MÄR 2 - ZSOLT MIKLÓSVÖLGYI
PHD CANDIDATE IN LITERARY AND CULTURAL STUDIES, PÁZMÁNY PÉTER CATHOLIC UNIVERSITY, BUDAPEST
VISIONS AND MIMICS: INTERWAR ARCHITECTURAL MODERNISM IN BUDAPEST

MÄR 9 - EWA ZAWOJSKA
PHD CANDIDATE IN ECONOMICS, UNIVERSITY OF WARSAW, POLAND
HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

MÄR 15 - MARINA PRAŽETINA
PHD CANDIDATE AT THE UNIVERSITY OF ZAGREB, CROATIA
TRUSTWORTHY SCIENCE FOR POLICY: AVOIDING BIASES AND MISLEADING INFORMATION

MÄR 23 - ONDŘEJ HAVÁČ
PHD CANDIDATE AT THE FACULTY OF ARTS, MASARYK UNIVERSITY, CZECH REPUBLIC
THE IDENTITY IN EXILE: THE CONSTRUCTION OF CZECH NATIONAL IDENTITY IN LIFE-STORIES OF THE POST-PRAHVE SPRING REFUGEES

WIRTH.INTERNET@UAlberta.CA | 780.492.1444
WIRTH.UALBERTA.CA
MAR 9 - EWA ZAWOJSKA
PHD CANDIDATE IN ECONOMICS, UNIVERSITY OF WARSAW, POLAND
HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS
HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

1. Individuals cannot be excluded from the use of these goods
2. The use of the goods by one individual does not reduce availability the goods to others

Examples: fresh air, biodiversity, street lighting
1. Individuals cannot be excluded from the use of these goods
2. The use of the goods by one individual does not reduce availability the goods to others

Examples: fresh air, biodiversity, street lighting

Benefits expressed in terms of money
WHY

HOW TO MEASURE ECONOMIC BENEFITS
FROM PUBLIC GOODS
1. Cost-benefit analysis of public policies
2. Litigation over environmental damages
Deepwater Horizon oil spill

• 20th April 2010 – an explosion on BP’s drilling platform
• 134 million gallons of oil spilled into the Gulf of Mexico (For non-Americans: 507 million liters)
• The largest offshore oil spill in U.S. history
Deepwater Horizon oil spill

• Injuries to natural resources: fish, birds, turtles, marine mammals, their habitats, nearshore ecosystems

• Lost human uses of these resources: recreation, fishing, hunting

• Restoration needed to address impacts from the spill:
  – to return the Gulf to the before-the-spill condition
  – to compensate the public for lost natural resource services
Deepwater Horizon oil spill

• How much should BP pay the public / government?
• To compensate the public, we need to know how the public value the losses.
• What is the value of the lost natural resource services?
Deepwater Horizon oil spill

- How much should BP pay the public/government?
- To compensate the public, we need to know how the public value the losses.
- What is the value of the lost natural resource services?

- So we come back to the issue:

**How to measure economic benefits from public goods**
How did they do that in the Deepwater Horizon case?

3,656 in-person interviews on a nationally representative sample of the adult population

The only way to prevent the effects of the next spill would be to put a second pipe in place at the same time that the first pipe is drilled.

“Prevention Program”: The government pays to put a second pipe in each new well that will be drilled in the Gulf.

Do you vote for or against the “Prevention Program”, which will cost you the onetime tax of $135?

FOR / AGAINST
How did they do that in the Deepwater Horizon case?

3,656 in-person interviews on a nationally representative sample of the adult population

The only way to prevent the effects of the next spill would be to put a second pipe in place at the same time that the first pipe is drilled.

“Prevention Program”: The government pays to put a second pipe in each new well that will be drilled in the Gulf.

Do you vote for or against the “Prevention Program”, which will cost you the onetime tax of $135?

FOR / AGAINST

Bid levels: $15, $65, $135, $265, $435
Survey results: Willingess-to-pay distribution

$ 8.8 billion settlement for natural resource damages
Do you vote for or against the “Prevention Program”, which will cost you the onetime tax of $135?

FOR / AGAINST
Do you vote for or against the “Prevention Program”, which will cost you the onetime tax of $135?

FOR / AGAINST

Stated preference methods
Stated preference methods

• Used to determine public’s preferences, especially towards public goods
• Survey-based – in specially designed surveys respondents state what they would do
• Flexible – enable valuation of hypothetical states
• Important for cost-benefit analysis – allow to estimate the benefits
Stated preference methods

• Used to determine public’s preferences, especially towards public goods
• Survey-based – in specially designed surveys respondents state what they would do
• Flexible – enable valuation of hypothetical states
• Important for cost-benefit analysis – allow to estimate the benefits

But much scepticism whether survey responses reflect actual preferences

• Surveys are often (seen as) hypothetical
• Lack of economic-based incentives to answer a survey truthfully
• Empirical evidence on hypothetical bias
• Strategic voting
CORRECTLY

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS
How to incentivise respondents to state their preferences truthfully?
How to incentivise respondents to state their preferences truthfully?

Theory suggests...

- The survey should be perceived as consequential:
  - Respondents care about the good being valued.
  - Respondents believe that their responses will affect the final decision of the authority. (*Policy consequentiality*)
  - Respondents view that the authority can enforce the payment. (*Payment consequentiality*)

- The survey should involve a *yes-no* question on a *single* project.

But how important are these issues in actual, field surveys?
What have I done to answer my PhD research question?

1. A literature review study about available research testing validity of stated preference methods
2. A study on the role of survey consequentiality for truthful preference elicitation
3. A study on the roles of policy consequentiality and payment consequentiality
4. A study on differences in stated preferences in surveys using two- versus three-option formats
1. A literature review study about available research testing validity of stated preference methods

- A large body of research assessing hypothetical bias
- Mixed evidence
- But when we limit evidence to studies that properly incentivise respondents to reveal their preferences...
- A clear finding: stated preference methods are valid!
- (That is, respondents disclose their true preferences.)
2. A study on the role of survey consequentiality for truthful preference elicitation

• Context: Cheap tickets to municipal theatres in Warsaw, Poland

<table>
<thead>
<tr>
<th>Program</th>
<th>No change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entertainment theatres</strong></td>
<td>No change</td>
</tr>
<tr>
<td><strong>Drama repertory theatres</strong></td>
<td>Tickets for 5 PLN</td>
</tr>
<tr>
<td><strong>Children’s theatres</strong></td>
<td>No change</td>
</tr>
<tr>
<td><strong>Experimental theatres</strong></td>
<td>Tickets for 5 PLN</td>
</tr>
<tr>
<td><strong>Annual cost for you (tax)</strong></td>
<td>100 PLN</td>
</tr>
<tr>
<td><strong>Your choice</strong></td>
<td>□</td>
</tr>
</tbody>
</table>

• Differences in consequentiality communicated in survey scripts

• “Do you think that your choices in the survey will influence future decisions regarding financing municipal theatres in Warsaw?”
• Consequentiality perceptions affect stated preferences.

\[ \text{The survey perceived as more consequential} \rightarrow \text{More support for the proposed program} \]

• Communicated consequentiality affects stated preferences.

• Communicated consequentiality has no effect on consequentiality perceptions.
  – Can researchers affect perceptions over consequentiality?
  – Poor survey scripts to influence consequentiality beliefs?
  – Poor measures of consequentiality perceptions?
3. A study on the roles of policy consequentiality and payment consequentiality

• Context: Development of renewable energy sites

<table>
<thead>
<tr>
<th></th>
<th>Wind energy</th>
<th>Biomass energy</th>
<th>Solar energy</th>
<th>I am indifferent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance of an energy site from residential areas</td>
<td>600 m</td>
<td>2500 m</td>
<td>300 m</td>
<td>900 m</td>
</tr>
<tr>
<td>Size of an energy site</td>
<td>Large</td>
<td>Large</td>
<td>Small</td>
<td>Medium</td>
</tr>
<tr>
<td>Type of energy transmission lines</td>
<td>Underground</td>
<td>Underground</td>
<td>Overhead</td>
<td>Overhead</td>
</tr>
<tr>
<td>Change in the electricity bill per month</td>
<td>+30 PLN</td>
<td>-10 PLN</td>
<td>+30 PLN</td>
<td>0 PLN</td>
</tr>
<tr>
<td>My choice</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
3. A study on the roles of policy consequentiality and payment consequentiality

• Policy consequentiality:
  “The project of development of renewable energy infrastructure will indeed be conducted in Poland in the next five years.”

• Payment consequentiality:
  “For the purpose of development of renewable energy infrastructure, the electricity bill will indeed change in the next five years.”

• Five-degree scale from “I definitely agree” to “I definitely disagree”
3. A study on the roles of policy consequentiality and payment consequentiality

• Those believing in policy consequentiality prefer changes to the current state (prefer the project implementation) more than those believing in payment consequentiality.

• Those believing in payment consequentiality state significantly lower willingness to pay for the project than those believing in policy consequentiality.
4. A study on differences in stated preferences in surveys using two- versus three-option formats

- Context: Improvement of tap water quality in Milanówek, Poland
4. A study on differences in stated preferences in surveys using two- versus three-option formats

• Context: Improvement of tap water quality in Milanówek, Poland

<table>
<thead>
<tr>
<th></th>
<th>No change</th>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>As today</td>
<td>50% lower</td>
<td>75% lower</td>
</tr>
<tr>
<td>Hardness</td>
<td>As today</td>
<td>50% lower</td>
<td>35% lower</td>
</tr>
<tr>
<td>Chlorine</td>
<td>As today</td>
<td>80% lower</td>
<td>As today</td>
</tr>
<tr>
<td>Additional cost per month for your household</td>
<td>0 zł</td>
<td>10 zł</td>
<td>70 zł</td>
</tr>
</tbody>
</table>
4. A study on differences in stated preferences in surveys using two- versus three-option formats

Mean willingness-to-pay estimates with 95% confidence intervals [EUR]

- The intervals for each attribute overlap. => No significant differences in preferences
- Narrower intervals for the three-option-based estimates. => More precise estimates
4. A study on differences in stated preferences in surveys using two- versus three-option formats

- Three-option format preferred
- Lack of strategic preference misrepresentation
  - *Too complex choice tasks?*
  - *Uncertainty about others’ preferences?*
CORRECTLY

HOW TO MEASURE ECONOMIC BENEFITS FROM PUBLIC GOODS

• Assure that a survey is perceived as consequential
• Control for respondents’ perceptions over policy / payment consequentiality
• The condition on a survey format appears of lesser importance
Thank you!
Dziękuję!