

Role of service uncertainty in decision to use Demand responsive transport services, A stated adaptation choice experiment

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Abstract

Demand responsive transport (DRT) although existed for decades, has recently become more attractive due to availability of real time (demand and supply) data and advanced matching algorithms. DRT is advantageous in reducing traffic and space occupancy if each service is simultaneously used by multiple travelers. Despite its benefits, travelers' willingness to adopt this transport service is essential for such a service to have a meaningful impact on the living environment. Apart from service characteristics such as travel cost, travel time, waiting time and convenience, the uncertainty involved in the service delivery can be an additional factor for travelers not to be eager in using such a service. In this study, a web-based stated adaptation experiment is designed to understand the travelers' choice of DRT in different contexts. Stated adaptation choice experiment first collect travel history and then expose respondents to two DRT options designed on the basis on the reported trip characteristics. A regret- rejoice based model is estimated to identify the relationship between the features of DRT service (including uncertain characteristics) and people's adaptation behavior.

Keywords: *Demand responsive transport, stated adaptation experiment, Uncertainty*