

Hidden Complementarities - Unobserved Asset Endowments and the Failure of Expected Utility Theory

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Abstract

Expected utility theory defines preferences over final wealth. Yet, in empirical applications individuals' wealth endowments typically remain unobserved. In this paper, we demonstrate that this incomplete data problem is a possible reason for falsifying expected utility theory. Specifically, we find that complementarities between alternatives in the choice set and risky wealth endowments can produce violations of the independence axiom. Conversely, revealed preferences obey the independence axiom if and only if choice alternatives and wealth endowments are stochastically independent. The (implicit) assumption of stochastic independence can lead the observer to conclude that individuals are risk seeking or prone to the Allais paradox, while indeed they are risk-averse expected utility maximizers choosing alternatives which hedge against their risky endowment. Our results have important implications for the definition of comparative risk aversion and comparative riskiness, and they help to understand an array of puzzling phenomena documented by the empirical literature. We identify conditions for which both risk preferences and asset endowments are recoverable from pure choice data.