


The impact of COVID19 on Swiss travel

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The impact of COVID19 on Swiss travel

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ETH Zürich

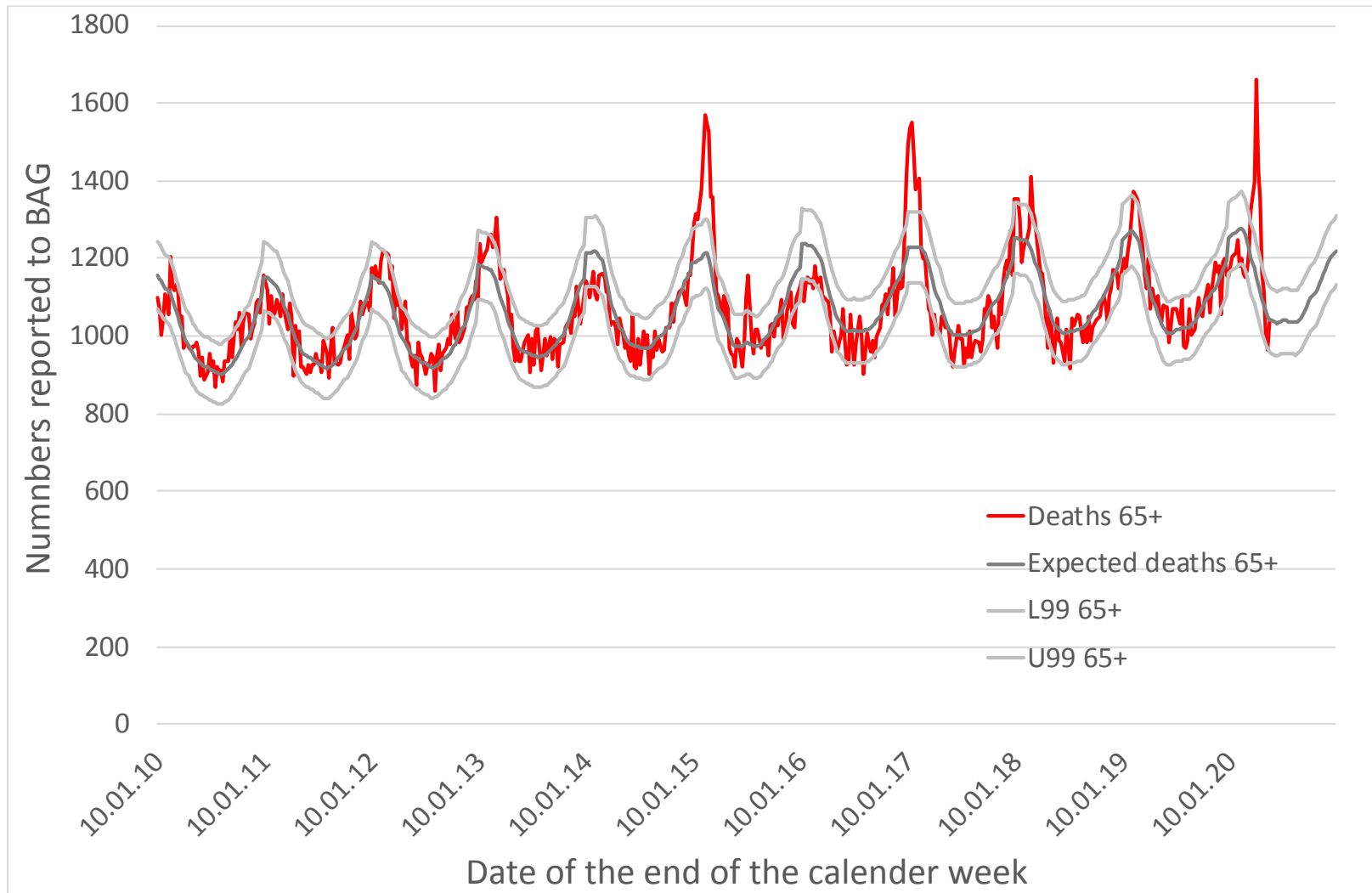
- J Molloy
- C Tchervakov
- T Schatzmann

- A Loder

WWZ, Universität Basel

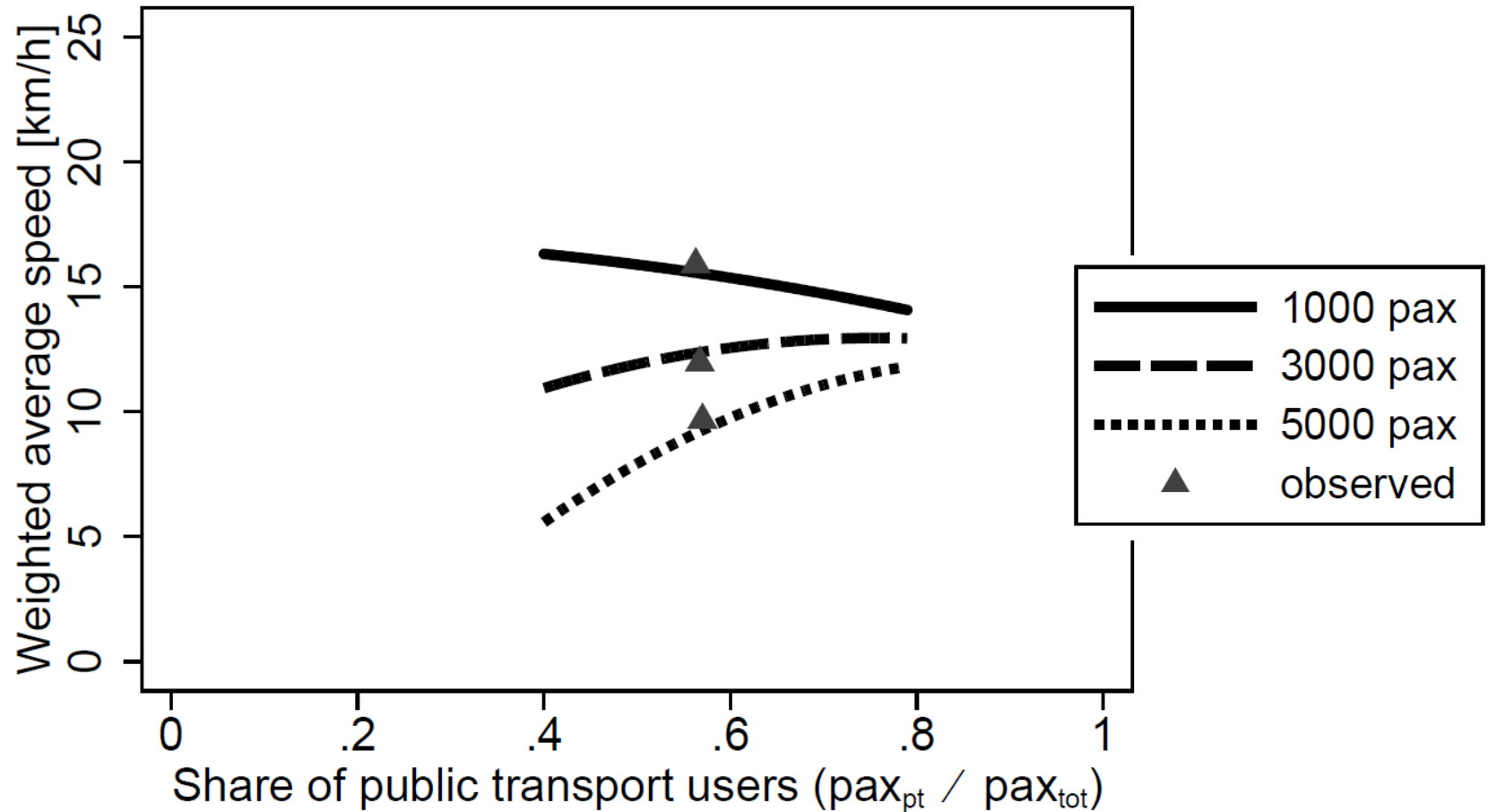
- B Hintermann
- B Schoeman

Excess death in Switzerland since 2010

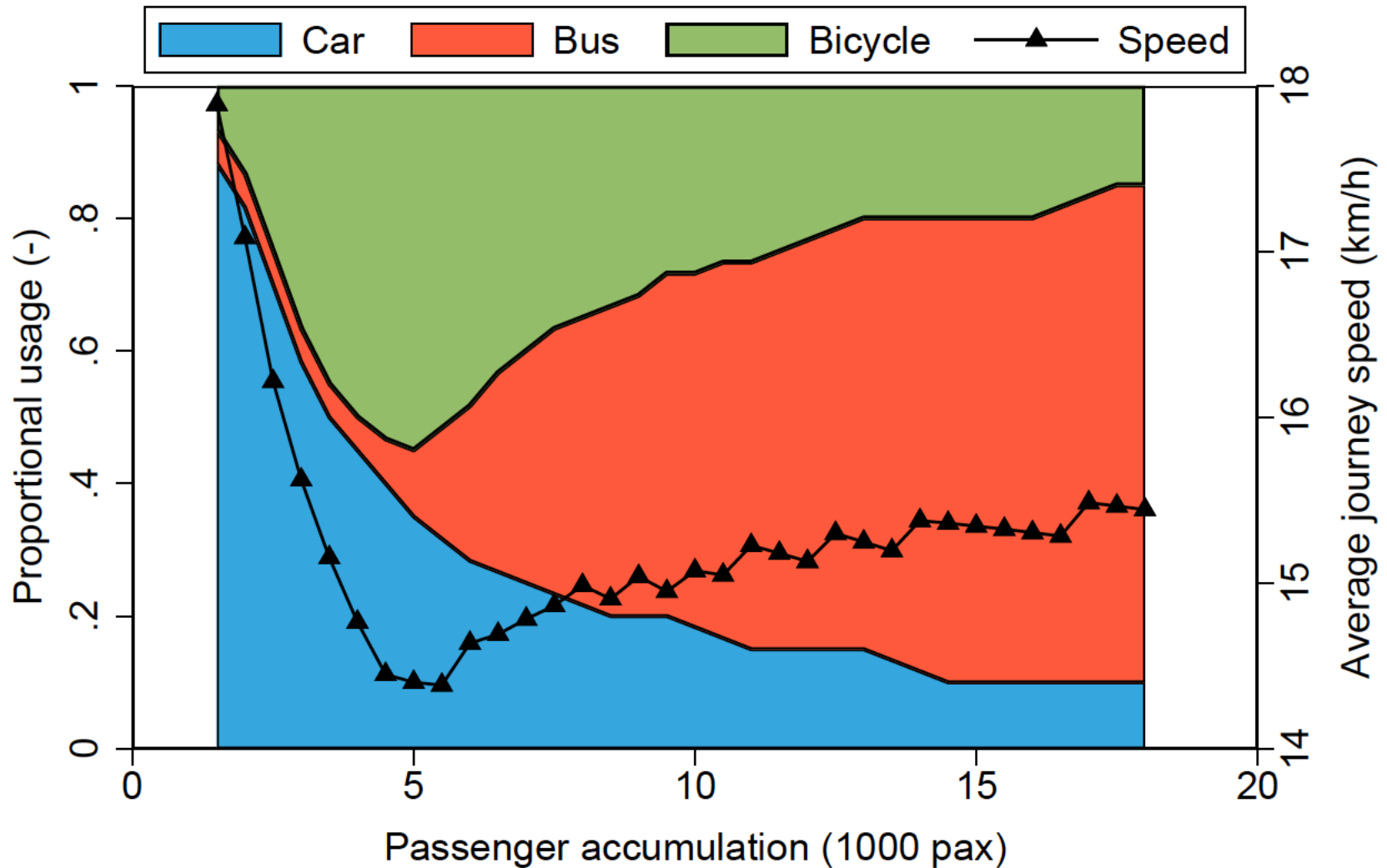


Speeds, volumes, mode shares

Speeds and modal shares Zürich: Bimodal MFD



Required modal shares with current technology: 3D MFD

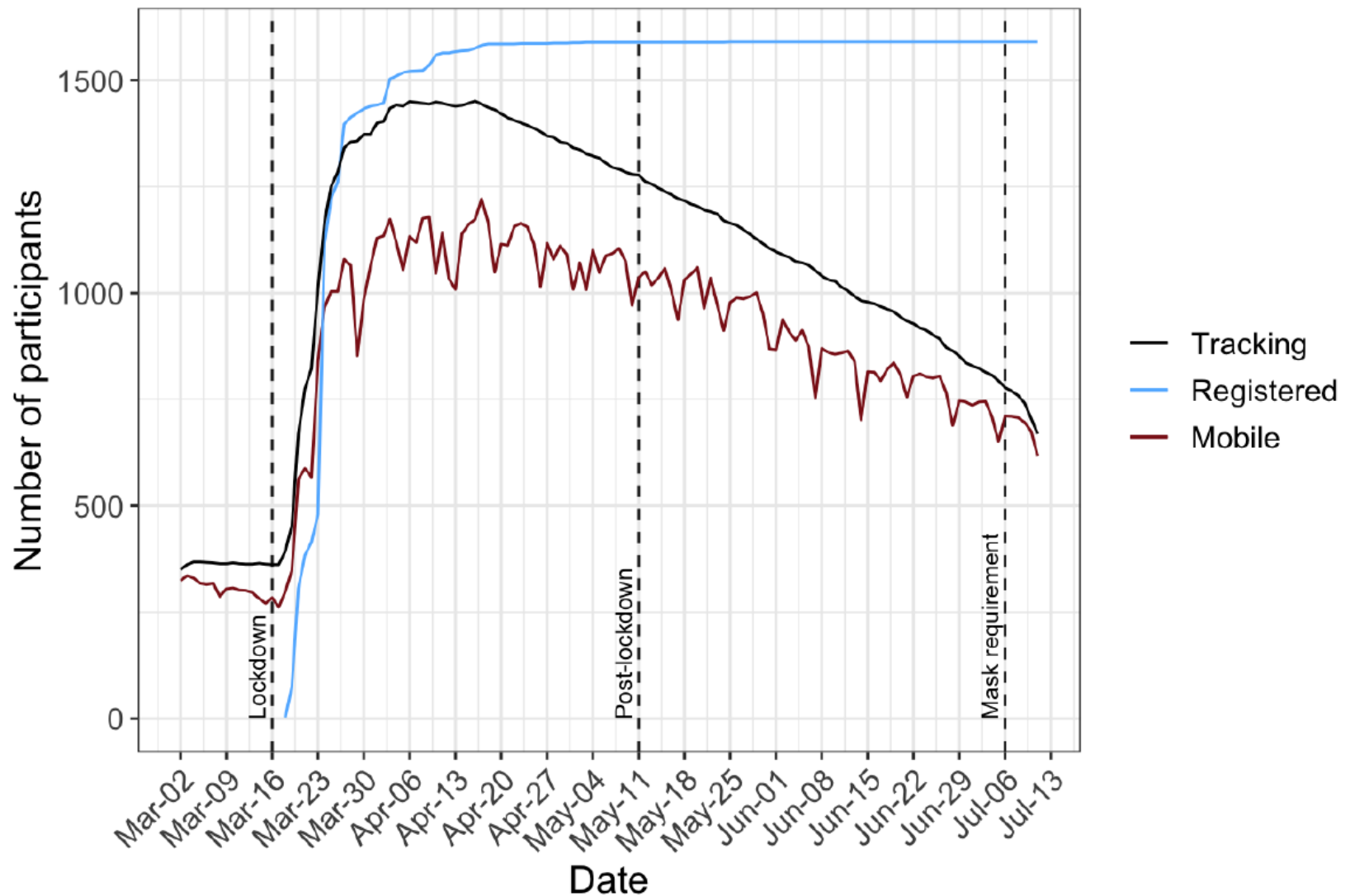


MOBIS COVID Sample

MOBIS COVID Sample

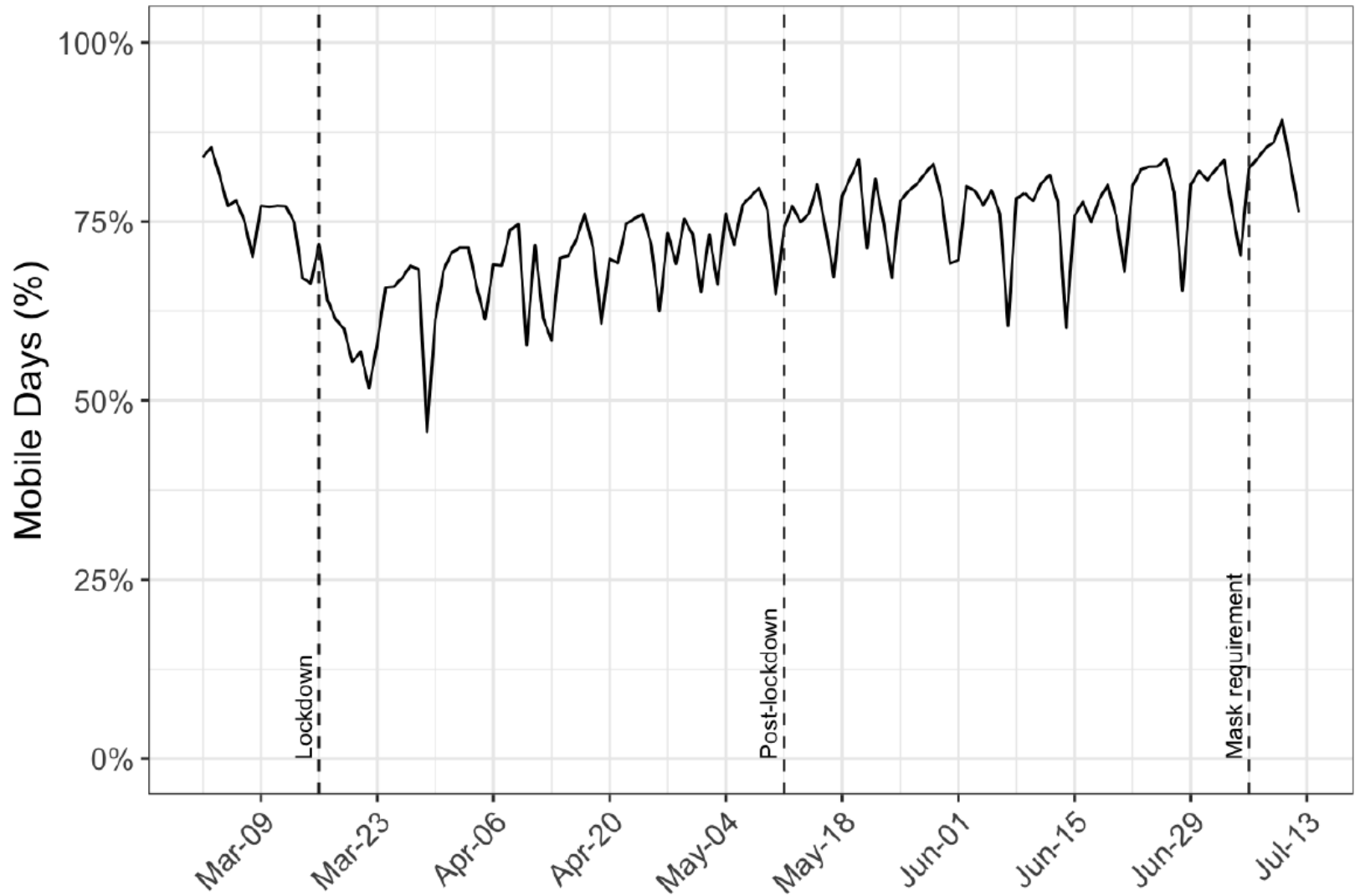
- Earlier virtual mobility pricing study of car and transit users
- French and German speaking Switzerland
- 1100+ started out of 3700 original ones
- No incentives for COVID19 phase
- Catch-a-day app (motion-tag, Berlin)

MOBIS COVID sample evolution



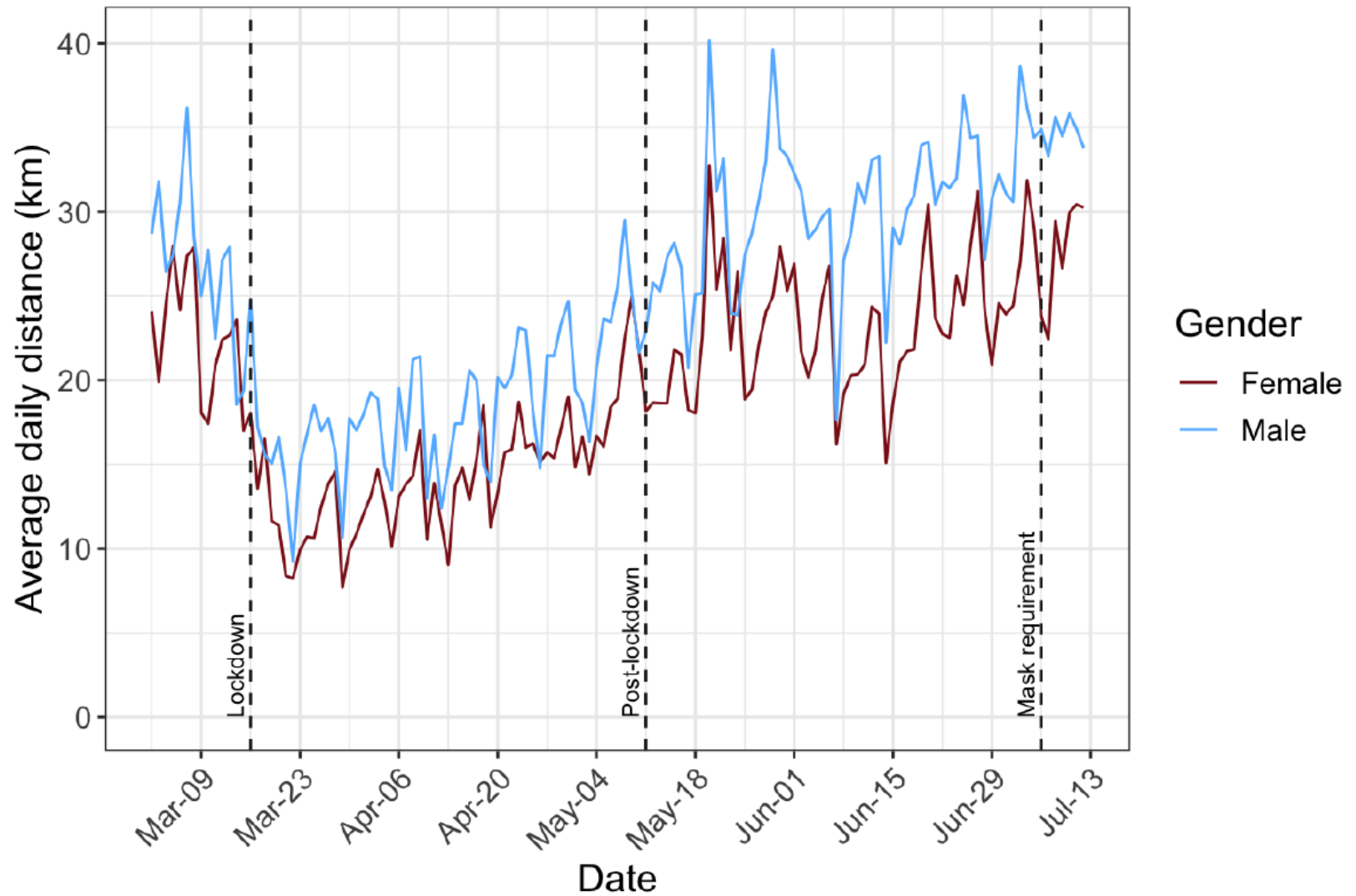
MOBIS COVID trajectory of out-of-home activities

Mobile persons per day

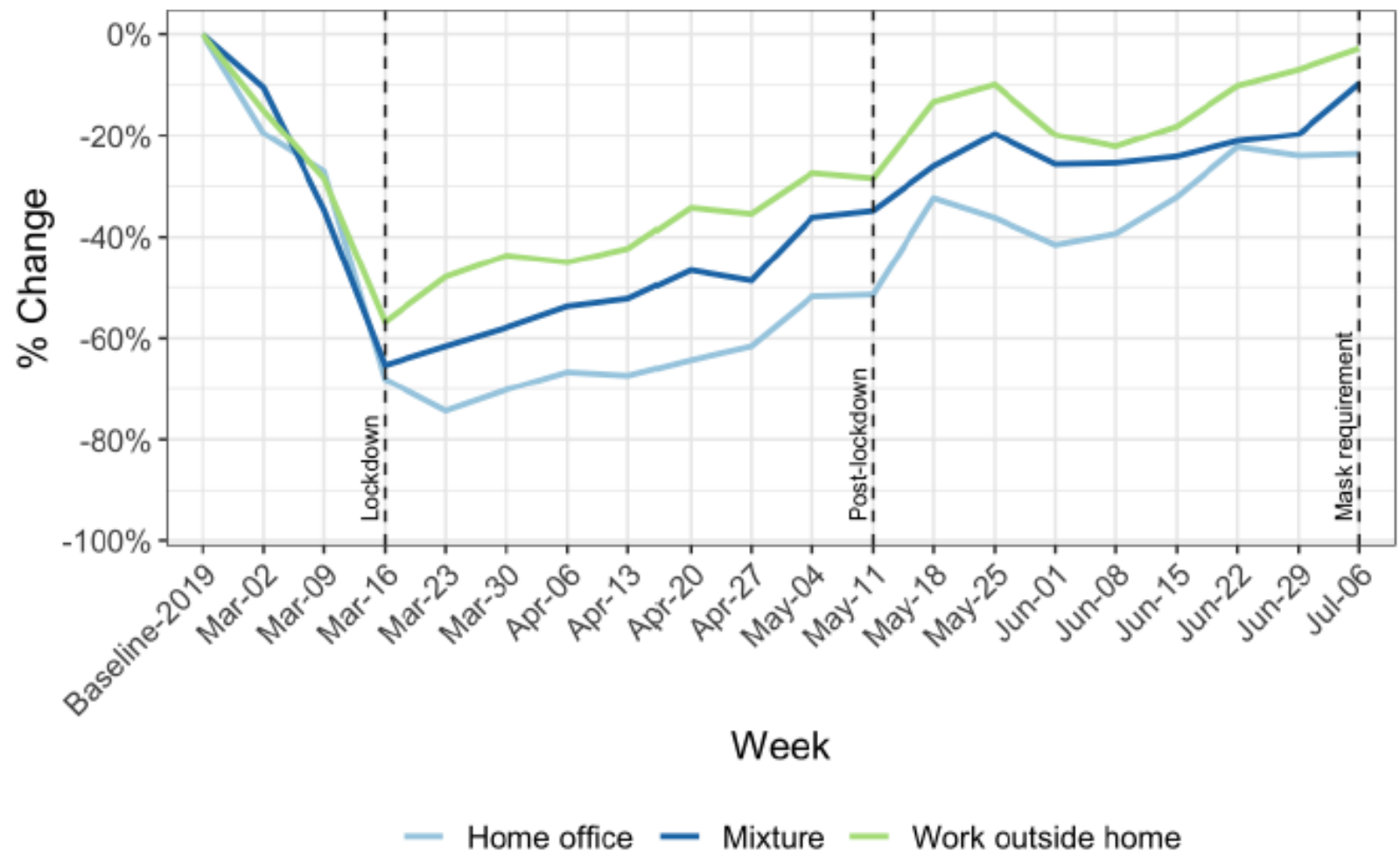


MOBIS COVID PKm, trips and activity space trajectory

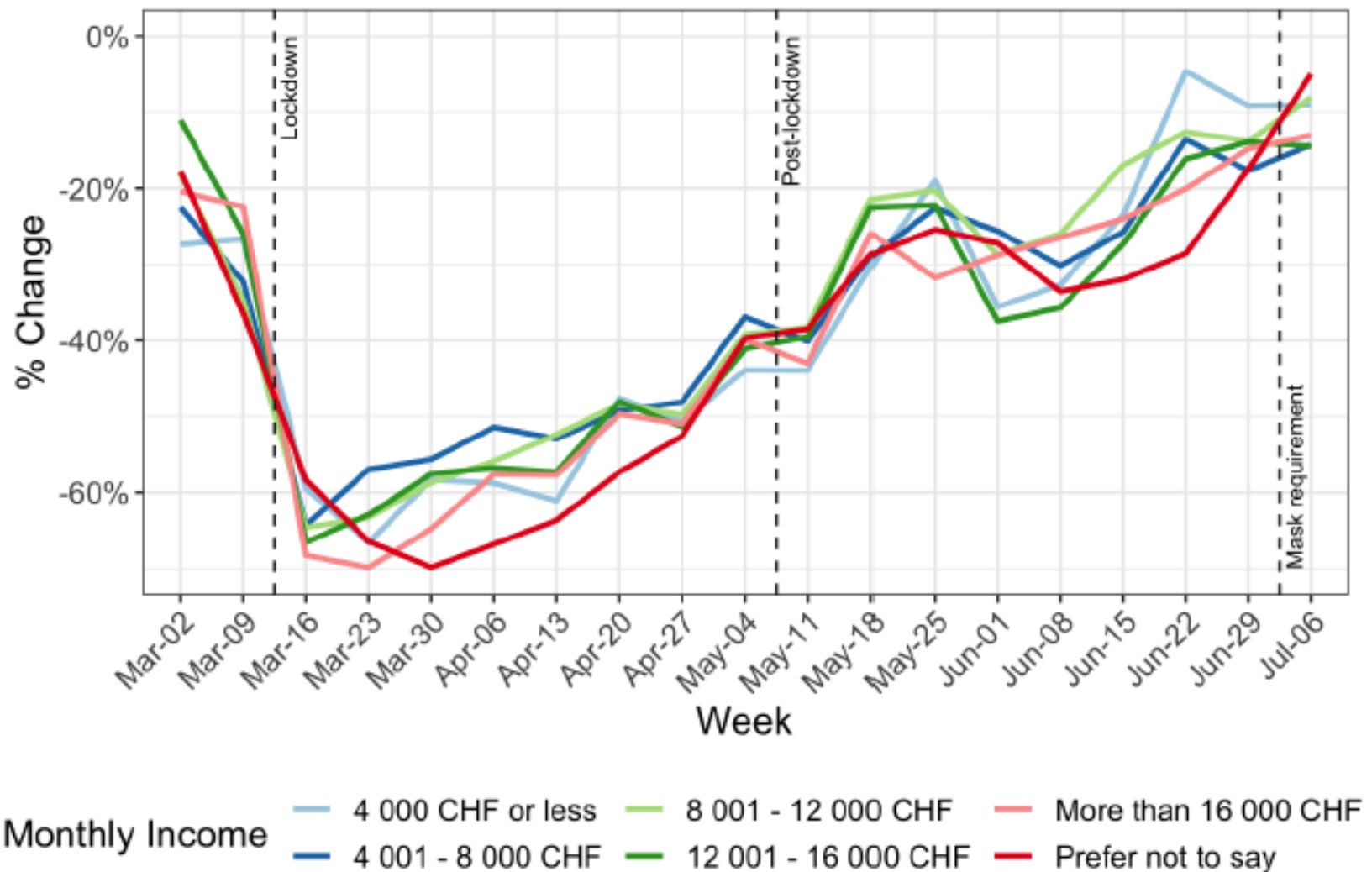
PKm by gender



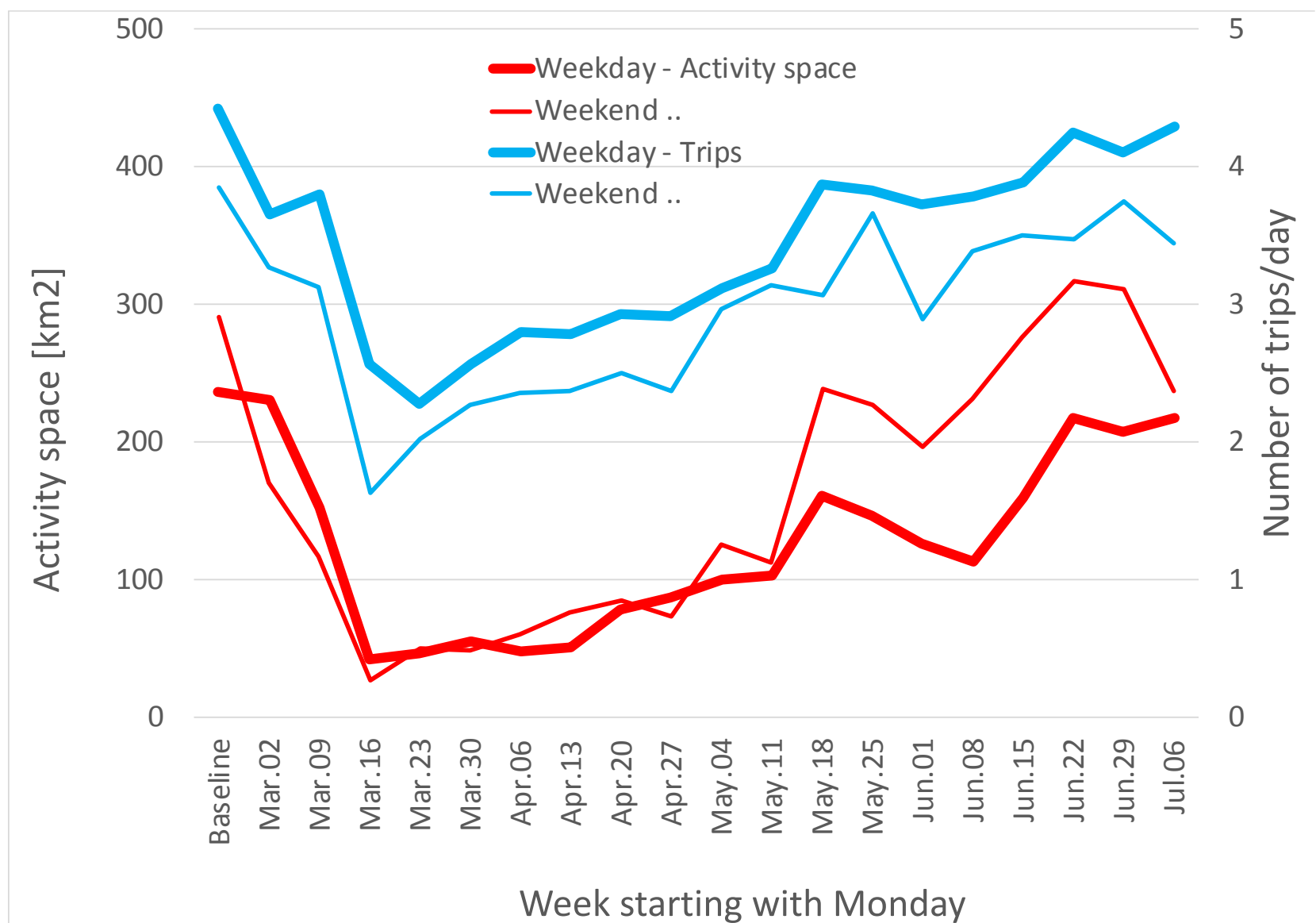
PKm by work arrangement



$\Delta\%$ of PKm by income

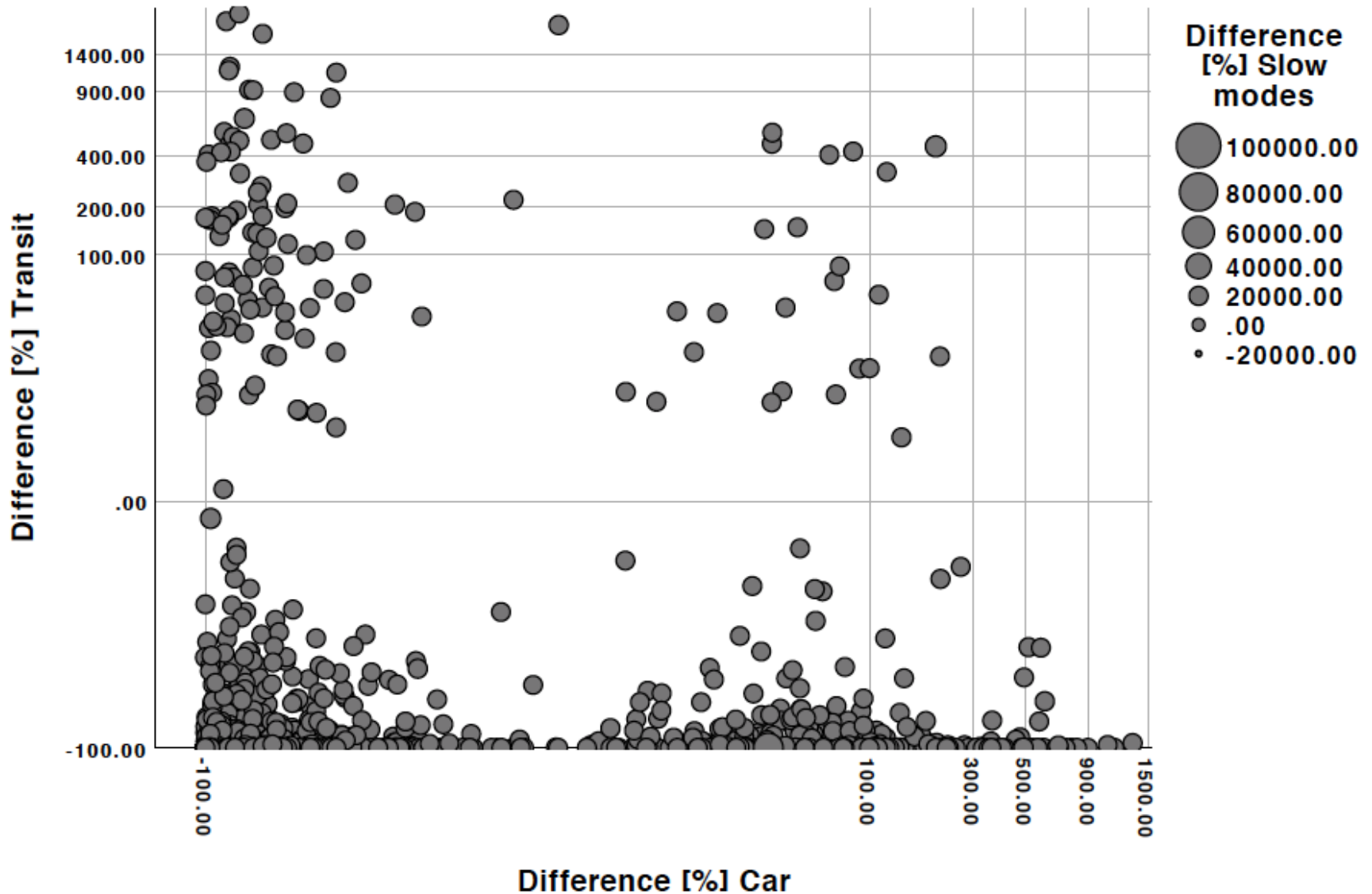


$\Delta\%$ of trips and activity spaces

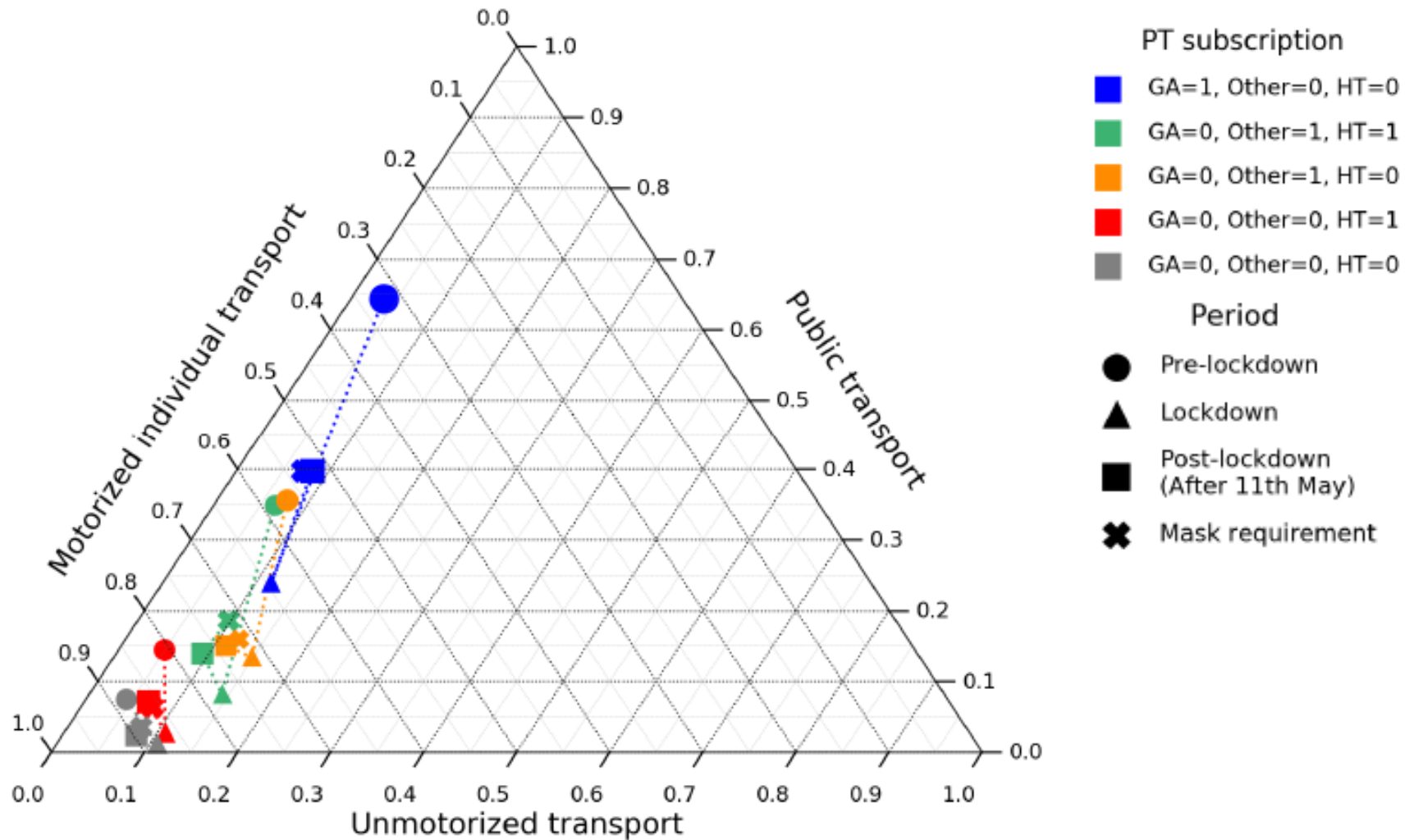


MOBIS COVID mode usage trajectory

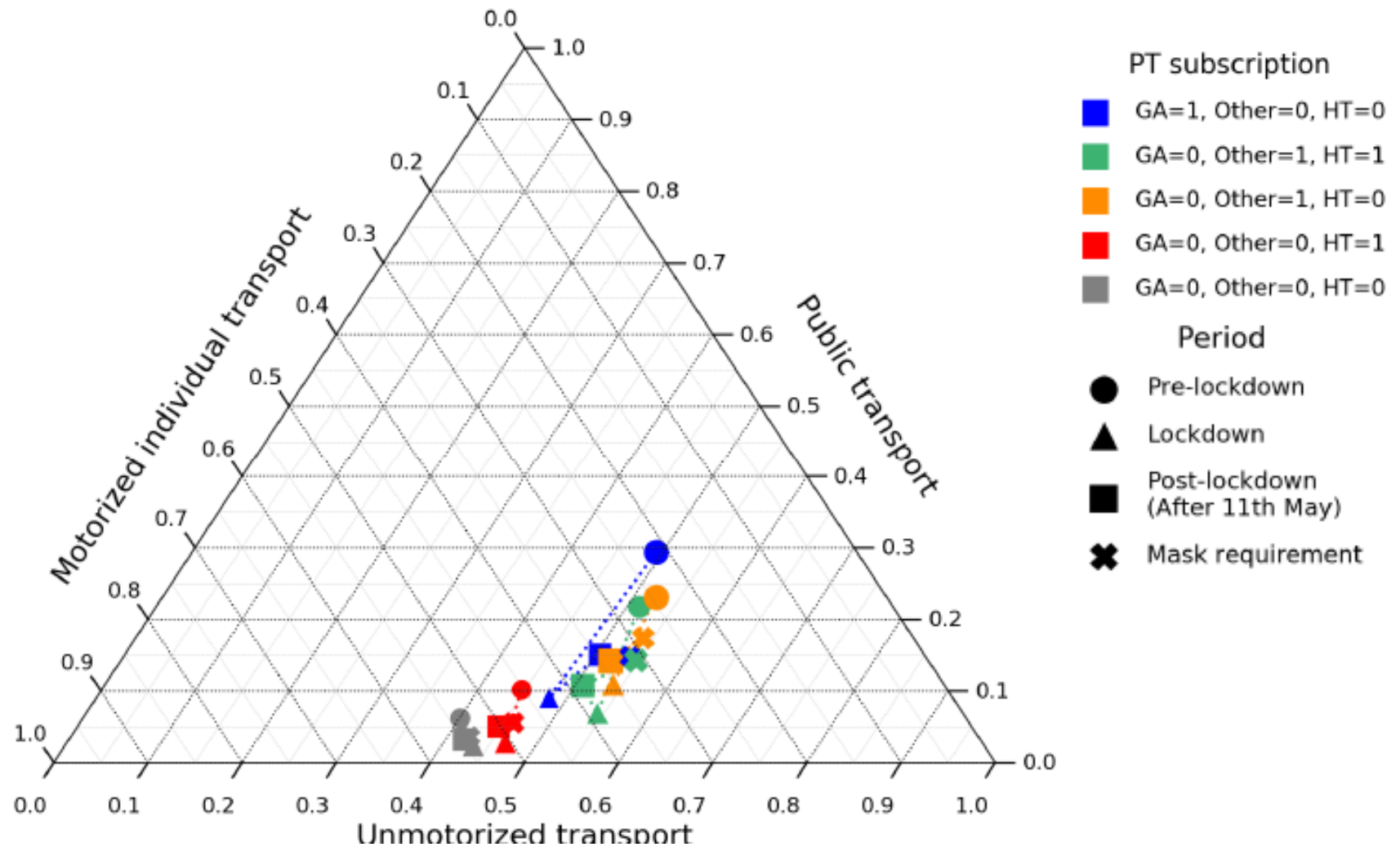
$\Delta\%$ of daily distances changed MOBIS to COVID Phase 1



PKm before, : Weekdays

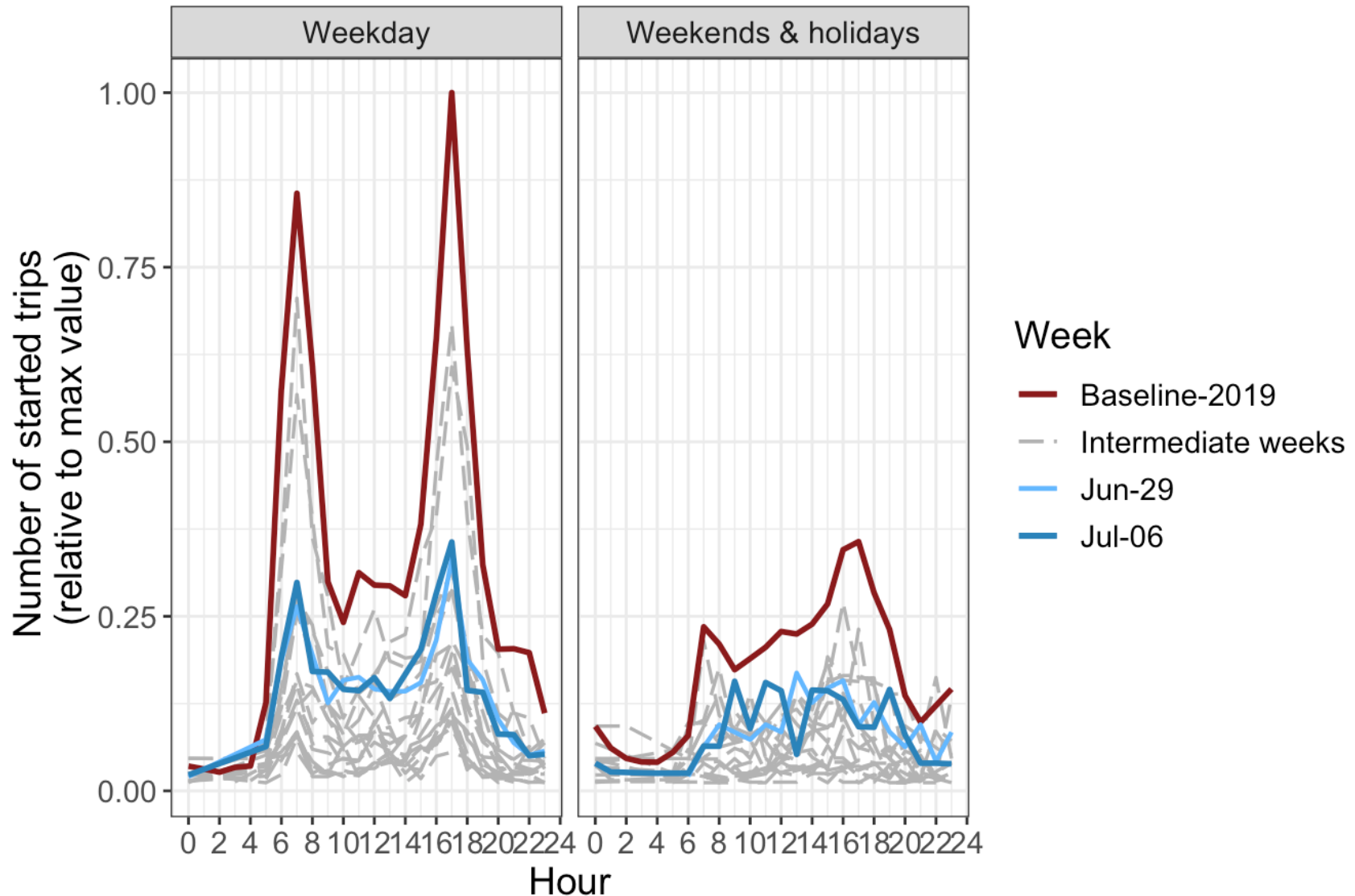


Trips before,: Weekdays

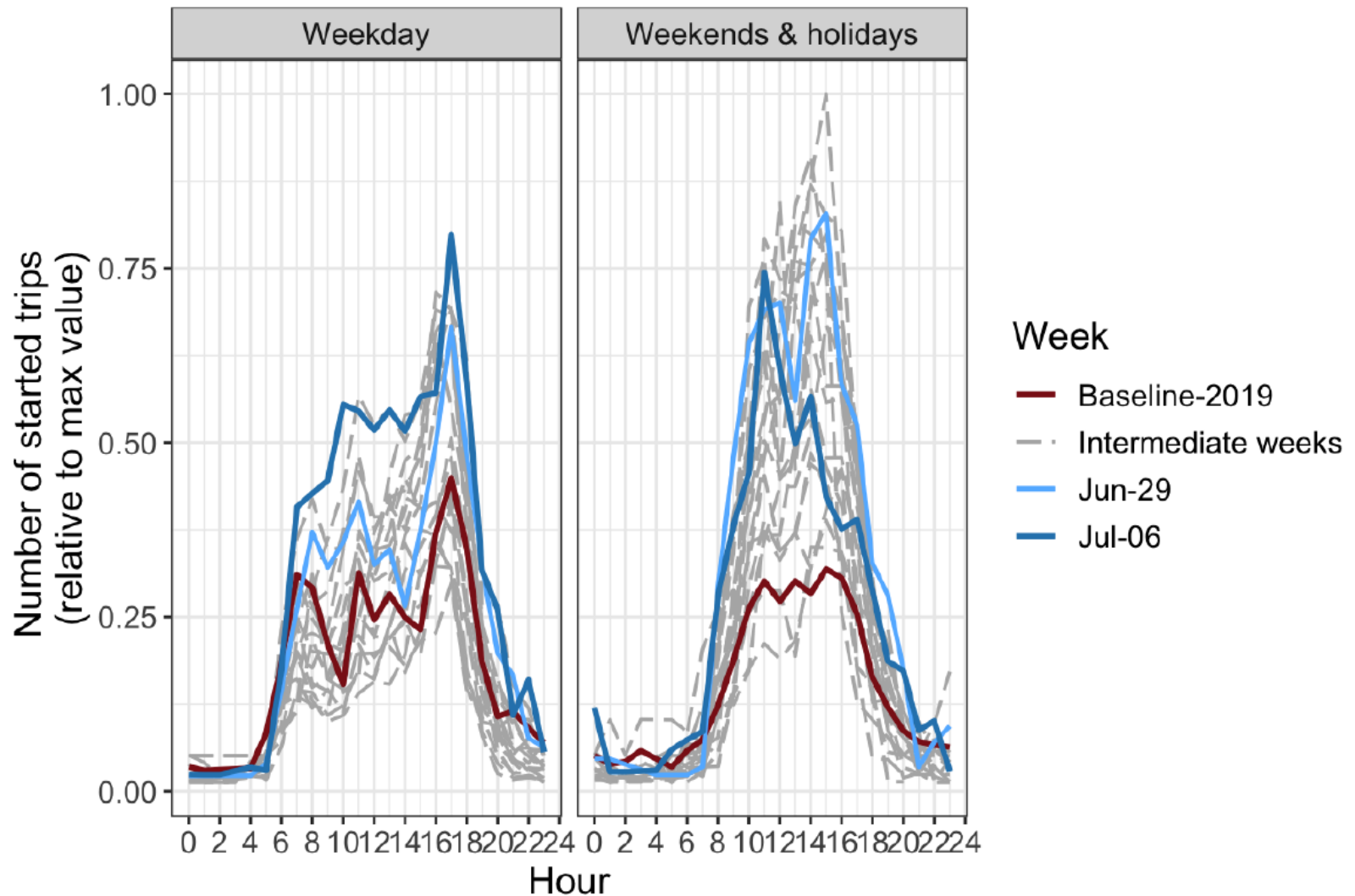


MOBIS COVID hourly pattern trajectory

Relative number of train trips by hour of the day

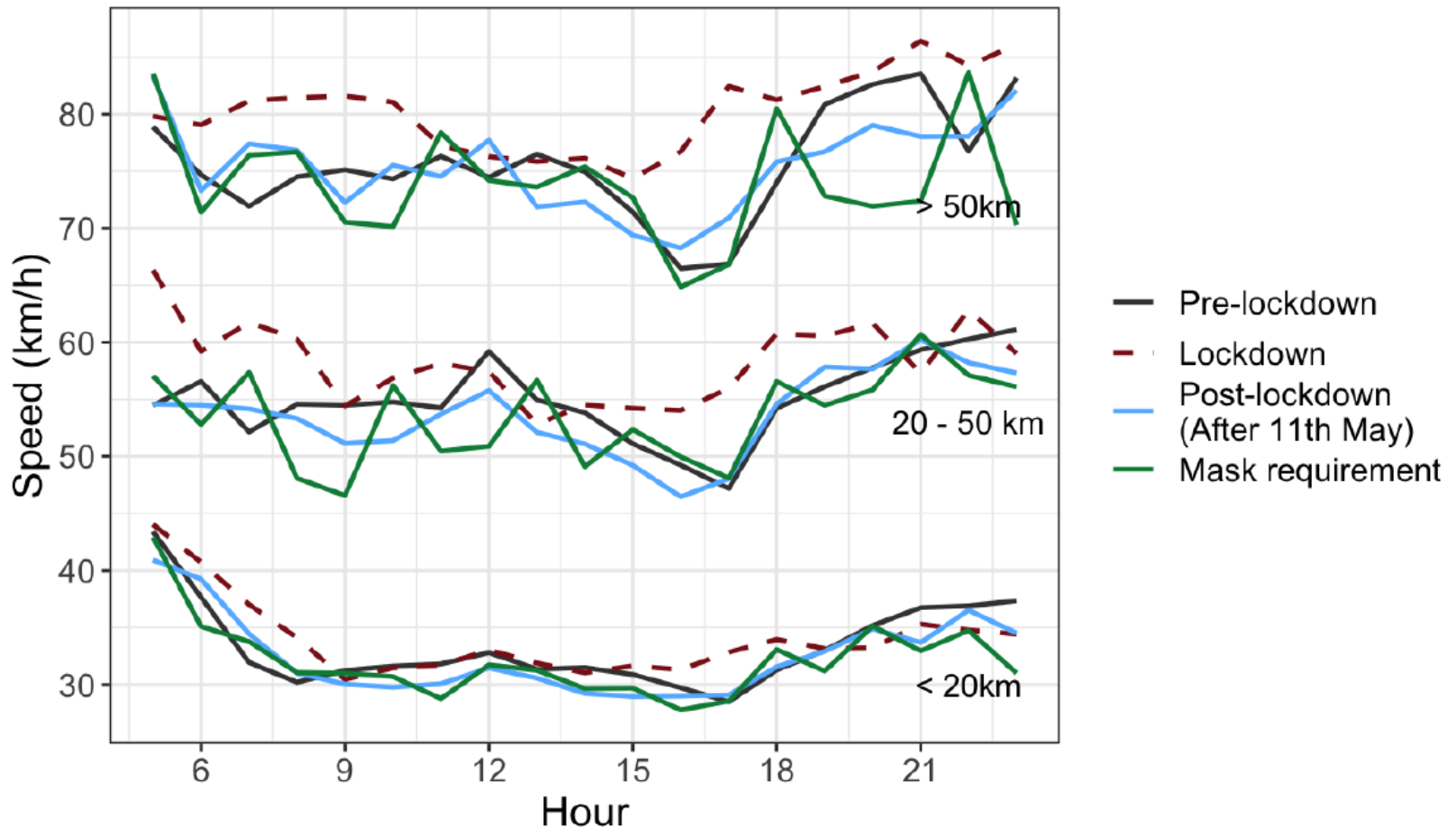


Relative number of cycle trips by hour of the day

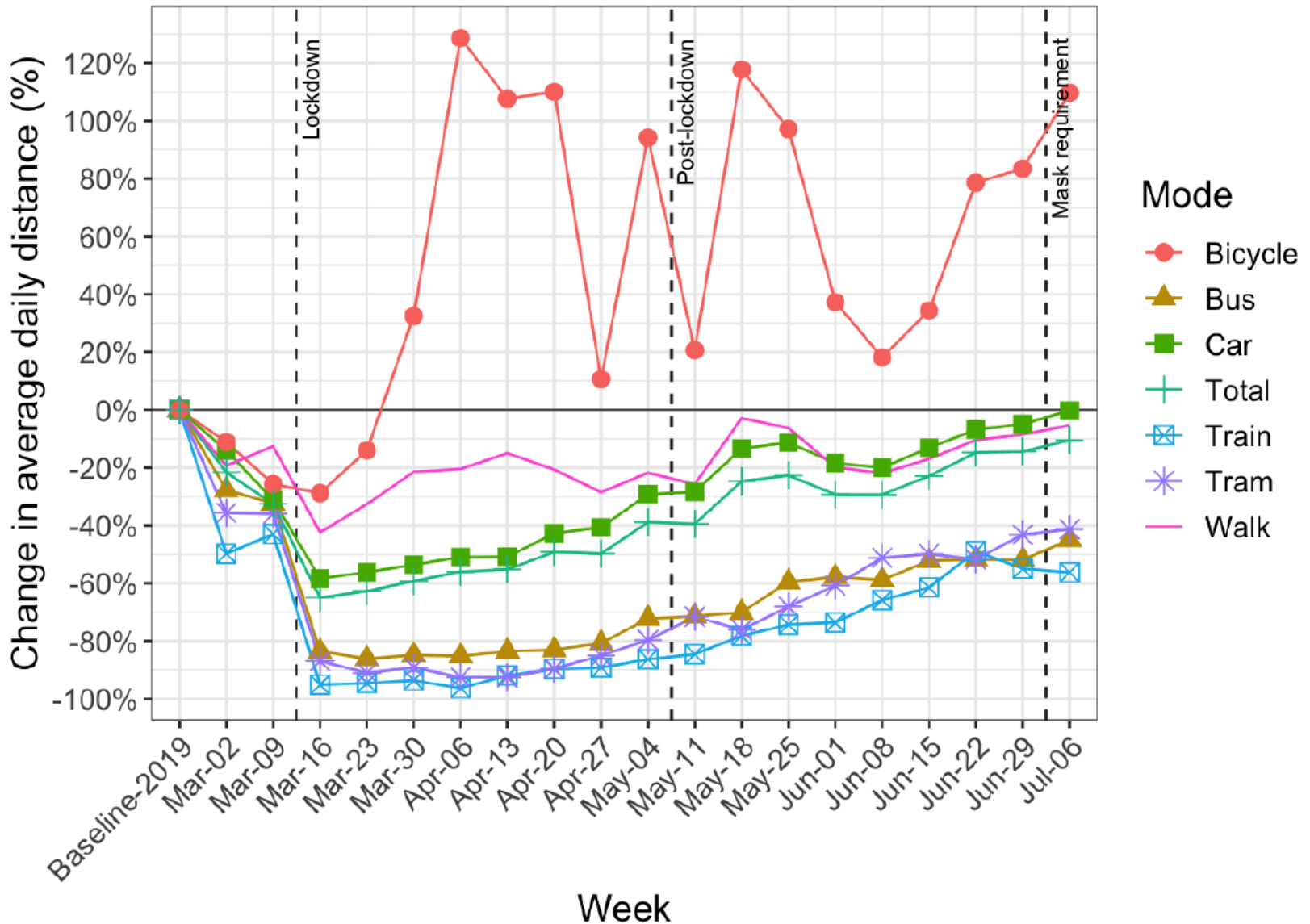


MOBIS COVID problems in the fall?

COVID19 impacts: Door to door speeds



COVID19 impacts: Supressed demand in PKm



Next steps

New equilibrium ?

- Productivity ~ accessibility ~ speeds & lived density
- Share of work from "home" – end of the office ?
 - Cost allocation for the work place (*free lancing/putting out/ generalised gig economy*)
 - Resilience of such an economy (health care, retirement)
- Use of large pooled vehicles (bus, tram, train)
- Redistribution of road space (pedestrians, cyclists, cars, big vehicles)
- Desired/enforced speed levels
 - Crowding pricing for all vehicle sizes/services
 - Parking pricing
- Crowding control in the city

Questions ?

ivtmobis.ethz.ch/mobis/covid19/

www.ivt.ethz.ch