

# An Experimental Study of an Alternating Bargaining Game with Uncertainties \*

Shirui Wang

Iowa State University

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## Abstract

I propose an alternating offer game with tractable uncertainties as the probability of the bargaining power shift. Proposers speculate on the types of responders being strategic or fair. The offers and the uncertainties exhibit an inverted U-shape curve, while the demands of responders increase on average. The experimental results show that the marginal effect of uncertainties on the responder demand is twice as large as the proposer offer. When the bargaining power increases, responders also tend to return less as a revenge. The fair split remains the mode regardless of uncertainties, suggesting a very high belief of fair players. With the strategy method design, simulation also shows that the fair offer is indeed the optimal strategy for proposers, whereas responders are better off by asking for a larger share. The dominance of fair split is thus justified by the model, experiment and simulation.

**Keywords:** Bargaining game, Lab experiment, Game theory

**JEL Codes:** C91, C78

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