

On-demand mobility (FLEX) – Stated preference datasets



Data description

- Two SP experiments on the preferences towards on-demand mobility (more info on both datasets on the next page):
 - SP1 context: single mode urban trip (~5km), commute or leisure trip
 - SP2 context: access mode and train station choice
- Responses for both surveys were obtained in February 2020
- Survey was carried out with the [MPN](#)
- Both surveys have additional attitudinal statements and can be linked to the MPN for further socio-demographic and attitudinal information

Thesis research ideas

- Are there any regional differences (in NL) in traveller preferences towards FLEX (SP1 & SP2)
- Clustering respondents based on their attitudes towards FLEX services (SP1 & SP2)
- Are on-demand services perceived like shared modes (public transport) or private modes (car, bike)? (SP1 & SP2)
- Do people choose to maximise utility or minimise regret when choosing the access mode and train station (SP1)
- Analysing the impact of train station proximity on access and station choice (SP2)
- Access mode or train station? What do travellers choose first? (SP2)
- How does train usage frequency affect access mode choice? (SP2)



Candidate

- Should have taken the Statistical Analysis of Choice Behaviour (SEN1221) course or the Travel behaviour research (SEN1721) course or have experience with choice analysis and experiment design otherwise

Information

- Do you have your own ideas for a research topic?
- Have more questions about the datasets?

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Both datasets

- Attitudinal statements on the **use of technology, mobility, sharing a ride** and the **sharing economy**
- Familiarity with sharing economy (home rent, on-demand services and bike/car sharing)

SP experiment 1: Urban mobility

- Single mode trip within an urban area (~5km long) for a commute or leisure trip purpose
- Choice between bicycle, car, public transport and FLEX (on-demand service)
- Blocked orthogonal design (12 blocks) with 6 choice tasks per block
- Each respondent was allocated 2 different blocks, one for the commute and one for the leisure trip purpose
- Respondents without an access to car did not have the option to choose car for their trip (it was also not shown in the choice set)
- 1,200 total responses, 1,063 after filtering the data

Example choice task

Bike	Public transport	Car	FLEX 1	FLEX 2
	walking 9 min	walking 0 min	depart in 1 min walking 6 min	depart in 9 min walking 0 min
	waiting 1 min			
cycling 16 min	in-vehicle time 12 min	driving 8 min	in-vehicle time 16 min	in-vehicle time 16 min
	travel cost € 2,00	travel cost € 1,00	type of ride Shared travel cost € 2,00	type of ride Private travel cost € 2,00

SP experiment 2: Train station access

- Three-step sequential SP survey design
 - Joint access-mode-and-train-station choice
- Step 1 and 2: access mode choice for 2 different stations
 - choice between bicycle, car, public transport and FLEX
- Step 3: choice between the 2 stations, given the access mode choice
- Efficient design of 6 choice tasks (each task made of 3 steps/choices)
- 1,193 total responses, 1,076 after filtering the data

Example choice task of Step 3

Station A	Station B
train every 10 min	train every 30 min
travel time 75 min	travel time 75 min
transfers 2	transfers 1
price € 23	price € 20
your chosen access mode Bicycle	your chosen access mode Public transport
	walking & waiting 9 min
cycling 20 min	travel time 30 min
parking & walking 1 min	
price € 2,00	price € 2,00

Example choice task of Steps 1 & 2

Bicycle	Car	Public transport	Private FLEX	Shared FLEX
cycling 20 min	driving 8 min	walking & waiting 9 min	depart in 9 min	depart in 5 min
parking & walking 1 min	parking & walking 9 min	travel time 12 min	travel time 12 min	travel time 16 min
price € 2,00	price € 1,00	price € 3,50	price € 5,00	price € 8,00