Tourist Preferences for Southern Resident Killer Whale Whale Watching and Rule Changes in the Salish Sea

Abby Schamp

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Tourist Preferences for Whale Watching and Rule Changes in the Salish Sea

Presented by Abby Schamp
With Hem Nalini Morzaria-Luna, Melissa Knox, and Christopher Anderson
Background

• Southern Resident Killer Whales (SRKW)
  • Listed endangered since 2005
• Large whale watching presence
• New rules on commercial whale watching
  • Limit on number of boats near SRKW
  • SRKW viewing limited by time, month
• Salish Sea also has other whales to view
• Whale watching important for local economies
Research Contributions from this Study

• Willingness-to-pay estimates for whale tours
• Latent Class model to group tourists
• Total willingness-to-pay estimates to measure total demand changes
• Information treatment to understand how potential tour participants respond to learning about a rule change

• Focus on multiple types of whales, though new rules only affect SRKW viewing
Data

• Population of interest: people that would consider paying for whale watching in Salish Sea area (boat tours)

• Recruitment through Facebook ads
  • Targeted to people that like whales and tourism

• 264,000 person “reach”

• 5,981 link clicks, 1,530 completed surveys

• 1,442 responses in sample
## Discrete choice experiment

Observe the following three tour choices and choose which one you would prefer.

<table>
<thead>
<tr>
<th>Type of Whale Observed</th>
<th>Tour 1</th>
<th>Tour 2</th>
<th>Tour 3</th>
<th>I would not choose to go on any tour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Resident Killer Whales</td>
<td>Humpback Whales</td>
<td>Humpback Whales</td>
<td></td>
<td>I will visit a park or a museum...</td>
</tr>
<tr>
<td>Distance from Whales</td>
<td>100 yards</td>
<td>100 yards</td>
<td>100 yards</td>
<td>I will view marine life from shore...</td>
</tr>
<tr>
<td>Time Spent with Whales</td>
<td>40 minutes</td>
<td>40 minutes</td>
<td>20 minutes</td>
<td>I will do other recreation...</td>
</tr>
<tr>
<td>Number of Boats Present with Whales</td>
<td>10 boats</td>
<td>10 boats</td>
<td>10 boats</td>
<td></td>
</tr>
<tr>
<td>Company Environmental Commitment</td>
<td>Company donates to salmon conservation</td>
<td>Company donates to whale conservation</td>
<td>Company participates in whale research</td>
<td></td>
</tr>
<tr>
<td>4 Hour Tour Cost</td>
<td>$90</td>
<td>$165</td>
<td>$90</td>
<td></td>
</tr>
</tbody>
</table>

\[
U_j = ASC + \beta_{SRKW} * SRKW + \beta_{KW} * KW + \beta_{dist} * distance + \beta_{boat} * boat + \beta_{whale.don} * WD + \beta_{salmon.don} * SD + \beta_{whale.research} * WR + \beta_{cost} * cost
\]

\[
WTP_i = -\frac{\beta_i}{\beta_{cost}}
\]
• Some respondents willing to pay over $100 to have less boats
• 25% of respondents prefer to view whales from farther away
• Value-minded whale watchers determine demand for tours
• They are willing to pay the most for viewing distance
Rule Changes

- SRKW viewing changes:
  - Farther viewing distance
  - Max 3 commercial boats
  - Limits on month/times to view
- Can affect tour attributes
  - Distance, whale viewed, distance
- Can also affect perceptions
  - Do tourists think whale watching is eco-friendly? Do tourists think they will see whales if they go whale watching?
## Attribute Changes

<table>
<thead>
<tr>
<th>Whale</th>
<th>Distance</th>
<th>Number of Boats</th>
<th>Percent of sample going on tours</th>
<th>Change in demand for tours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transient</td>
<td>200</td>
<td>10</td>
<td>87%</td>
<td>-</td>
</tr>
<tr>
<td>Transient</td>
<td>100</td>
<td>10</td>
<td>92%</td>
<td>6%</td>
</tr>
<tr>
<td>Transient</td>
<td>300</td>
<td>10</td>
<td>81%</td>
<td>-7%</td>
</tr>
<tr>
<td>Transient</td>
<td>200</td>
<td>3</td>
<td>92%</td>
<td>5%</td>
</tr>
<tr>
<td>Transient</td>
<td>200</td>
<td>20</td>
<td>87%</td>
<td>-1%</td>
</tr>
<tr>
<td>SRKW</td>
<td>300</td>
<td>10</td>
<td>81%</td>
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</tr>
<tr>
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<td>100</td>
<td>10</td>
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<td>6%</td>
</tr>
</tbody>
</table>
Information Treatment

• Half the respondents read treatment information, half read control information

• Treatment information
  • Recent WDFW rule change
  • SRKW info

• Control information
  • SRKW info
Information Treatment Results

- Likelihood of whale watching in Washington in next 5 years = $\beta_0 + \beta_{treatment} \times treatment + \beta_{\text{whale.watching.history}} \times \text{whale.watching.history}$

- Treatment information does not effect respondent stated likelihood to whale watch in Washington or in the world in the next 5 years

- Concern about the impact of commercial whale watching boats is correlated with a decrease in the likelihood of whale watching in Washington
  - Half a point on a 5-point Likert Scale of whale watching likelihood

- Respondents that think they are more likely to see whales if they go whale watching are more likely to go whale watching in Washington
  - 0.4 on a 5-point Likert Scale
Summary

- Tourists love whales and are willing to pay
  - Many come to northwest for killer whales
  - Other key attributes: distance, # of boats
  - The group that affects overall demand for whale watching the most is willing to pay the most to be close to whales
    - Viewing distance is the most important attribute
  - Learning about the rule change did not cause large changes in stated likelihood of future whale watching
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