

Summary

Trenklin 2: Review of the Model and Discussion about Fields of Application

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Trenklin 2 is a model for calculation of effects of train policies. We review the methodology and the underlying parameters of the model. We find, among others, that the value of time for passengers with seats are too high given the applied method where people have different value of times dependent on the seating availability. On a more general basis we discuss strengths and weaknesses of the model and use this as a point of departure for a discussion about reasonable fields of application of the model. We conclude that the model is well suited for projects that adjust time tables and other detailed train polices.

Trenklin is a tactical transport model and a tool to calculate user benefits for train users. It calculates the number of rail passengers between train stations per train departure for three different travel purposes. Trenklin is currently the only transport model in Norway that calculates an equilibrium between demand and crowding on trains. It applies weights on the value of time to account for the disadvantage of crowding/travelling without an available seat. Our analysis shows that the weight applied for seated travelers should be lowered to a weight of about 0,59 (not 1,0) to account for that the official value of the time parameter is estimated on data that includes both crowded and uncrowded trains.

In comparison with the regional transport models (RTM which are traditional used for transport planning), Trenklin has different methodological advantages and disadvantages. Trenklin's detailed description of train services and the calculation of crowding - and modeling of users' adaptation to crowding - are the most obvious strengths. These advantages make Trenklin the natural choice for timetable projects and other detailed polices for train services. That Trenklin 2 only considers changes for trains, does not calculate transport choices and does not consider longer-term behavioral dimensions, makes Trenklin unsuitable for the evaluation of transport policies with overall and long-term effects.

The methodology of Trenklin 2 is very different from that in the RTM model. This could increase the uncertainty about the consistent ranking of policy measures or infrastructure projects that are analyzed with model. We therefore suggest that certain parameters (as the value of time) and components of the model are adjusted and improved in upcoming versions of Trenklin.