A SYNTHESIS OF (BEHAVIORAL) GAME THEORY

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Abstract :
S equilibrium synthesizes a century of game-theoretic modeling. S-beliefs determine choices as in the refinement literature and level-k, without anchoring on Nash equilibrium or imposing ad hoc belief formation. S-choices allow for mistakes as in QRE, without imposing rational expectations. S equilibrium is explicitly set-valued to avoid the common practice of selecting the best prediction from an implicitly defined set of unknown, and unaccounted for, size. S-equilibrium sets vary with a complexity parameter, offering a trade-off between accuracy and precision unlike in M equilibrium. Simple "areametrics" determine the model's parameter and show that choice sets with a relative size of 5% capture 58% of the data. Goodnessof- fit tests applied to data from a broad array of experimental games confirm S equilibrium's ability to predict behavior in and out of sample. In contrast, choice (belief) predictions of level-k and QRE are rejected in most (all) games.