

Rich man and Lazarus - Asymmetric Endowments in Public-Goods Experiments

Claudia Keser, Andreas Markstädter, Martin Schmidt, Cornelius Schnitzler

We compare voluntary contributions to a public good in a symmetric situation, where each of four players has the same endowment of 15, to those in asymmetric situations, where the players have different randomly allocated endowments. We distinguish between a weakly asymmetric situation with endowments of 10, 15, 15, and 20 (AsymWeak) and a strongly asymmetric situation with endowments of 8, 8, 8, and 36 (AsymStrong). In all three situations, zero contribution is the dominant strategy of each player and contribution of the entire endowment of all four players describes the group optimum. AsymStrong differs from the other situations in that the player with the highest endowment has no interest in achieving the group optimum.

In the experiments with a total of 108 participants we examine a 25-fold repetition of a simple linear public-goods game, where each participant stays with the same endowment and interacts with the same three but anonymous other participants. We observe that the group contribution levels are not significantly different between the symmetric and the AsymWeak situation (between 57.5 and 55 percent of the group endowment). In the latter situation, participants cooperate at a point where the group members contribute the same percentage of their respective endowment.

In the AsymStrong situation, where one of the players has a higher endowment than the sum of the three other players' endowments, we observe that the contribution level is significantly lower than in the other situations (37 percent of the group endowment). The "rich" players in the experiment do not show a significant tendency to contribute more than the average contribution of the "poor" players although the rich player in some of the groups is attributed and recognizes a leadership role in the game. The rich player is not as greedy as the rich man in the parable but leaves not considerably more than "breadcrumbs" to the poor players.

Key words: Experimental economics, public goods, asymmetries.