

Parameter Interactions in the Cumulative Prospect Theory: Fitting the Binary Choice Experiment Data

Authors : Elzbieta Babula, Juhyun Park

Abstract : Tversky and Kahneman's cumulative prospect theory assumes symmetric probability cumulation with regard to the reference point within decision weights. Theoretically, this model should be invariant under the change of the direction of probability cumulation. In the present study, this phenomenon is being investigated by creating a reference model that allows verifying the parameter interactions in the cumulative prospect theory specifications. The simultaneous parametric fitting of utility and weighting functions is applied to binary choice data from the experiment. The results show that the flexibility of the probability weighting function is a crucial characteristic allowing to prevent parameter interactions while estimating cumulative prospect theory.

Keywords : binary choice experiment, cumulative prospect theory, decision weights, parameter interactions

Conference Title : ICBEPP 2021 : International Conference on Behavioural Economics and Public Policy

Conference Location : Budapest, Hungary

Conference Dates : August 23-24, 2021