

Fundamentals

Precepts (sufficient conditions) for conducting a valid lab experiment (V.L. Smith, *AER*, 1982)

Non-satiation in the reward medium

Saliency of variability in payments of the reward medium

Dominance on the amounts of payment of the reward medium

Privacy of reward payment

Ideal types of experiments

Theory-testing: when testable hypotheses can be derived from theoretical models

Heuristic:

when there is no well-defined theory

experiment data provides “stylized facts”

Central Questions

What does one test?

What does one control?

Does one use induced valuation?

If so, what is induced?

Examples for Induced Valuation

Commodity double auction: induced demand and supply prices

Asset double auction: induced probability distributions of payoffs

The seminal question for experimental design:

What does one hope to learn from conducting the experiment?

Three ingredients of a theoretical model:

Institution: e.g., double auction, posted offer, voluntary contributions (VCM) mechanism

Environment: preferences, technology, information

Behavior

What can we control in a lab experiment? We can control:

The institution

The environment

What do we test in an experiment? We test **hypotheses** about

Behavior

Properties of institutions

We **test** hypotheses by asking **whether data** from experiments:

Conform to predictions

Track changing predictions when we change

The environment; or

The institution