Is There a Plausible Theory for Decision under Risk?

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Abstract: Expected utility theory and other theories of decision under risk that model risk aversion with decreasing marginal utility of money have been critiqued with concavity calibration arguments. This paper introduces a dual calibration that applies to theories that model risk aversion with nonlinear transformation of probabilities. The new convexity calibration for probability transformations and the concavity calibration from previous literature together make clear why plausibility problems with theories of decision under risk may be fundamental. They are fundamental if their empirical relevance can be demonstrated. Heretofore, the calibration critique has been based on thought experiments. This paper reports real experiments that provide data on the empirical relevance of the critique.

JEL classification: C90, D81

Keywords: experiments, duality, decision theory, risk aversion, calibration

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