

Four Essays in Experimental Economics: Informational Asymmetries in Markets and Endowment Heterogeneity in Public-Good Games

The first essay “Informational Asymmetries in Laboratory Asset Markets with State-Dependent Fundamentals” investigates the formation of market prices in a new experimental setting involving multi-period call-auction asset markets. In this paper, we are particularly interested in two informational aspects: (1) the role of traders who are informed about the true state and/or (2) the impact of the provision of Bayesian updates of the assets’ state-dependent fundamental values (BFVs) to all traders. We find that markets with asymmetrically informed traders exhibit smaller price deviations from fundamentals than markets without informed traders. The provision of BFVs has little to no effect. Behavior of informed and uninformed traders differs in early periods but converges over time. On average, uninformed traders offer lower (higher) limit prices and hold less (more) assets than informed traders in “good”-state (“bad”-state) markets. Informed traders earn superior profits.

The second essay “Social Costs of Inequality – Heterogeneous Endowments in Public-Good Experiments” compares voluntary contributions to the financing of a public good in a symmetric setting to those in asymmetric settings, in which four players have different, randomly allocated endowments. In this paper, we observe that a weak asymmetry in the endowment distribution leads to the same contribution level as symmetry; players tend to contribute the same proportion of their respective endowment. In a strongly asymmetric setting, where one player has an endowment higher than the endowments of the other players taken together, we, however, observe significantly lower group contributions than in the other settings. The super-rich player does not contribute significantly more than the others on average and thus a much lower proportion of the endowment.

The third essay “Mandatory Minimum Contributions, Heterogeneous Endowments, and Voluntary Public-Good Provision” investigates, by using the weakly asymmetric endowment distribution of the second essay, if the contribution level as well as the afore observed “fair-share” rule of equal contributions relative to one’s endowment may be influenced by minimum-contribution requirements. We consider three different schedules: FixMin, requiring the same absolute contributions, RelMin, requiring the same relative contributions, and ProgMin, requiring minimum contributions that progressively increase with the endowment. We find that minimum contributions exert norm-giving character and lead to an increase in average group contributions. This is especially true for the progressive schedule. On the individual level, this schedule leads to higher relative contributions by the wealthier players and thus violates the “fair-share” norm. On the group level, it leads to the highest contribution level and the lowest inequality in total profits as measured by the Gini index.

Lastly, the fourth essay “Recommended Minimum Contributions in a Public-Good Game with Heterogeneous Endowments” investigates, in the same setting as before, whether the transformation of progressive mandatory minimum contributions into recommendations for minimum contributions of the same size impacts the behavior of the differently endowed subjects in the same way as the mandatory minimum contributions. Contrary to the previous paper, we observe no increase in group contributions in comparison to the baseline treatment without minimum contributions; also the “fair-share” norm of equal relative contributions is not modified. Thus, progressive minimum contributions presented as recommendations do not show the same effect as similar mandatory minimum contributions in our experiment.