her write a brief retort that argues that the contingent valuation method is not a defensible method for estimating environmental benefits and/or costs.
11. Write the retort to someone else's answer to the last question.
12. Consider the designation of a new wilderness area in Colorado. Assume that the economics consulting firm of Snerd, Snerd, and Gomer has accurately determined the CV each hiker and back packer would associate with designation and that the sum of all these individual CV's is \$5 million. Snerd, Snerd, and Gomer included all the aspects of the change in their CV calculation for the hikers and backpackers. However, designation of this Wilderness Area will decrease the availability of water to grow Soy beans on the plains of Colorado. This reduction will cause the price of Tofu to rise by \$1 a pound. Assume that before the change, four million pounds of Tofu was produced and sold. This price increase obviously makes Tofu consumers worse off. Note that hikers and backpackers are not in this group; i.e., they never consume Tofu. Convince me whether designating the Wilderness Area is a potential pareto improvement. What if the price increased by \$1.50 rather than by \$1?
13. Critique the NYT's article, Polls May Help Government Decide the Worth of Nature.
14. Do you believe a typical American would pay \$30 to avoid to avoid another oil spill in Prince William Sound of the magnitude of the Exxon Valdez spill? Explain. If not, is the amount they would be willing-to-pay more or less? Why?
15. Why does industry have such a great interest in passive-use values?
16. Define the following terms and discuss their relevance to the Contingent Valuation Method: embedding, free-rider bias, and starting point bias. As part of your answer discuss how you might attempt to minimize the potential problems.
17. What is consumer's surplus and why do we care about estimating the consumer's surplus associated with different policies. As part of your answer, provide some examples.

18. What are choice experiments, and how are they used to value environmental commodities, As part of your answer, provide some examples.
19. Define the term Pareto Improvement. Define the term Potential Pareto Improvement. Discuss the advantages and disadvantages of each as a rule for whether a project/policy should be enacted
20. Assume that Fred's demand curve for trips to a recreational site is
$$Trips = \alpha - \beta(cost)$$

You have the following data. If cost were zero, Fred would take 20 trips, and if cost were \$40 or greater, Fred would take no trips. Draw the graph of Fred's demand function with \$ on the vertical axis and trips on the horizontal axis.

What are the values of α and β ? How many trips will Fred take if the cost is \$10/trip?
What is Fred's willingness-to-pay to have the site available at a cost of \$10 a trip?
21. What are use values and how do they differ from nonuse values? Why is the distinction important? As part of your answer define use value and nonuse value. Discuss some of the aspects and implications of including nonuse values in benefits/cost analysis for environmental policies.
22. Nonmarket valuation uses stated preference techniques and revealed preference techniques to value environmental amenities. Explain to the reader the difference between stated preferences and revealed preferences. List two stated preference techniques for nonmarket valuation and two revealed preference techniques of nonmarket valuation.
23. Can human life be valued?
24. Why is it possible to look at wages or housing/land prices and draw conclusions about the value of environmental amenities?
25. What valuation technique would you use to measure the value of improving water quality in a local lake or river? Why?
26. What valuation technique would you use to measure the value to us of preserving a tropical rain forest? Why?