MOBIS
Response rates and survey method results

Conference Poster

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MOBIS: Response Rates and Survey Method Results

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1 Introduction

We present the response rates and methodological observations from the MOBIS study, a nation-wide mobility pricing field experiment in Switzerland.

Mobility pricing is widely regarded as a promising policy measure to combat congestion, internalize external costs of transport, and offset decreasing fuel tax revenues.

2 Study design

- In the field experiment, participants used a GPS tracking app, Catch-my-Day, which logged their daily travel on different transport modes and imputed the trip segments and modes.

- The experiment lasted 8 weeks, bookended by online surveys. After the first 4 week control phase, participants were split into three treatment groups:

- The first continued as a control

- The second received information on their external costs

- The third received a real monetary budget, from which their external costs were deducted

- 100 CHF for participating for the entire 8 weeks

- Neither the 'mobility pricing' nature of the study nor the focus on the external costs of transport was shared with the participants before the treatment phase.
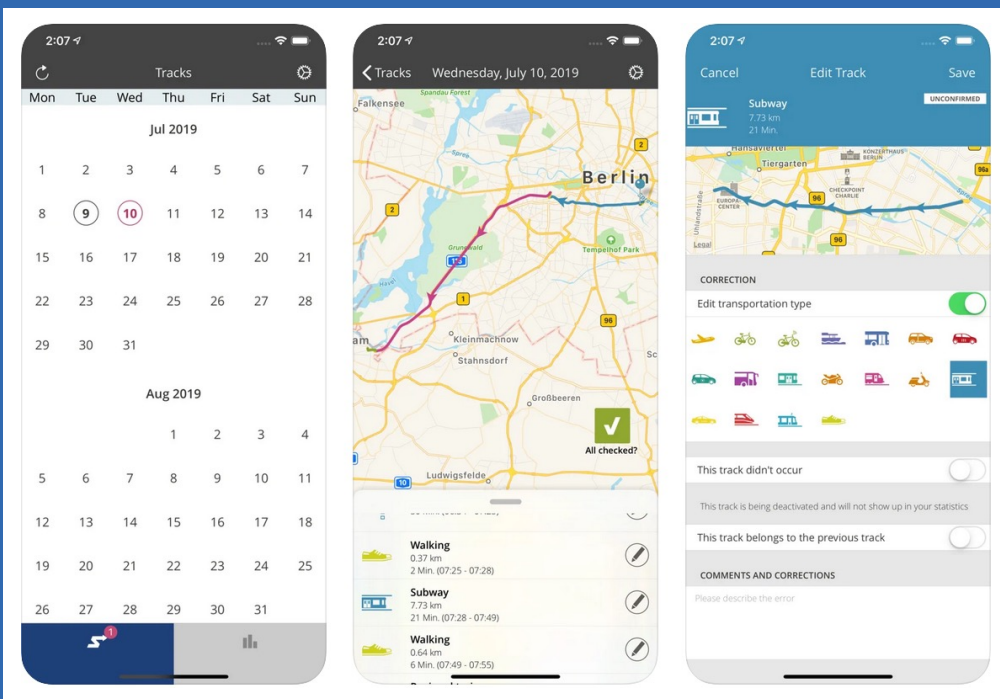
3 Catch-my-Day App

Figure 1: Screenshots from the Catch-my-Day app

4 Results and Discussion

- The first results show that the technology is capable of supporting such an experiment on both Android and iOS, the two main mobile platforms.

- Significant differences in the engagement and attrition were observed between iOS and Android participants over the 8-week period.

- The attrition rate did not vary between treatment groups.

- This work makes multiple contributions to the literature on conducting tracking-based mobility studies, and demonstrates the feasibility of running an incentive-based field experiment using a tracking app.

Table 1: Catch-my-Day mode detection accuracy

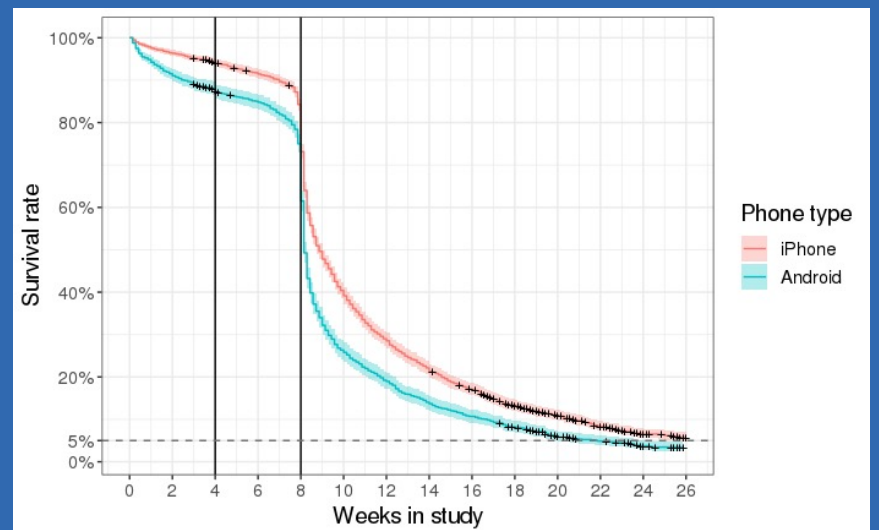|	% Correct			
Mode	**Android**		**iOS**	
Airplane	99.48%		98.86%	
Bicycle	81.59%		79.14%	
Bus	66.98%		66.82%	
Car	92.98%		93.15%	
Rail	89.50%		91.05%	
Local train		88.67%		90.18%
Regional train		71.35%		73.40%
Subway		93.56%		92.53%
Train		63.13%		63.78%
Tram	95.01%		96.64%	
Walk	95.56%		97.21%	

Figure 2: Kaplan-Meier Survival curve, including post-study retention

References

- Molloy, J., A. Castro, T. Götschi, B. Schoeman, C. Tchervenkov, U. Tomic, B. Hintermann, K. W. Axhausen (2021) A National-Scale Mobility Pricing Experiment using GPS Tracking and Online Surveys in Switzerland: Response Rates and Survey Method Results. Poster presented at the 100th Annual Meeting of the Transportation Research Board (TRB 2021), online, January 25-29.

- https://ivtmobis.ethz.ch/mobis/covid19/

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