Class # 6 and 7
Values and Valuation

Principle Methods for Nonmarket Valuation

**Revealed Preference Methods**
*Best when we can look at actual behavior*
- Travel Cost Method
- Hedonic valuation
- Averting or defensive expenditures

**Stated Preference Methods**
*Only option when there are no actions to look at*
- Contingent Valuation (and related stated preference methods)

A break down of value

- Extractive Uses
- Non-extractive Use
  - Direct Use
  - Indirect Use
  - Bequest Value
  - Existence Value
  - Option Value
- Non-use Value

**Total Economic Value**

A break down of value

Total Economic Value

Use Value

Direct Use

Indirect Use

Non-use Value

Non-extractive Use

Extractive Uses

Surveys

A break down of value

Total Economic Value

Use Value

Direct Use

Indirect Use

Non-use Value

Non-extractive Use

Extractive Uses

Non-market valuation methods required

Four Main Types of Non-market Valuation

1. Travel-Cost Method
2. Hedonic Pricing
3. Defensive or averting expenditures
4. Stated-preference (e.g. the Contingent Valuation method)

Travel Cost Method

$/trip

Trips

Travel Cost Method

$/trip

Trips


Four Main Types of Non-market Valuation

1. Travel-Cost Method
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Travel Cost Method

What if there’s an improvement?

The value of the improvement is the change in surplus

Notice that the estimated value will be different for people facing different travel costs.

Travel Cost Exercise

• Big Bird Birding (BBB) offers guided trips to a state park. The cost of the tour is $10 per person. In addition, people have to pay transportation costs that vary depending upon how far they have to travel. Specifically, the average cost is $10 for each 100 miles that individuals have to travel. The table below presents the average number of guided trips taken by birding enthusiasts who live in 4 different towns at various distances from the park.

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Part A (6 minutes)

Step 1: Calculate cost/trip

Step 2: Graph demand curve

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Part B (4 minutes)

Estimate value of surplus to people in Town C

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Part C (4 minutes)

New Demand Curve with everyone taking 1 fewer trip

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Part D (6 minutes)

Estimate benefit to people in Town C if BBB doesn’t charge.

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Four Main Types of Non-market Valuation

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3. Defensive or averting expenditures
4. Stated-preference (e.g. the Contingent Valuation method)
The Hog Farm Article

• What was one environmental benefit or cost discussed in the article.
• What type of benefit or cost was it (i.e., where does it fit in the value taxonomy?)
• What valuation method was used or could be used to place a dollar value on that benefit or cost?

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Averting or defensive expenditures

• Finds values using markets for related goods or services that provide similar benefits.
• Example: The value of a wetland that cleans the water could be estimated using the cost of treating the same quantity of water.

When do we use the averting or defensive expenditures approach? (3 minutes)

Which of the following would be the most & 2\textsuperscript{nd} most appropriate case for this approach?

A. The extinction of a bird species.
B. An increase in air pollution that causes respiratory problems.
C. The pollution of a river that is used for drinking water.
D. Rising sea levels.