

Estimating exponential scheduling preferences - DTU Orbit (08/11/2017)

Estimating exponential scheduling preferences

Different assumptions about travelers' scheduling preferences yield different measures of the cost of travel time variability. Only few forms of scheduling preferences provide non-trivial measures which are additive over links in transport networks where link travel times are arbitrarily distributed independent random variables: Assuming smooth preferences; this holds only for specifications with a constant marginal utility of time at the origin and an exponential or affine marginal utility of time at the destination. We apply a generalized version of this model to stated preference data of car drivers' route and mode choice under uncertain travel times. Our analysis exposes some important methodological issues related to complex non-linear scheduling models: One issue is identifying the point in time where the marginal utility of being at the destination becomes larger than the marginal utility of being at the origin. Another issue is that models with the exponential marginal utility formulation suffer from empirical identification problems. Though our results are not decisive, they partly support the constant-affine specification, in which the value of travel time variability is proportional to the variance of travel time. (C) 2015 Elsevier Ltd. All rights reserved.

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