

# Public Goods: A survey of Experimental Research

Chapter 2 - Handbook of Experimental Econ. (Kagel & Roth)

# Main Points

- Can markets provide optimal allocations of PG such as air pollution or public health?
- PGs raise issues about the very nature of humans: Are people cooperative or selfish?
- Do they behave differently when confronting PG decisions than when making private good decisions?
- Are altruism or fairness concepts that a social scientist must come to terms with before solving the organizational problems?

- What does a PG experiment look like?
- Endowment of \$5. Students (4 males) are told that each can choose to invest some or all of their \$5 in a group project.
- Simultaneously put an amount in an envelop
- The experimenter collects the contributions, total them up and double the amount
- Divide the money among the group
- What should one expect to happen in this experiment?

- The economic/game theoretic prediction is that no one will ever contribute "free-rider"
- It is a dominant strategy \$0, because each \$1 contributed yields only \$0.5 to its contributor (no matters what the others do)
- Social problem dilemma.
- The group would be best off in some sense if all contributed \$5 (taking home \$10)
- Individual self-interest is at odds with group interest.

- Sociologic-psychologic prediction is that each individual will contribute something.
- Altruism, social norms or group identification will lead each to contribute \$5, the group optimal outcome.
- What does happen in a PGs experiment?

- Examination of the data reveals that neither theory is right.
- We can observe \$0, \$5 and some choose a middle course and contribute less than \$5.
- Generally, total contributions can be expected to lie between \$8 and \$12 or 40% to 60% of the group optimum
- They seem to claim that a full range of behavior exists from fully selfish to fully altruistic.
- Why should we care? The experimental evidence suggests that voluntary contribution will not produce that desired outcome.
- Change the institutions by which groups choices are made
- Discover the behavior not only in the context of VC but also in the presence of institutional design.