

Qu, Xiangyu

Purely subjective extended Bayesian models with Knightian unambiguity. (English)

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Summary: This paper provides a model of belief representation in which ambiguity and unambiguity are endogenously distinguished in a purely subjective setting where objects of choices are, as usual, maps from states to consequences. Specifically, I first extend the maxmin expected utility theory and get a representation of beliefs such that the probabilistic beliefs over each ambiguous event are represented by a non-degenerate interval, while the ones over each unambiguous event are represented by a number. I then consider a class of the biseparable preferences. Two representation results are achieved and can be used to identify the unambiguity in the context of the biseparable preferences. Finally a subjective definition of ambiguity is suggested. It provides a choice theoretic foundation for the Knightian distinction between ambiguity and unambiguity.

MSC:

91B16 Utility theory

91B06 Decision theory

91B08 Individual preferences

Keywords:

Knightian distinction; maxmin expected utility; biseparable preference; unambiguous event

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