Abstract
When measuring preferences, how many questions should we ask a participant? Psychometrics suggests the more questions the better the estimate. However, other research suggests that people develop heuristics, which should decrease reliability and validity, when answering questions. Through a formal model and experimental evidence, we explore how heuristics affect reliability and validity. The model underscores the need to efficiently and robustly estimate preferences before task and person-specific heuristics dominate the participants true preferences. We test the predictions of the model in two studies. Participants answered a series of intertemporal choices; we find that test-retest reliability plateaus after 8 of 20 questions and that concurrent and external validity peak after 8 questions. When measuring preferences, less can be more.

Conceptual Model

Consequences of Model:
1. There can be plateaus and in some cases peaks in test-retest reliability and validity.
2. Asking more questions does not necessarily lead to better estimates of parameters.
3. A decrease in reliability with more questions asked is more likely when questions are asked in a more efficient manner, i.e., when convergence within a session is faster and/or when the use of heuristics increases at a slower rate.

Experiment Evidence of Model

Reliability

Conclusions
• Our generalized model of heuristic formation leads to novel predictions for preference measurement.
• We see a plateau in test-retest reliability.
• We see a marked decrease in concurrent validity with more questions asked.
• When measuring preferences, less can be more.

Future Directions
• How do context shifts alter heuristic use?
• Do estimates combined across contexts increase predictive validity?
• Do we see this pattern in other preference measurements (e.g., conjoint)?
• Testing the efficiency hypothesis.

References

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