Analysis of the Demand Patterns of Limited Express Trains Aiming at Optimizing Allocation of Reserved/Non-Reserved Seats

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Allocation of reserved/non-reserved seats of limited express trains does not always correspond with customers' demand which may vary depending on many elements such as days and operating sections. This mismatch may spoil customers' convenience due to the congestion and railway operators may lose profits. Developing a demand estimation model and optimizing seat allocation, as a sort of revenue management, will be a solution of this problem. As a step to construct the model, we conducted a demand analysis for selected limited express trains which are often crowded. We also worked out a stated preference survey to observe how people choose their seat classes of a train. This paper describes some valuable findings from their results, such as the difference between the trend in demand of two seat classes and the willingness to pay for the seat reservation.