

SHARING AS A KEY TO RETHINK URBAN MOBILITY: INVESTIGATING AND MODELING INNOVATIVE TRANSPORT SYSTEMS

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Motivation

Evaluate how innovative transport systems could be used to go beyond the actual private-car centered transportation system

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Investigate and model innovative transport systems

Carpooling & Carsharing

Carpooling: Two or more persons, not belonging to the same household, sharing a trip, or a part of it, with the passengers contributing to the driver's expenses.

Carsharing: A membership program intended to offer an alternative to car ownership under which persons or entities that become members are permitted to use vehicles from a fleet on an hourly basis.

Context (1)

Sharing

- Information, pictures, video, etc.
- Objects

Community (Peer-to-peer)

- Virtual communities □ Real world

Context (2)

“Servicizing”

- Accessing instead owning

- Car culture

- Young generations less interested in owning a car

Carpooling

Carpooling

- Goal
- Understand and model the attitude toward carpooling of the Swiss public

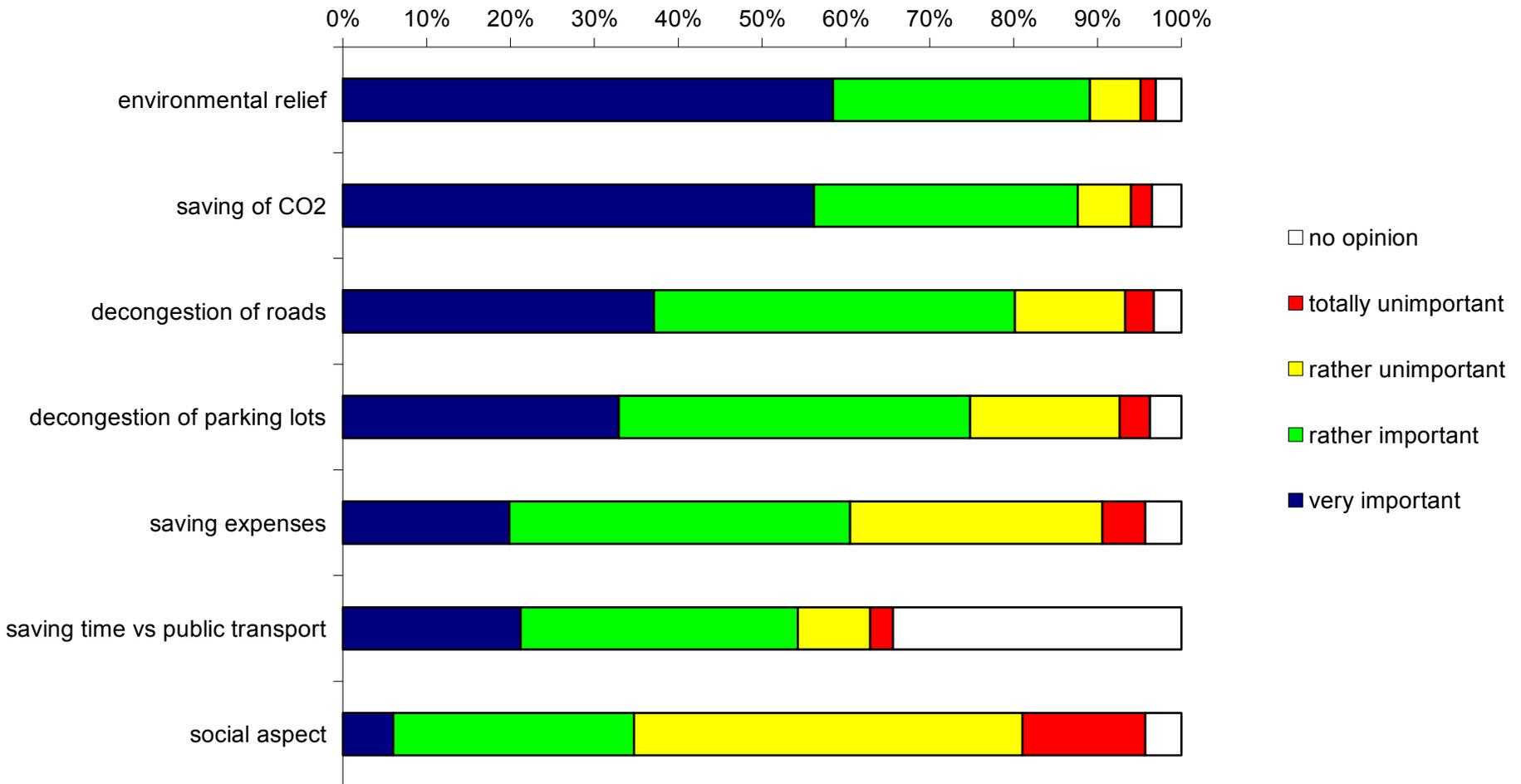
- Methodologies
 - Discrete choice modeling
 - Qualitative and cluster analysis

- Data
- Survey with stated choice exercise and qualitative questions (2010-2011)
 - Stated choice exercise based on reported trips
 - 1683 persons recruited in Switzerland (51% response rate)
 - Stated choice on carsharing as benchmark

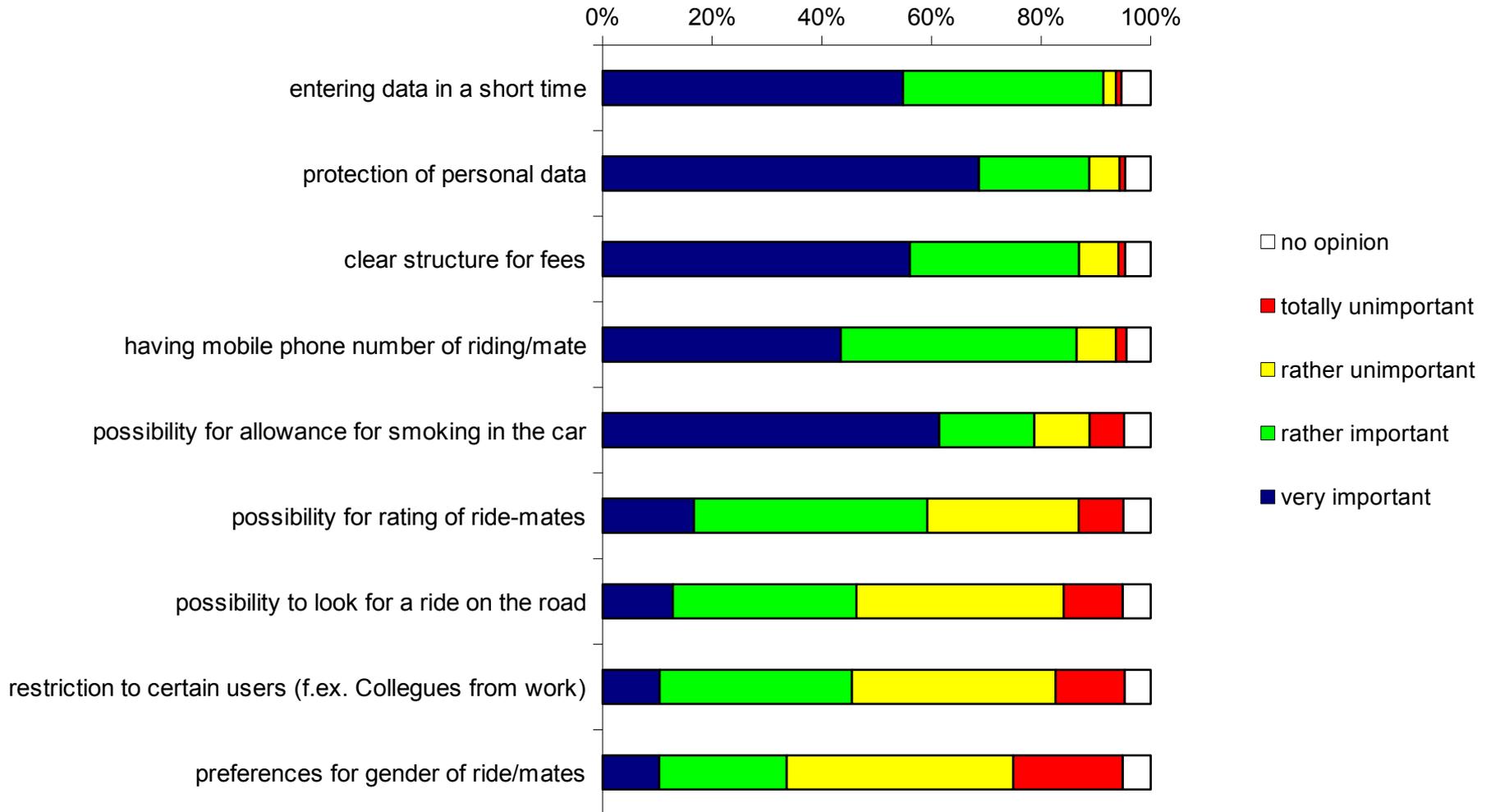
Summary qualitative carpooling

- Positive Attitude: 76% Positive
- Readiness to participate: 51% would participate
- Most important characteristics of the trip-mate: Driving style, Smoker, Appearance/Demeanor
- Basis for sharing the costs: Gasoline cost (70%)
- Maximal deviation for the Driver: up to 10 Minutes (83%)
- Barriers: Time adjustments, Fixed working time, Risk not being picked up
- Preferred incentives: Back-to-home guarantee, Pooling Platform, Financial incentives

What motivate potential carpoolers?



How should be a Carpooling platform?



Clusters

- **Not interested / Negative (4.5%)**
 - No factors
 - Older, small HH, high or low Income, Retired
- **Pragmatic (18.8%)**
 - Egoism and Convenience
 - Young, avg. to high Income, Employed
- **Skeptical environmentalist (45%)**
 - Environment / Altruism and Reliability / Safety
 - Female, avg. to low Income, PT oriented
- **Enthusiastic environmentalist (31.7%)**
 - Environment / Altruism
 - Young to middle age, avg. to high Income, Well educated, Employed

Remarks

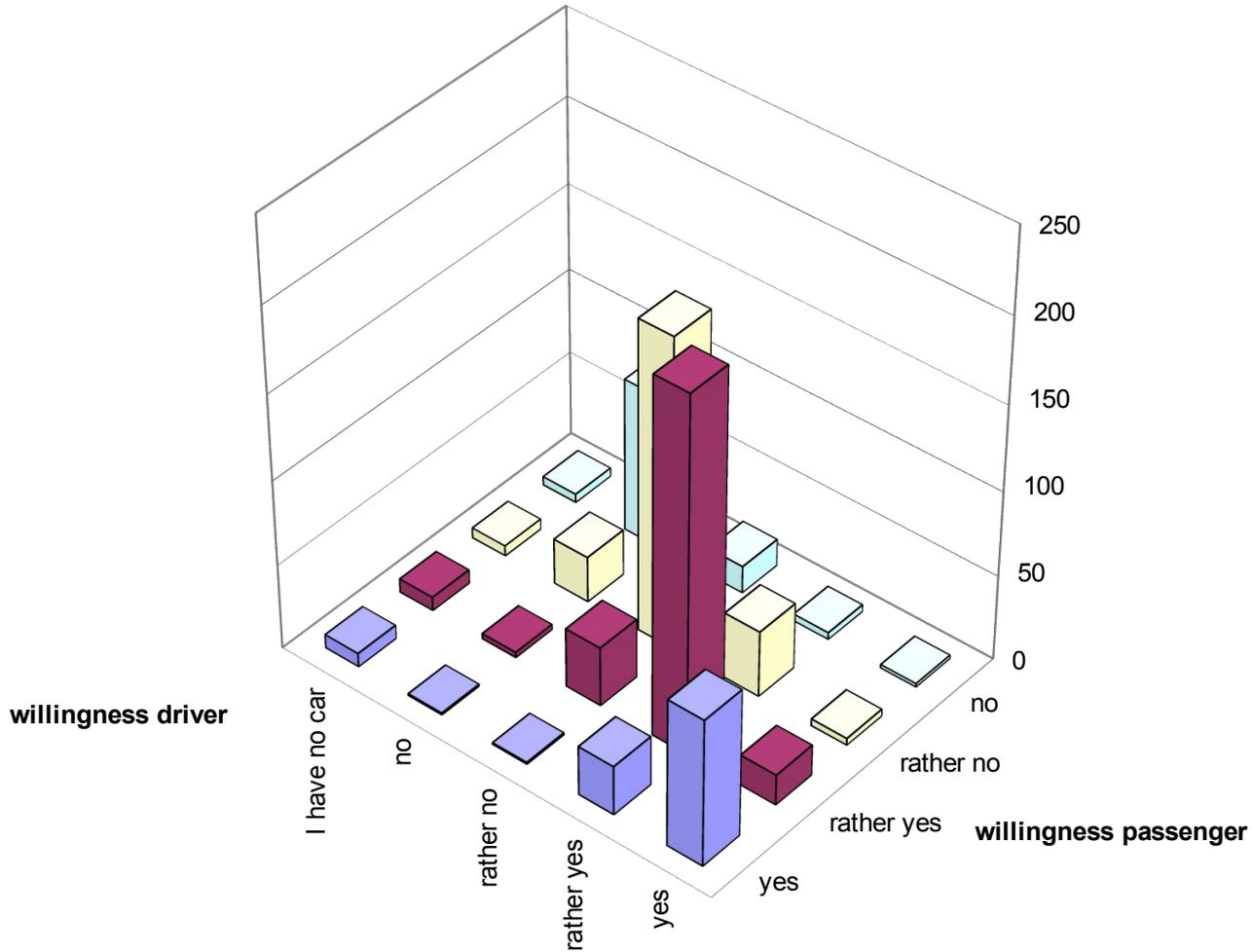
- Is carpooling really on the verge of a breakthrough in Switzerland?
- Possible reasons of the (for carpooling very positive) results are:
 - Sample bias (Self selection effect)
 - Reflects some assumptions on carpooling which might be unrealistic for some potential participants (temporal deviation, available matches, etc.)
 - SP sometimes closer to self-representation than to reality
 - Learning process?

Conclusions

- Overall, the existence of a good unexploited potential for carpooling in Switzerland is suggested.
- In general the public shows interest in innovative transport solutions
- Technology might help exploiting this potential
- The context is positive for innovation in transport and for all forms of “shared economy”

Thank you for your attention!

Correlation willingness to be a driver/passenger



Strategy to upscale carpooling

Enthusiastic environmentalist □ Early phase, little advertisement centered on environmental benefits

Skeptical environmentalist □ When most flaws are solved, large advertisement centered on environmental benefits, safety, reliability

Pragmatic □ When evidence of personal benefits emerges from practice, large advertisement centered on reliability and personal benefits

Non-interested □ No advertisement at all, might change if carpooling become mainstream

Statistics: Sample vs. Micro-census

- Gender= + Male
- Age: - Young + Middle Age
- Education: ++ Tertiary
- Household Size: + Larger households
- Cars in the household: + Multiple cars (≥ 2)
- Public Transport Season Tickets: + HF + GA
- Income: + Affluent

Stated preference - Modal choice

Revealed Choice

- Car = 68.4%
- Car Passenger = 11.1%
- Other = 0.5%
- PT = 19.9 %

Stated Choice

- Car = 39.8%
- CP Passenger = 35.0%
- CP Driver = 16.3%
- PT = 8.9%