Head:	Prof. Dr. Eva Heinen
Topic:	Identification and Analysis of Excess Travel in Trip Diary Data
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Policy makers face the difficult tension between designing a transport system that provides people access to (basic) needs while trying to reduce travel. It is therefore important to identify and understand excess travel –travel resulting from trips for which alternative destinations closer to home were available. The aim of this thesis is to identify and analyze excess travel in household travel survey data. The analysis can be based on data from either the Swiss Microcensus or the TimeUse+ survey; both surveys contain trip diary data as well as sociodemographic information of the respective respondents. Further, openstreetmap (osm) data will be used to generate a full set of destinations against which the conducted trips will be compared. Based on these data sources, a method will be developed to identify excess travel. Further analyses will be conducted regarding the trip purposes as well as the trip makers' characteristics.

Tasks to be conducted in this thesis (depending on final format and group size):

- Familiarisation with the data sources
- Choice of study area and extraction of osm data
- Development of method to identify alternative destinations
- Definition of measure of excess travel
- (potentially) Adapting measure to account for rubber banding
- Analysis of trip characteristics of excess travel, e.g., mode, purpose
- Analysis of characteristics of excess travelers

Links:	
Additional remarks:	We recommend conducting this work in python; R could also be used.
Minimum credits:	Topic suitable for MSc thesis, credits will depend on study program
Recommended lectures:	Transport planning methods (MSc), GIS