

Elicitation and Identification of subjective probabilities

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Abstract

The theory of individual decision under uncertainty has been developed for three cases: games against nature, games of strategy (considered from the viewpoint of one player), and games of strength and skill (or equivalently games with moral hazard). With the publication of the paper by Aumann and Drèze (2009), the analysis of the three cases has been integrated, and a common set of weak (?) axioms leads to the "Subjective Expected Utility" representation of preferences. However, the identification of subjective probabilities is not always complete. There are three possible reasons for this: (i) the specifics of the problem (in games of strategy, preferences are meaningfully defined for the original mixed strategies alone and cannot be extended to arbitrary prospects); (ii) the nature of preferences (in games against nature with state-dependent preferences, probabilities and state-dependent utilities are not identified separately); (iii) the observational set-up (covering either arbitrary prospects, or a given set of prospects defining a decision problem, or the optimal choices alone). In all cases, identification corresponds to the extent needed for solving the problem at hand, neither more nor less. The paper presents in an integrated way the set of results currently available.