

Can virtuous institutions crowd out selfish preferences in a market environment?

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Experimental markets and fairness

Background.

- **Roth *et al.* (1991): UG with Proposer competition**
 - A seller (responder) is matched with a group of 9 buyers (proposer).
 - 10 rounds with rematching.
 - The exchange of the product entails the division of a surplus between the seller and the buyers.
 - The set price determines how the surplus is split.
 - The seller can accept or refuse the highest offer.
 - If she rejects the highest offer, the payoff is 0 for all.
 - Seller monopoly (one seller receives the offers of 9 buyers).
 - Result: The price converges to a situation of maximum profit for the seller. The result is compared with evidence from standard UG.

Results from Roth et al. (1991)

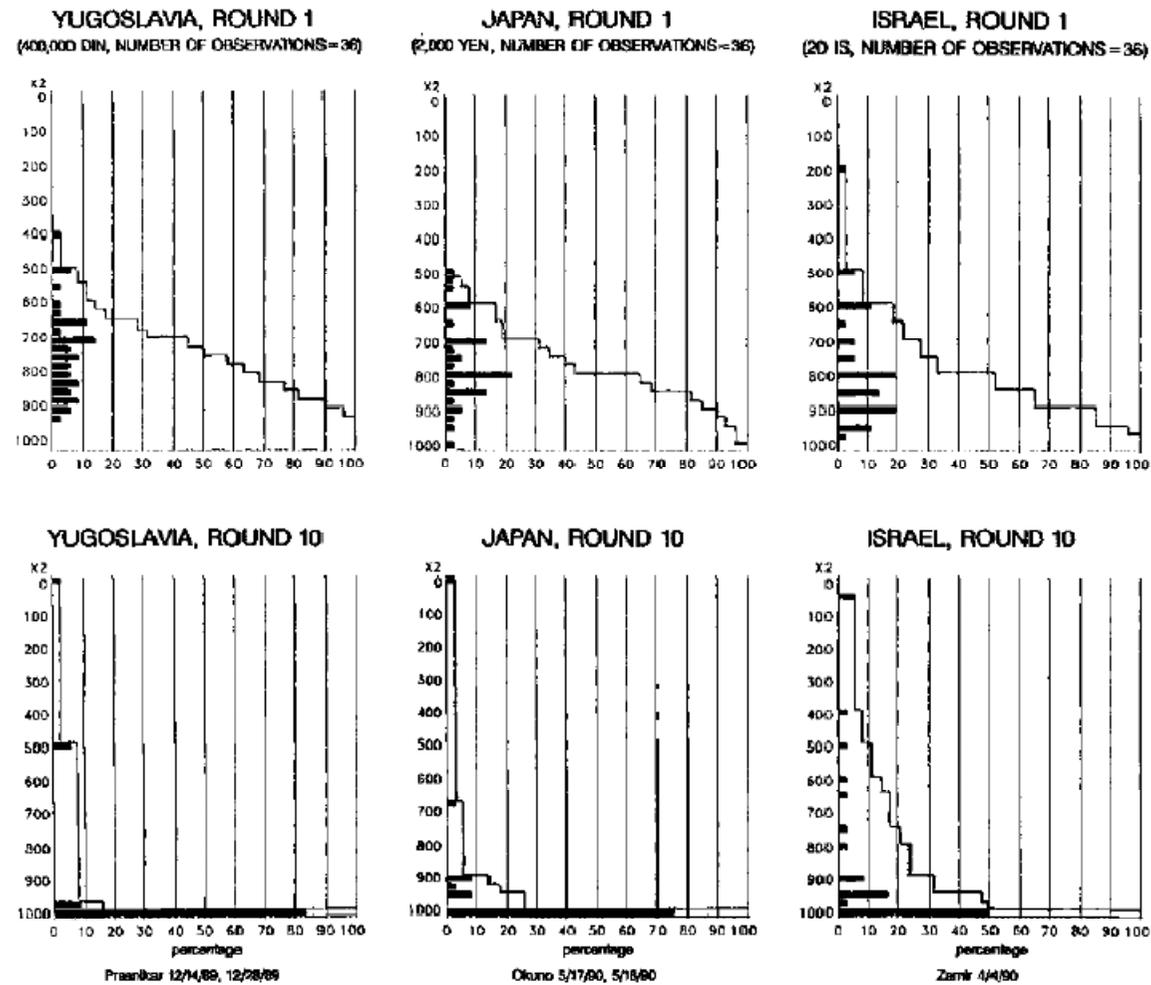


FIGURE 2. DISTRIBUTIONS OF MARKET OFFERS IN YUGOSLAVIA, JAPAN, AND ISRAEL

Experimental markets and fairness

Background.

- Fehr and Schmidt (1999):
 - Application FS model to UG with Responder competition with 2 responders (Guth et al, 1997).
 - Result: significant reduction of the mean accepted offer
- Fischbacher et al (2009):
 - Standard Ultimatum Game (UG).
 - Proposer competition with two proposers (PC2)
 - Responder competition with two (RC2) and (RC5) five responders.
 - 20 rounds, rematching.

Experimental markets and fairness Background.

- Fischbacher et al (2009) cont'd

Results:

- adding one extra responder, causes a large reduction in mean accepted offers. Adding three additional responders, by moving from RC2 to RC5, causes a further reduction in the mean accepted offer.
- adding one extra proposer, causes a large increase in mean accepted offers. However, proposers still reap a substantial share of the surplus.

Impact of Seller/Buyer Competition

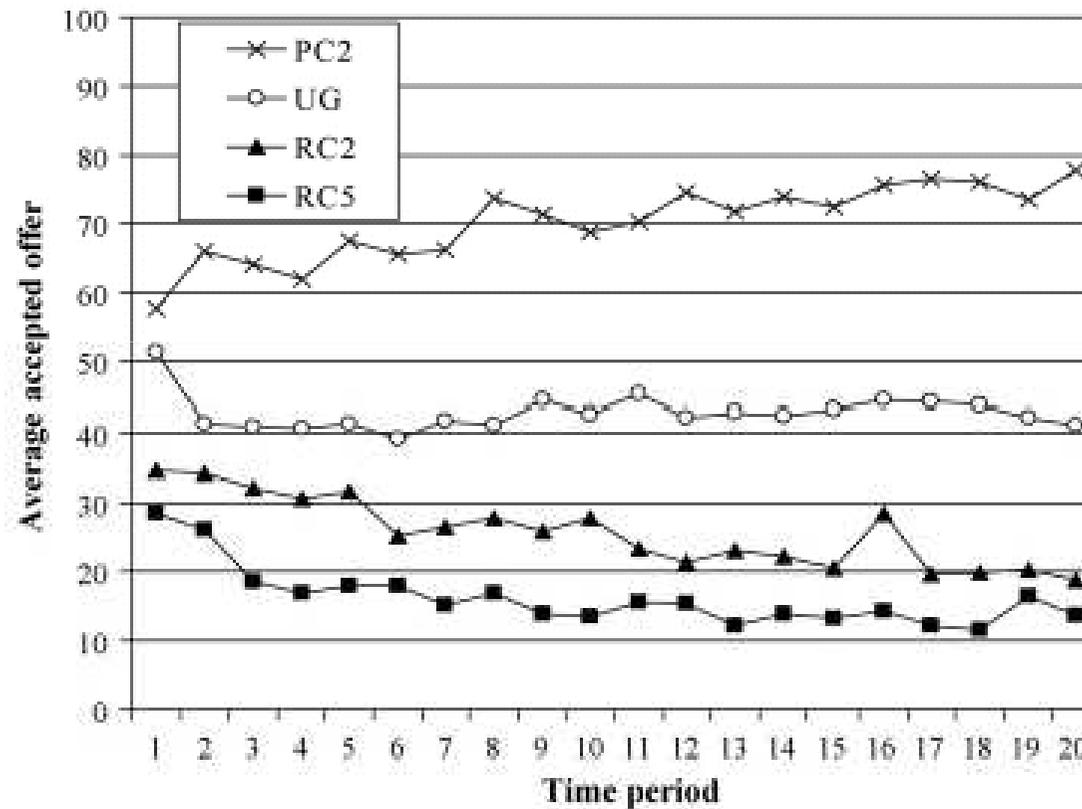


Fig. 3. Average accepted offer in bargaining and market experiments.

WHY DOES MARKET COMPETITION CROWD OUT (MOST OF THE) EQUITY?

Fehr & Schmidt (1999) account: introducing competition makes punishment unattractive even for inequality-averse agent.

$$(1) \quad U_i(x) = x_i - \alpha_i \frac{1}{n-1} \sum_{j \neq i} \max \{x_j - x_i, 0\} \\ - \beta_i \frac{1}{n-1} \sum_{j \neq i} \max \{x_i - x_j, 0\}$$

FS-inequality averse agents will have an incentive to reduce what would be their Minimal Acceptable Offer (MAO) in a standard Ultimatum Game because

- (a) if they don't acquire the good they are faced with a large disadvantageous inequality with respect to the seller and with a moderate inequality vis-à-vis the buyer who gets the good.
- (b) If they do acquire the good, (b1) the disadvantageous inequality with the sellers is reduced, (b2) they have some advantageous inequality with respect to the other bidders, but this weighs less than disadvantageous inequality; (b3) they get some positive utility from the good.

A different approach

- Inequality aversion a la FS does not take into account other types of other-regarding preferences, such as conformism, and the propensity of people to substitute group objectives for individual objectives.
- Conformism has been defined as the conditional propensity to act in accordance with principles of justice (or norms of behaviour) conditional on others' similar disposition (Grimalda & Sacconi, 2005).
- Group thinking is widely observed experimentally (Turner *et al.*, 1987; Brewer, 1991; De Cremer & Van Vugt, 1999; Kramer & Brewer, 1986).

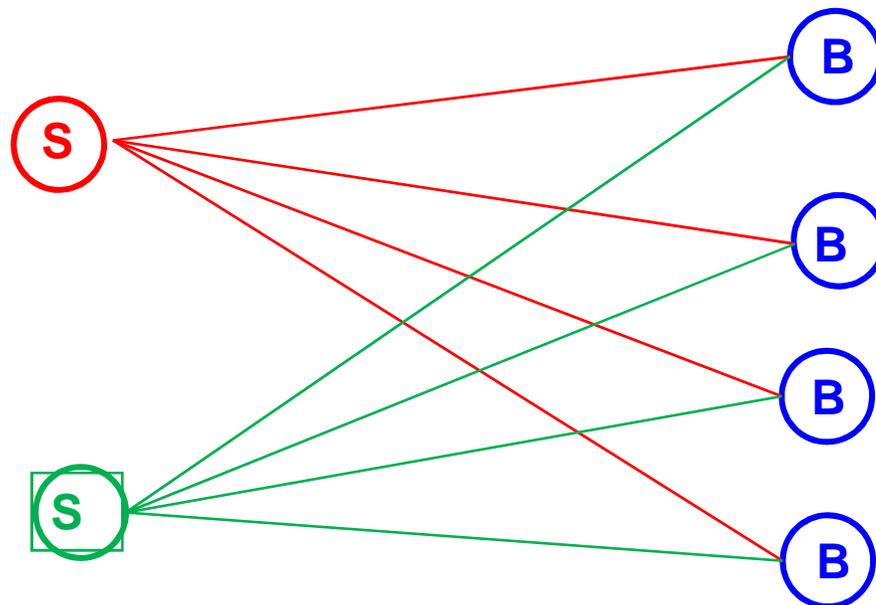
A different approach (2)

- Main question: How do market outcomes vary if people are given the possibility to conform with mutually agreed norms of behaviour?
- We study different types of institutions:
 - ❖ Collective action by consumers
 - ❖ Social responsibility by the sellers
 - ❖ A “social contract” involving consumers and sellers
- We study different conditions:
 - ❖ Asymmetric information over surplus size
 - ❖ Possibility of paying a cost to verify actual surplus size
 - ❖ Possible reputation effects for the seller

The baseline: “Free Market condition with symmetric information (FMS)”.

- Mini-markets with 2 sellers and 4 buyers. 2 products are for sale, and each buyer can only buy one (two buyers will be rationed)
- Each buyer receives the two offers, and has to decide whether to accept or reject each offer.
- If more than 1 buyer accepts the offer, the tie is solved through a random draw.
- Similarly, if only one buyer among the 4 has accepted both offers, another tie-break rule is selected.
- The stage game is repeated for $N=20$ rounds without (?) rematching.

Our game: Free-Market



PREDICTION

- Competition advantages the sellers. Nash Equilibrium with selfish players is maximal inequality (all surplus go to sellers).
- FS argument holds here, too: Inequality averse agents do not have incentive to “punish” the seller.

Treatment 1: “Free Market with consumer action”.

- The same as FMS, but buyers can agree on a common rule of action
- For instance, they can agree on a collective MAO, and announce publicly that offers below MAO will be rejected by all (consumer boycott).

PREDICTION

- Buyers face a collective action problem analogous to a public good game. Selfish (and FS-inequality averse?) players should defect (or not enter) the agreement.
- However conformist buyers may enter and respect the agreement.
- Note that interaction structure is different to a classic public good problem because: (a) this is a second order collective action problem; (b) a situation of between-group antagonism is originated.

Treatment 2: “Free Market with social responsibility action by sellers”.

- Sellers have large market power, so if they wanted to act “equitably” they could.
- However, the crowding out argument may apply here as well (though more weakly than before). If an inequality averse seller expects large inequality to get established in the market, she may prefer to act inequitably.
- Hence, there is room for a collective non-binding agreement among seller to “crowd-in” virtuous preferences. This may take the shape of the guarantee of an equitable price offered to buyers.

PREDICTION

- Public agreement by sellers may “crowd-in” some virtuous seller.
- It may trigger even stronger collusion among selfish sellers.

Treatment 3: “Free Market with asymmetric information and consumer action”.

- The same as FMS, but information over the actual surplus by the seller is unknown to buyers
- Buyers know that the seller’s surplus can be either high or low with probability 50%.
- The expected value of the surplus is the same as in the baseline
- When proposing the offer, the seller has to declare her own surplus, too
- Here consumer action may be structured as “paying to see” the real surplus.

PREDICTION

- The “ethical” incentive to create consumer action is strengthened because possibility of cheating adds to inequality

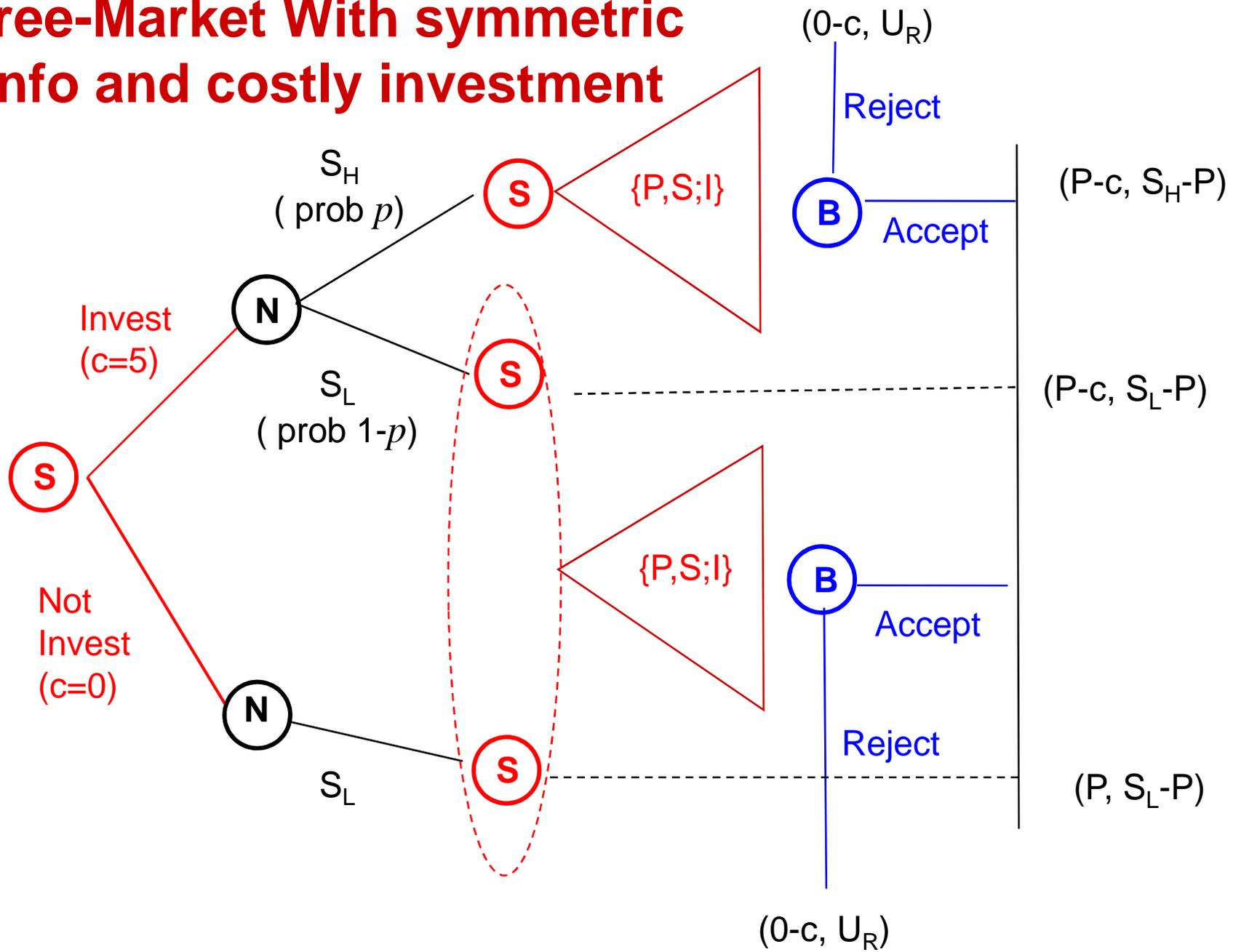
Treatment 4: “Free Market with asymmetric information, costly investment, and consumer action”.

- The same as Treatment 3, but surplus increase only occurs if seller invest and if investment is successful (say, with 50% probability)
- When proposing the offer, the seller has to declare her own surplus, and whether she has realised the investment or not.

PREDICTION

- The threat of consumer action makes it more unlikely that investment will be carried out.

Free-Market With symmetric info and costly investment



Where to go?

- Main idea: study how possibility of collective action and non-binding agreements affect market outcomes.
- Experimenter demand effects?
- Complexity of the situation
- Disentangling of underlying preferences vis-à-vis exploration of market outcomes