

OPTIMISM AND PESSIMISM WITH EXPECTED UTILITY

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Abstract

Maximizing subjective expected utility is the classic model of decision making under uncertainty. Savage (1954) provides axioms on preference over acts that are equivalent to the existence of a subjective expected utility representation, and further establishes that such a representation is essentially unique. We show that there is a continuum of other “expected utility” representations in which the probability distributions over states used to evaluate acts depend on the set of possible outcomes of the act and suggest that these alternate representations can capture pessimism or optimism. A consequence of the multiplicity of alternative representations of preferences that satisfy Savage’s axioms is that existing analyses of agents’ market behavior in the face of uncertainty have a broader interpretation than would appear at first glance. Extending the DM’s choice domain to include both subjective acts and objective lotteries, we consider a DM who behaves in accordance with expected utility on each subdomain, applies the same Bernoulli utility function over prizes regardless of their source, but may be optimistic or pessimistic with regard to subjective acts. This model can accommodate, for instance, the behavior in Ellsberg’s two-urn experiment, and provides a framework within which optimism, pessimism, and standard Savage agents can be distinguished. (JEL: D80, D81)

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