Externalities Games

Ethan Bueno de Mesquita
Harris School of Public Policy Studies
University of Chicago

OUTLINE

RULES

4 players

Each player has 10 units to divide between team production and private consumption

Call player i's contribution to team production t_i

- Any real number in $[0, 10]$

The team produces

$$T = 2\sqrt{t_1 + t_2 + t_3 + t_4}$$

Team plays 4 times

Scoring

Player i's individual score in a round is:

$$T + (10 - t_i)$$

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Player 2's score for that round is:

$$2\sqrt{2.5 + 2 + 1.5 + 3} + (10 - 2) = 6 + 8 = 14$$

Adding Communication

Same rules and players as Game 1, except . . .

Now you can talk to one another for 30 seconds before making contributions

Play 3 times

These rounds also count toward your net score

OUTLINE

Adding a Social Planner

New game

The social planner gets to instruct each player how much to contribute

The social planner's payoff is the sum of the four players' payoffs, summed over 3 rounds

The winner is the social planner with the highest score across the sections of the course