

Thursday, November 2nd, 2023

14:00 – 15:00

IRISK RESEARCH SEMINAR



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RESEARCH
SEMINAR

‘ATTENTION ALLOCATION IN HEALTH STATE VALUATION. DOES CORRECTING TIME TRADE-OFF AND STANDARD GAMBLE FOR PROSPECT THEORY REFLECT ATTENTION ALLOCATION?’

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ABSTRACT

Objectives: Time trade-off and standard gamble are among the most popular methods for estimating health state utilities for use in economic evaluation of health technologies, which typically yield different results for the same state. In the ‘corrective approach’ TTO and SG utilities are obtained whilst incorporating that individuals may be loss averse, weight probabilities and discount life duration. In other words, bias in time TTO and SG health state valuation is corrected using insights from cumulative prospect theory (CPT). This, however, (implicitly) assumes that the decision processes underlying TTO and SG can be proxied with parameters estimated from risky gambles. This study extends earlier work that has shown that attention allocation in risky gambles is associated with CPT parameters, to the corrective approach.

Methods: Attention allocation was studied using process tracing tools often used in the psychological literature on decision processes, i.e. hiding all information in choice tasks, to only show when a component of the task is clicked on. Using such a process tracing paradigm, respondents completed 4 TTO and 4 SG tasks, as well as a set of gamble tasks used for estimating CPT parameters. A total of 167 UK general public respondents took part in this online experiment, which consisted of two sessions on Prolific. A Bayesian hierarchical model was used to estimate TTO and SG utilities, as well as for estimating the CPT parameters needed for the corrective approach.

Results & Discussion: The findings of this study provide both some evidence for the validity of the corrective approach. Before applying a corrective approach, TTO utilities were significantly lower than SG utilities. Respondents allocated more attention to duration than to health status in TTO tasks. In SG tasks, most attention is allocated to probability information. Our analysis suggests two patterns of attention allocation in line with the corrective approach: i) those with a stronger focus on the duration sacrificed rather than the quality of life gained in TTO had higher utilities, and ii) those with a stronger focus on the worst outcome in SG to have higher utilities. Furthermore, the CPT parameters estimated from risky gambles are associated both with attention allocation within these gambles, as well as with attention allocation in TTO and SG.

