

An economic game: a template for a typical experiment

To facilitate the evaluation of experimental research by a Human Subjects Protection Program it may be a good idea to develop templates for designs which are similar enough that they warrant the same treatment. I here describe such a template concerning *economic games*.

Abstract description

An economic game involves three things:

1. A group of individuals who influence each other by making choices.
2. Choice rules governing which decisions can be made, by whom and when.
3. Payoff rules governing how patterns of choices translate into payments.

Examples

Ultimatum game (UG): The game describes a simple bargaining situation. The group = two individuals. The choice rules = one individual proposes a division of a sum of money; the other individual observes the proposal and accepts or rejects it. The payoff rules = the proposal is implemented if accepted; otherwise no one gets anything.

Double auction (DA): The group = (say) six individuals. The choice rules = during (say) two minutes the individuals post and accept bids and asks to buy or sell some valuable laboratory asset on a computerized platform that mimics the features of online stock market trading. The payoff rule = each individual's payoff is proportional to her or his gain through from trading.

UG and DA both fit the description 1-3. So would countless other economic games. For example, one may consider bargaining games that involve counter-offers and so are more complicated than the UG. Then there are other economic games some of which have names, e.g. "prisoners dilemmas", "trust games", "public goods game," or "the game of 21" to pick examples which resemble the UG in having interaction in a small group (often two individuals) or "English auction", "Bertrand game", or "call market" to pick examples of (often market-oriented games) which like the DA involve more individuals. Other economic games are invented as researchers need them to shed light on various research questions. The important thing to appreciate, however, is that these are all economic games which fit the description 1-3.

Typical features

Experiments on economic games typically include the following additional features:

- (i) The subjects are anonymous towards one another throughout the experiment.
- (ii) No deception is used, in the sense that whatever subjects are told is true.
- (iii) No questionnaire is used.
- (iv) The payoff rules guarantee that no subject makes an overall loss.
- (v) Each subject gets a show-up fee which is independent of the outcome of the game.

Variations

Some experiments on economic games do not satisfy all of (i)-(v). For example, an experiment on face-to-face bargaining cannot satisfy (i). If a questionnaire is used, (iii) will not hold. Or, if the payoff rule is generous enough, there may be no show-up fee, in contrast to (v). Using the above description, researchers submitting proposals to the HSPP, can easily describe the nature of their exercise by saying, for example, that "it is a typical economic game experiment except that a questionnaire is used," etc.