

## 9 EUR-Ticket study at TUM: Student theses available on energy utilization and CO<sub>2</sub> emissions

The 9 EUR-Ticket is an unprecedented transport policy and behavioral experiment in Germany. During June, July, and August 2022 a flat-rate ticket of 9 EUR per month allows to travel on all local, regional, and urban transportation networks. This low price can be considered almost fare-free. TUM set up the study [Mobilität.Leben](#) to observe and analyze the various dimensions of this experiment. The study comprises a three-wave survey and an app-based travel diary to measure the travel behavior automatically.

Due to the 9€ Ticket, we expect a reduction in total CO<sub>2</sub> emissions from the transportation sector in the months of Jun-Aug 2022 as compared to previous years for the same period. This reduction should arise from a smaller number of individual cars on the road and must be offset by the increase in energy utilization (if significant) by the public transport sector due to increased passenger volume.

Post 9€ ticket, we might expect that the CO<sub>2</sub> emissions will rise again as people resort to old habits, but there could be some permanent adopters to public transport. Also new planned strategies by government to subsidize public transport can lead to people being more inclined to wait before buying the new car.

### Research Questions

1. Can these phenomena be validated by an empirical and model-based study of the existing user data?
2. Can we see such an impact in the city of Munich with the Mobilität.Leben project data?
3. If yes, can we extrapolate this data for the rest of the country?

Candidates must be enrolled at TUM. Ideal candidates have a good command of statistical programming / data science, e.g., R, python, MATLAB, etc. Preferred starting date is October 2022. Good command of German is not required but is a plus.

Candidates are invited to submit their application via email to [andrea.cadavid@tum.de](mailto:andrea.cadavid@tum.de). The application should include a CV, transcript of records, and a motivational statement of around 150-200 words. Interviews will be conducted via zoom.