



Impact of reliability and crowding on public transport users' choices

General description

Mode choice models, which attempt to predict users' behaviour regarding the use of different modes of transport, typically consider travel time and waiting time, as well as the fare and accessibility of each available mode. However, the role of the variability of these attributes on users' choices remain largely unknown. In a high-frequency public transportation scenario, this variability is strongly affected by headway irregularity between consecutive vehicles. Furthermore, this has also several impacts for crowding, which harms public transport comfort in many cities around the world.

Assignment description

The purpose of this project is to find the impact that reliability has on travellers' public transport alternative choice. To do so, a choice experiment of stated preferences will be carried out. In this experiment, each alternative will have different values of speed, frequency, headway regularity and average occupation. This experiment has already been designed and is currently conducted in Santiago de Chile. The attribute values will have to be determined for the Dutch context (e.g. Amsterdam metro or Dutch Railways) and a series of choice model estimations will be performed to establish the trade off between variables and the value of reliability. Results will be compared to findings from Santiago de Chile where crowding is prevalent.

Candidate background

T&P or TIL students who have knowledge and interest in public transport operations and travellers' behaviour, and have affinity with data analysis and discrete choice modelling.

Research group

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External support

The project will be performed in cooperation with *Pontificia Universidad Católica de Chile* Transportation Department, as it is part of a current PhD Project by Jaime Soza-Parra.