

Value of Game Theory: Reporting Back

ELMAR Contribution by J. Scott Armstrong
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In an ELMAR message of January 28, 2002, I requested empirical evidence on the value of game theory (versus other procedures) for prediction and decision making. Similar requests were made on other email lists (some including game theorists). I also conducted literatures searches using the SSCI and Google, and asked key researchers.

My conclusions are summarized in a recently published paper in the *International Journal of Forecasting*. Despite enormous resources devoted to research on game theory over more than half a century:

1. There is no empirical evidence that game theory can produce better strategies.
2. There is no empirical evidence that game theory produces better decisions.
3. Game theory has no predictive value. In a direct test, game theorists who were requested to use game theory were no better than university students (who used unaided judgment) at forecasting decisions in five conflict situations, while forecasts from simulated interactions were much more accurate.

If you have empirical evidence to refute conclusions #1 or #2, I could arrange for you to publish this in *Interfaces*. (This also applies if the findings support conclusions #1 and #2). If you have evidence to refute (or support) conclusion #3, I can arrange for that to be published in the *International Journal of Forecasting*. The criteria would be that the study provides empirical evidence comparing game theory with an alternative reasonable approach other than game theory. Opinions, mathematical proofs, anecdotes and case studies would not qualify.

My paper from the *International Journal of Forecasting* can be found at <http://jscottarmstrong.com> under "Current projects."