Insights into the Tourism Intensity Index

WEBINAR
MEASUREMENT OF LOCAL SATISFACTION AT THE DESTINATION LEVEL

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THE CASE OF SOUTH TYROL (ITALY)

INTRODUCTION

- South Tyrol is an **Autonomous Province** in the Italian Alps ≈ 500,000 inhabitants
- Official languages: German (69%), Italian (26%), Ladin (5%)
- **Dolomites UNESCO WHS**
- Tourism sector directly accounts for **11.4% of total GVA** (2019)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2021</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arrivals</strong></td>
<td>7.7 Million</td>
<td>5.4 Million</td>
<td>- 29.9%</td>
</tr>
<tr>
<td><strong>Overnight stays</strong></td>
<td>33.7 Million</td>
<td>23.8 Million</td>
<td>- 29.4%</td>
</tr>
</tbody>
</table>

- Limits to growth
  - First *moratorium* (limit to the creation of new bed capacity) in 1980
  - Second limit to growth: discussed in 2020-2021 and under implementation

Source: ASTAT
Based on what criteria can we decide about the constant growth (or the need to prevent growth) of accommodation facilities in a tourism destination?

- Evidence informed decision making

Baseline indicators

Indicators’ analysis and further elaboration for decision making purposes (e.g. moratorium)

Source: Eurac Research
THE CASE OF SOUTH TYROL (ITALY)

THE APPROACH

- The approach was to combine data about tourism intensities with data about tourism acceptance by local populations, to better define policies.

![Diagram showing the relationship between tourism intensity and acceptance.](image-url)
Tourism Exposure Index to study tourism intensity

- Overnight stays & bed capacities (considered)
- Employees (excluded, too correlated)

Definition of data sources

Definition of the "Tourism Exposure"
- Bed concentration
- Tourism intensity

Definition of the "Tourism Exposure"
- Deviation from the mean (z-scores)
- Equal weighting of intensity and density

Standardization and weighting system

Classification (groups of municipalities)
- Quartiles or percentiles
- Absolute values (baseline year 2019)

Based on the STOST report and the ESPON report "Carrying capacity methodology for tourism".

eurac research
Calculation, standardization, weighting systems

Calculation:

1. Calculation of tourism intensity for each municipality \((\text{Average daily overnights/population})*100\)

2. Calculation of the bed density for each municipality \((\text{beds per km2})\)

3. **Standardization** (determination of the distance of each municipality from the mean value of the two indicators in the reference year)

   \[ z = \frac{x - \mu}{\sigma} \]

   - \(\mu\) = Mean
   - \(\sigma\) = Standard Deviation

4. “Tourism exposure” as the average of both standardized values (equal weight)
Tourism exposure

Alternative options

- **Quartile (STOST-classification):** We group the communities into three groups, i.e.:
  a) “low exposure” (25% lower quartile),
  b) “average tourism exposure” (50% central quartile) und
  c) “high tourism exposure” (25% upper quartile)

- **Percentiles** (similar, but with arbitrarily selected percentages)

- **Ranking** (no categorization)
Fine-tuning of the Tourism Exposure Index

Stakeholder involvement

• Stakeholder meetings and fine-tuning of the indicator - Consideration of new data, different indicators, other selection criteria
  • Trade-off between: accuracy and data availability
• Analysis of possible alternatives and their power in describing reality and supporting decision making
  • e.g. 0.77 between tourism intensity and bed density (permanent settlement area) vs. 0.43 between tourism intensity and bed density (permanent settlement area)
• Consideration of the policy goal of the indicator
  • e.g. are differentiated policies needed between municipalities with average or low tourism exposure?
First results – considering total municipal surface and quartiles

Tourism exposure (total municipal surface)

- high
- medium
- low
First results – considering permanent settlement area and quartiles

Changing the type of surface considered, 14 municipalities change their status.
First results – considering permanent settlement area and ranking
Tourism acceptance – The sensitivity Index

• Developed thanks to a cooperation with the Curtin University (Australia), the sensitivity index is based on subjective assessments of the local population on the following dimensions:

1. economic prosperity
2. community vitality
3. vitality of the atmosphere
4. harmony of the urban environment and landscape
5. affordable housing
6. acceptability of traffic load
7. trust in institutions
8. local satisfaction with tourism
9. support for the future growth of tourism

Survey-based assessment of the sensitivity level
Framework also applied to apply for a GSTC certification at local scale
THE MEASUREMENT LOCAL SENSITIVITIES
THE COOPERATION PROCESS(es)

• Conceptualization and survey instrument design (questionnaire)

• Sampling technique and sample size determination, survey administration design

• Pilot testing and preparation of the online questionnaire

• Data collection and analysis

• 367 participants
• Random sample
• Written invitation & QR code/Link
• Computer Assisted Data Collection
THE MEASUREMENT LOCAL SENSITIVITIES

SELECTED RESULTS

harmony of the urban environment and landscape

Affordability of housing (buying an apartment)

Level of traffic load

Affordability of housing (renting an apartment)
THE MEASUREMENT LOCAL SENSITIVITIES

SELECTED RESULTS

Perceived sustainability of tourism in the destination

• **Learning**: to better interpret the result, environmental, social and economic aspects of sustainability might be treated separately.
### The Measurement Local Sensitivities

**Selected Results**

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Never</th>
<th>1-2 times</th>
<th>3-5 times</th>
<th>5-10 times</th>
<th>&gt;10 times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golf facilities</td>
<td>93.9%</td>
<td></td>
<td></td>
<td></td>
<td>7.0%</td>
</tr>
<tr>
<td>Snow parks</td>
<td>83.0%</td>
<td></td>
<td></td>
<td>7.0%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Bikeparks and biketrails</td>
<td>70.7%</td>
<td>17.5%</td>
<td></td>
<td></td>
<td>6.1%</td>
</tr>
<tr>
<td>Cross-country ski trails</td>
<td>66.8%</td>
<td>14.8%</td>
<td>6.1%</td>
<td>4.4%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Ice rinks</td>
<td>63.3%</td>
<td>19.2%</td>
<td>9.2%</td>
<td>3.9%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Swimming pools</td>
<td>52.4%</td>
<td>21.4%</td>
<td>11.8%</td>
<td>7.0%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Playgrounds</td>
<td>49.8%</td>
<td>13.1%</td>
<td>10.9%</td>
<td>7.4%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Fixed-rope and climbing routes</td>
<td>45.0%</td>
<td>21.0%</td>
<td>13.5%</td>
<td>10.9%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Bobsleigh tracks</td>
<td>37.6%</td>
<td>34.1%</td>
<td>17.5%</td>
<td>6.8%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Cycling and mountainbike routes</td>
<td>37.1%</td>
<td>15.7%</td>
<td>14.4%</td>
<td>9.2%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Ski slopes and ski lifts</td>
<td>31.4%</td>
<td>17.9%</td>
<td>11.4%</td>
<td>10.0%</td>
<td>29.3%</td>
</tr>
<tr>
<td>Public transport</td>
<td>24.9%</td>
<td>18.8%</td>
<td>15.3%</td>
<td>10.0%</td>
<td>31.0%</td>
</tr>
<tr>
<td>Winter hiking trails</td>
<td>17.5%</td>
<td>18.6%</td>
<td>22.3%</td>
<td>16.8%</td>
<td>24.9%</td>
</tr>
<tr>
<td>Ski lifts in summer</td>
<td>15.3%</td>
<td>34.5%</td>
<td>21.0%</td>
<td>11.8%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Hiking trail</td>
<td>4.8%</td>
<td>6.6%</td>
<td>9.6%</td>
<td>79.2%</td>
<td></td>
</tr>
</tbody>
</table>

*Never, 1-2 times, 3-5 times, 5-10 times, >10 times*
THE MEASUREMENT OF INTENSITIES AND LOCAL SENSITIVITIES

CONCLUSION

• A comprehensive assessment of the intensities and sensitivities is an innovative approach for tourism planning

• Generating evidence about intensities and sensitivities and using it for policy-making purposes is not straightforward
  • A match between measurement instruments and policy goals requires time investment and flexibility

• Evidence-informed policy making is a co-production process, embracing academics, policy makers and many other stakeholders in the tourism ecosystem
CONTACT US

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