The Impact of Surfing on the local Economy of Mundaka, Spain

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THE ISSUE

• Estimated population = 1,200

• Tourism number one source of revenue – Biosphere & surfing

• Home to one of worlds top surf breaks

• Stop on the Billabong Pro World Tour Contest

• Estimate between 10 and 30 thousand surfers/spectators annually (>20 thousand due to Billabong Pro)

• 2005 dredging of river mouth destroyed sandbar and the wave disappeared for over a year

• Contest cancelled in Mundaka two years in a row

• No studies or estimates done to quantify the value of the surf tourism or the wave to the town
Methodology

• Research questions
  – Is surfing a significant source of Economic activity in Mundaka, Spain (Economic Impact Analysis)

• Survey
  – Online survey designed and open from September to December 2007
  – Survey designed to capture spending, trip characteristics, demographics of surf market participants
  – Promotional cards distributed at local businesses and by hand

• Population/response rate
  – Target population was 150 to 300 (depending on contest)
  – Survey population 140
  – 50% Response rate

• Analysis
  – Economic Impact using MGM2 model
  – OLS Regression model
Participant Characteristics

Average visitor:
- 30yrs
- Male
- University education
- Annual Income = 26,500 euros
- Distance traveled = 1530 km
- 3 Annual trips to Mundaka
- 4 Days spent surfing
- 3 Travel partners
- Attended Billabong Pro twice

Majority:
- Visited other locations
- Split expenses on combination of items
- Camped or stayed with friends & ate at Restaurants/Cafes
- Would continue to visit if Billabong Pro was no longer held in Mundaka
- Would no longer visit if wave was permanently degraded
OLS Regression

• Research question
  – What factors, if any, influence expenditures by surf market participants in Mundaka, Spain

• Dependent Variable
  – Total expenditure
    (computed variable = total_lodge + total_meals + total_fuel + total_lessons + total_stuff)

• Independent Variables
  1. Age
  2. Sex
  3. Annual Income
  4. Highest level education
  5. Distance traveled
  6. Did you visit other locations
  7. Annual visits
  8. Days spent surfing
  9. Number of travel partners
  10. Did you split expenses
OLS Regression

• No significant variables (no p-values < .001)
• Adjusted $R^2$ value .479 (48% explained)
  – Reporting adjusted $R^2$ because of the small sample size
• Standardized Beta ($\beta$)
  – Negative relationships found for Annual Income (-.144), Education Level (-.046), and Distance Traveled (-973).
  – Run travel cost analysis
  – Positive relationships found with Age (.298), Visiting Other Locals (.197), and Days Spent Surfing (1.23)
ECONOMIC IMPACT ANALYSIS

• Average spending per visitor per party night = $120

• Multipliers: Direct Sales 1.33  Jobs 1.19  Personal Income 1.32

• Capture Rate and Leakage

• Stay: 3 nights, 4 days surfing

• Visitor type by percent:
  – Non Local Day User 35%
  – Motel In Area 30%
  – Camp In Area 35%
ECONOMIC IMPACT ANALYSIS

30,000 Visitors annually (estimated for four days & three night visit)

• Total annual spending = $3,621,000

• Total effects of spending (Direct + Indirect):
  – Total Sales Effects $3,411,000
  – Jobs 71
  – Total Personal Income Effects $1,158,000

10,000 Visitors annually (estimated for four days & three night visit)

• Total annual spending = $1,207,000

• Total effects of spending (Direct + Indirect):
  – Total Sales Effects $1,137,000
  – Jobs 24
  – Total Personal Income Effects $386,000
### Table 2. Economic Impacts of Visitor Spending: Direct & Secondary Effects

<table>
<thead>
<tr>
<th>Sector/Spending category</th>
<th>Direct Sales $000's</th>
<th>Jobs</th>
<th>Personal Income $000's</th>
<th>Value Added $000's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motel, hotel cabin or B&amp;B</td>
<td>513</td>
<td>12</td>
<td>149</td>
<td>226</td>
</tr>
<tr>
<td>Camping fees</td>
<td>305</td>
<td>2</td>
<td>46</td>
<td>112</td>
</tr>
<tr>
<td>Restaurants &amp; bars</td>
<td>522</td>
<td>14</td>
<td>164</td>
<td>229</td>
</tr>
<tr>
<td>Admissions &amp; fees</td>
<td>477</td>
<td>12</td>
<td>164</td>
<td>268</td>
</tr>
<tr>
<td>Gambling</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other vehicle expenses</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Local transportation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>613</td>
<td>19</td>
<td>313</td>
<td>488</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>102</td>
<td>1</td>
<td>41</td>
<td>70</td>
</tr>
<tr>
<td>Local Production of goods</td>
<td>30</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Direct Effects</strong></td>
<td><strong>2,561</strong></td>
<td><strong>60</strong></td>
<td><strong>878</strong></td>
<td><strong>1,394</strong></td>
</tr>
<tr>
<td><strong>Secondary Effects</strong></td>
<td><strong>850</strong></td>
<td><strong>11</strong></td>
<td><strong>280</strong></td>
<td><strong>520</strong></td>
</tr>
<tr>
<td><strong>Total Effects</strong></td>
<td><strong>$ 3,411</strong></td>
<td><strong>71</strong></td>
<td><strong>$ 1,158</strong></td>
<td><strong>$ 1,914</strong></td>
</tr>
<tr>
<td><strong>Multiplier</strong></td>
<td>1.33</td>
<td>1.19</td>
<td>1.32</td>
<td>1.37</td>
</tr>
</tbody>
</table>
Future Research

• Further Economic Impact:
  – On site survey
  – Input/Output analysis to better measure effects
  – Impacts of the Billabong Pro Contest
  – Specific survey to measure expenditure influences

• Non market valuation:
  – Need to measure the value of surfing and site to the participant, resident, and spectator (contingent value method)
  – Need to measure investment made by participants (travel cost method)
Conclusion

• Surfing is a viable and valuable recreational activity for the city of Mundaka

• The loss of the surf break would result in a major loss of surf tourism and culture

• Certain trip characteristics could be good predictors of spending behavior

• The total economic impact is potentially greater than $3 million annually

• Value of surfing is potentially greater than Economic Impact
Thank You

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Questions?