

**A Method for Evaluating Effect of Transportation Plans on Convenience of Public Transportation Networks  
in Small and Middle Sized Local Cities**

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In order to improve the convenience of public transportation networks such as railways and buses, various transportation plans such as changing the route and timetable are being implemented. This study aims to develop a method that can evaluate the effect of transportation plans on the convenience of public transportation networks in terms of the rate of change based on the current situation. This method can be applied to small and middle-sized local cities where the accumulation of data on local traffic conditions is poor. In addition, a system that implements the method is developed, and it becomes possible to carry out evaluation simulations on the convenience of public transportation networks in case of revisions in transportation services. Using the results of the study, it is possible to compare effects of various transportation plans in small and middle sized local cities on the convenience of public transportation networks based on quantitative basis. As a result, it is possible to extract desirable plan.