Mobility Pricing in Switzerland (MOBIS)

Webinar for participants

Universität Basel

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

ZHAW
Zürcher Hochschule für Angewandte Wissenschaften
Webinar overview

1. MOBIS
   - Design
   - Results
2. MOBIS-COVID
3. Outlook
Who is the MOBIS team?

- Prof. Kay W. Axhausen
- Joseph Molloy
- Christopher Tchervenkov
- Thomas Schatzmann

- Prof. Beat Hintermann
- Beaumont Schoeman
- Dr. Thomas Götschi
- Dr. Alberto Castro

External funding sources:

- Innosuisse
- UVEK
Goal of the study

- Observe mobility behavior for **research purposes**
- Test effect of **mobility pricing** using a randomized control trial
- Gather **additional information** using surveys
  - Sociodemographics
  - Views on transport-related topics
  - Preferences
**Study design**

**Sampling Pool**
- 91,300 persons in urban agglom. in Switzerland
- Identified by BFS
- Invited by letter

**Initial survey**
- (N=21,800)
  - Sociodemographic
  - Transport behaviour
  - Filtering
  - Invitation to tracking study

**Tracking-based RCT**
- (N=3,700)
  - 4+4 weeks
  - Control
  - Information
  - Info & Pricing

**Final survey**
- (N=3,520)
  - Exp. check
  - Opinions
  - Values, lifestyles
  - SCE

**Start:** Aug. 2019  
**End:** Jan. 2020
External costs of travel

Definition: **Costs not borne by individual, but by society**

- Health costs
  - Air pollution, noise, accidents
  - Benefit: Physical exercise
- Climate damages
- Congestion

Computation of external costs (in CHF) based on Swiss norms and transport model for each trip
Observation period and control group

Report | Week 5
26.10.2019 - 01.11.2019

Dear Mr John Doe

Thank you for participating in the MOBIS study. This week was the 5th week of the study.

Your participation this week: 7 active days and 0 inactive days

Your use of different travel modes and their external costs are displayed below.

Distance by transport mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>239 km</td>
</tr>
<tr>
<td>Train</td>
<td>0 km</td>
</tr>
<tr>
<td>Car</td>
<td>23 km **</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0 km</td>
</tr>
<tr>
<td>Walking</td>
<td>7 km</td>
</tr>
</tbody>
</table>

* Increase/decrease in travel distance since last week
** Includes all local public transport: Bus, Tram, Metro & S-Bahn
Treatment

Your external costs for the last week

<table>
<thead>
<tr>
<th>Profits</th>
<th>Costs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>CHF 16.70</td>
<td>CHF 25.52</td>
</tr>
<tr>
<td>CO2</td>
<td>CHF 4.51</td>
<td>CHF 0.00</td>
</tr>
<tr>
<td>Congestion*</td>
<td>CHF 4.32</td>
<td>CHF 0.75</td>
</tr>
<tr>
<td>Walking</td>
<td>CHF -0.72</td>
<td>CHF 0.00</td>
</tr>
</tbody>
</table>

*Includes the public transport peak hour surcharge
Average treatment effect, by externality

- Total Externalities
- Congestion
- CO2
- Health

- Info plus Pricing
- Information
- Pricing
Total externalities, by gender

Female

Male

Difference

- Info plus Pricing
- Information
- Pricing
MOBIS-COVID: Participation

- MOBIS study finished
- MOBIS-Covid study

Number of tracking participants:
- Participants using Catch-my-Day
- Tracking within MOBIS study

Timeline:
- Sep-2019 to Jun-2020
The real challenge for the transport system
A bicycle boom?

Hourly trip count (Bicycle)

Weekday

Weekend

Week
- Baseline-2019
- Intermediate weeks
- May-18
- May-25

Normalized by number of participants travelling per day
Counts between midnight and 4am excluded
Trips and space

# Trips/day

Espace d'activité

- Jour de la semaine
- Week-ends et jours fériés

Semaine
Adjustments?

• How will we adjust to "social distancing"?
• Will we rebuild the cities?
  – Widen the sidewalks?
  – Remove the on-street parking spaces for the bicyclists?
• What will happen to unused offices?
Did we learn something?

• Have we changed our preferences?
  – Are we willing to walk longer?
  – Will we avoid public transport more?

• Will we make our (personal) world more resilient?
  – More monetary savings
  – Stronger local social networks
  – Higher physical fitness
Timeline

- Tracking (hopefully) until at least September
- Next month: Personal COVID travel report
- First quarter of 2021: MOBIS report
Vehicle counts in Zürich
Passengers counts at Hardbrücke

PT Counts

- 25.05. - 31.05.
- 18.05. - 24.05.
- 11.05. - 17.05.
- 04.05. - 10.05.
- Base line
Traffic counts in Zürich: Bicyclists
Pedestrian counts in Zürich