



Extended prospect theory: Findings on choice behaviour from economics and the behavioural sciences and their relevance for travel behaviour

Title

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Abstract

In Transport Sciences different implementations of Utility Theory are commonly used for the description and prediction of human choice behaviour. Almost 30 years ago Kahneman and Tversky proposed an alternative behavioural-economic model of choice behaviour called Prospect Theory. In contrast to Utility Theory they assumed that preference orders depend on the choice context. The most important differences between Extended Prospect Theory and Utility Theory are: preferences for one alternative over another are not stable but may change with the circumstances; people frame alternatives as changes compared to a reference state; they adapt that reference state almost immediately once a choice is made; and they attach a much higher value to a loss of, for example, ten minutes leisure time compared to an increase of the same size. This book demonstrates that in many occasions an Extended Prospect Theory explains the choice behaviour of people better than Utility Theory for the whole range of travel choice contexts. It also proposes a mathematical model based on Extended Prospect Theory that, compared to a similar Utility Theory-model, appeared to offer a better prediction of the responses of car owners in Singapore to the introduction and changes in the road pricing fares from 1975 to 2005.

Subject

[transport economics](#)

[travel behaviour](#)

[value of travel time](#)

[road pricing](#)

[prospect theory](#)

[loss aversion](#)

[reference-dependent framing](#)

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While a robust finding in many SP studies is the gain/loss asymmetry, other features of PT are less explored in a travel behaviour context. Interestingly, findings reported by Hess et al. In addition, some open questions remain about the suitability of PT to describe and model a dynamic environment of travel choice, and the effect of feedback and learning on repeated choice. PT was originally proposed in order to capture description-based decisions in one-shot tasks. The effect of this dynamic update of attributes and their distribution, combined with the effect of learning (which by itself is characterised by bounded rationality) might be stronger than loss aversion and other features of PT. Another open question associated with the dynamic nature of travel behaviour is how Richard Thaler's contributions to behavioral economics. October 3, 2017 1. Introduction Economists aim to develop models of human behavior and interactions in markets and other economic settings. But we humans behave in complex ways. Although we try to make rational decisions, we have limited cognitive abilities and limited willpower. slightly reducing a large loss, depends on the exact parameters of the value function and the exact difference between the large loss and the small gain. Behavioral economics - thesis information. Below you find possible supervisors, their general research area or research interests and some example topics the supervisor proposes. Own topic: Generally, own ideas are very welcome! Please write a short description / proposal and send this to the thesis coordinator Julia Müller: jmuller@ese.eur.nl. This type of behaviour causes huge damages to companies and the whole economy. On the other side, the people engaging in dishonest behaviour play it down or justify it. This can also be related to norms. How can one prevent dishonest behaviour? Practical relevance of behavioral economics. The nudge techniques of behavioral economics are being used by governments in the UK and Australia.