



Research School for Operations
Management and Logistics

Models for predicting the effects of subway stations on multimodal connections and neighborhoods in urban areas

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The research is motivated by the need to gain insight in the implications of changes in the public transport systems on the mobility in urban areas. This raises the need for the development of quantitative models and methods to predict mobility patterns in response to changes in the public transport system. The main use-case and motivation for the project is the introduction of the North-South subway system in the city of Amsterdam in 2018. In this context, the project is focused on understanding and predicting the parking behavior and car ownership in the municipality of Amsterdam. To this end, we focus on the development of discrete choice models. The project consists of two subsequent phases: (1) a statistical analysis of the dominant factors that influence the parking behavior and car ownership, and the development of a prediction model, and (2) a re-estimation of the model with the data over the years when the North-South subway is operational. In this phase the model will be evaluated against the previous created model to see whether any changes have occurred in the set of chosen variables or the quality of the model.