Quantitative Methods to Evaluate Timetable Attractiveness

The article describes how the attractiveness of timetables can be evaluated quantitatively to ensure a consistent evaluation of timetables. Since the different key stakeholders (infrastructure manager, train operating company, customers, and society) have different opinions on what an attractive timetable is, the article categorizes the different interests for each key stakeholder. Based on this categorization, the most important timetable attractiveness parameters are described (timetable structure, timetable complexity, travel time, transfers, punctuality and reliability). The descriptions of the timetable attractiveness parameters form the basis for proposing preliminary attractiveness indexes that are assigned an index value. In the end all the attractiveness indexes are collected and one overall preliminary attractiveness index is proposed. Although one (preliminary) attractiveness index is proposed it is still necessary to keep the individual attractiveness parameters to be able to analyse where it is possible to improve the timetable – and possibly the infrastructure too. Since the indexes are preliminary proposals they can each be improved and thereby also improving the overall timetable attractiveness index. To identify the preferred timetable structure it could e.g. be useful to apply multi criteria analysis methodology to weight the input from the stakeholders. A route choice model could for instance be used to get a better picture of the transfer patterns in a given timetable, and thereby making it possible to create better transfer indexes.

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